SPEED POST

BY SPEED POST

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

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 Bhawanl,
10th 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 $20^0$00?30? to 20^O 01?20? N and longitude 79^O11?50? to 79^O12?35 E?. Water requirement of 19.272 mcum 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.

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 SOx, NOx 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.

vi. High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm^3.

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 4th 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 suh 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, NOx, 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 form 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.

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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 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.

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; SPM, RSPM(PM_{10}/$PM_{2.5}$), 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.

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 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.

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

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.

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

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, 3rd & 4th 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

Dhariwal Infrastructure Limited

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

Ref. No.: DIL/MoEF/HSE/ Date: 30-10-2015

To,
The Additional Director(S),
Ministry of Environment & Forests,
Regional Office, Western Region,
Kendriya Paryavaran Bhavan,
E-5, Link Road No.3,
Ravi Shankar Nagar,
BHOPAL – 462 016 (M.P.).

Sub. : Half Yearly Compliance Report of the Environmental Clearance (1st April 2015 – 30th September 2015)

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

Dear Sir,

Herewith we are submitting Half Yearly Compliance Report for the period from **1st April 2015 to 30th September 2015** in respect of the stipulated prior environmental clearance terms and conditions with reference to our 2 x 300 MW Thermal Power Plant at MIDC, Tadali Industrial Area, Chandrapur (M.S.) .

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

31/10/2015
Maharashtra Pollution Control Board
Regional office
Udyog Bhavan 1st Floor Station Road,
Chandrapur-442401.

Encl.: As above

CC to:
Zonal Officer,
Central Pollution Control Board,
Parivesh Bhawan,
Opp.VMC ward office No.10, Subhanpura,
Vadodara,300023 (Gujrat)

Regional Officer,
Maharashtra Pollution Control Board, Ist Floor, Udhyog Bhawan,
Chandrapur,
Maharashtra

Environmental Compliance Report
for
the Period From
1st April 2015 to 30th September 2015

of

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

Submitted to

Ministry of Environment & Forests,
Regional Office, Western Region,
Kendriya Paryavaran Bhavan,
E-5, Link Road No.3,
Ravi Shankar Nagar,
BHOPAL – 462 016 (M.P.)

1.0 PREAMBLE

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 renewed for both units for the period valid up to 31-12-2016.

All the environmental works including air pollution control systems, effluent treatment plant, sewage treatment plant, rain water harvesting pond, green belt 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 1st April 2015 to 30th September 2015 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 2015 & September 2015) are enclosed herewith as **Enclosure-1.** 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 2015 & September 2015) are enclosed herewith as **Enclosure -2**
(v)	Two Bi-Flue stacks of 275 m height shall be provided with continuous online monitoring equipments for SOx, NOx 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 SOx, NOx 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^3.	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^3. The analysis reports of stack emission monitoring for both units are enclosed as **Enclosure-3**
(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 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Yes, steps for utilization of 100% Fly Ash generated for cement manufacture are already taken. From very 1st Year of operation, majority of the fly ash is in supply to cement plants.
(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.	Yes, fly ash silo & Ash handling plant for direct loading to bulkers is in operation. The condition is fully complied. Bottom Ash in slurry form sent to Ash Pond.
(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 Slate 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	Closed cycle cooling system with

	draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	Induced draft cooling towers is provided. The effluents are 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 get mixed.	The treated effluents conforming to the prescribed standards are recycled & reused. Treated effluent is being mixed with ash to make slurry & send to ash pond through pipelines. Arrangement are made in such a way 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 greenbelt/plantation purpose.
(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 is made for this 08 Nos. of single fire hydrants in addition 04 nos. water monitors are also provided for checking/minimizing spontaneous fire at Coal yard. Apart from that water sprinklers has been provided around the coal storage area.
(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 lo storage of oil.	Facilities for storage of auxiliary liquid fuel such as LDO and HSD are provided in the plant area. For firefighting arrangement 02 Nos. Water monitor ,02 Nos. single fire hydrant,02 Nos. Deluge valve near LDO tanks ,02 Nos. Foam system (pourer type), 01 No. Deluge valve (emulsifier system) etc. has been provided. 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	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

	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.	study area & specifically around ash pond site since beginning is regularly carried out and reports are submitted. 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 55,500 trees are existing. The major existing trees (17200) are Akeshiya, Imli, Karanj, Mahaneem, Neem, Nilgiri, Peltoforam, Sisam, Giloe etc. The other existing trees (8916) are Aapta, Amla, Anjeer, Areka Palm, Aerial Palm, Arjun ,Ashoka, Bargad, Badam, Banana, Boganvel, Chikku, Coconut, Flower tree, Fucus benjamina, Golden 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, Black & golden phycus etc. In the rainy season of the year 2014, plantation of about 17,500 saplings was carried out with varieties as mainly as Neem, Karanj, Shisam, Peltophorum, Alstonia (chatwan), Gulmohor, etc. In the rainy season of the year 2015, plantation of about 20,000 saplings are being planted including Sweet orange, Red sandalwood, eucalyptus, casuarina etc.
(xx)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Yes, First aid and sanitation arrangements for the drivers and other contract workers during construction phase & are already made & continue in operation phase too. 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	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

	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.	earplugs/ear muffs etc. are provided. Workers engaged in noisy areas such as turbine area, air compressors etc. will be periodically examined to maintain audiometric record and any hearing loss including shifting to non noisy/less noisy areas. The ambient noise quality results for are enclosed herewith as **Enclosure-4.**
(xxii)	Regular monitoring of ground level concentration of SO_2, NOx, 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 the Ministry. The data shall also be put on the website of the company.	Yes, regular ambient air quality monitoring at six locations is carried out and reports (April 2015 & September 2015) are enclosed herewith as **Enclosure -5**.
(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 form 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	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 approximately 800 nos. sanitary toilets to 9 Adjacent villages. Education programme for Dropout &

	and income generating programs. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.	blind students in nearby 05 villages. Agriculture programme, Vegetable promotion activities & water shed project to ten nos. of adjacent villages under Nirmal gram yojna.2 nos check Dam over Nallaha so that 3 times vegetables /crop could be cultivated in a year. Tree plantation in Surrounding villages Health check up plan for nearby villages. Skill development programme.
(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 be in this form of temporary structures to be removed after the completion of the project.	Yes, housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care etc is provided.
(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	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 Cell with qualified staff is set up for implementation & maintaining the stipulated environmental safeguards.
(xxx)	The proponent shall upload the status of	Yes, it is complied.

	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_{10}/$PM_{2.5}$) SO_2 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.	
(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.	Yes, six monthly reports are regularly submitting since beginning.
(xxxii)	The environment statement for each financial /year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules. 1986, as amended subsequently, shall also be put on the website off 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 31st March 2015 is complied and submitted online to MPCB. Acknowledged letter copy is enclosed herewith as **Enclosure -6.** .
(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 of the project.
(xxxiv)	Regional Office of the Ministry of	Yes, will be complied time to time.

	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 slack & 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.	Yes, separate funds are allocated for implementation of environmental protection measures.
(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.	Financial closure is done in the month of June 2010 and TPP construction & installation work completed/is in full swing.
(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. Duly filled monitoring report in specified format is enclosed herewith as **Enclosure -7.**

Yours faithfully.

For DHARIWAL INFRASTRUCTURE LTD.

Basab Ghose.

(Basab Ghose)
Vice President

Encl. : As above

ENCLOSURE – 1
GROUND WATER LEVEL STATUS
APRIL - 2015

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 Zitraji Wadai Farm	DIL 1	14-04-2015	2.55	9.5	8.10	0.8	7.30
2.	**Village- Sonegaon**	Grampanchayat Dugwell,Near Hanuman Mandir	DIL 2	14-04-2015	4.10	9.8	5.25	0.8	4.45
3.	**Village- Sonegaon**	Borewell of Shri Kundlik Vishwanath Urkude,	DIL 3	14-04-2015	0.16	80.0	5.64	0.1	5.54
4.	**Village- Yerur**	Dugwell of Shri Ravindra Pandurangji Balki	DIL 4	14-04-2015	6.0	9.5	7.80	0.1	7.70
5.	**Village- Yerur**	Borewell near Vijay Pandurang Balki House	DIL 5	14-04-2015	0.16	60.0	6.95	0.5	6.45
6.	**Village- Yerur**	Grampanchayat Dugwell near	DIL 6	14-04-2015	4.95	11.0	9.40	0.7	8.70

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)
		Primary School							
7.	**Village-Ghodpeth**	Dugwell of Shiv Mandir	DIL 7	14-04-2015	4.50	9.0	7.95	0.6	7.35
8.	**Village- Tadali**	Grampanchayat Dugwell Near Z. P. Primary School	DIL 8	14-04-2015	3.65	12.35	8.32	0.8	7.52
9.	**Village-Morwa**	Dugwell near Jagnath Baba Mandir	DIL 9	14-04-2015	2.40	14.80	3.85	0.8	3.05
10.	**Village- Mursa**	Grampanchayat. Dugwell near Z.P. Primary School	DIL 10	14-04-2015	7.0	10.8	8.70	4.4	4.30
11.	**MIDC,Tadali**	Piezometer Well No.5 near Chimney Area	DIL 11	14-04-2015	0.1	15.0	8.30	0.2	8.10
12.	**MIDC,Tadali**	Piezometer Well No.4 behind Site Office near Cooling Tower, DIL	DIL 12	14-04-2015	0.1	15.0	8.90	0.1	8.80

AUGUST - 2015

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 Zitraji Wadai Farm	DIL 1	21-08-2015	2.55	9.5	4.60	0.8	3.8
2.	**Village- Yerur**	Dugwell of Shri Ravindra Pandurangji Balki	DIL 4	21-08-2015	6.0	9.5	6.10	0.1	6.00
3.	**Village- Wandhari**	Dugwell of Shri Anandrao Vithoba Kwrashe Farm	DIL 5	21-08-2015	5.0	10.3	5.0	0.2	4.80
6.	**Village- Yerur**	Grampanchayat Dugwell near Primary School	DIL 6	21-08-2015	4.95	11.0	6.20	0.7	5.50
7.	**Village- Ghodpeth**	Dugwell of Shiv Mandir	DIL 7	21-08-2015	4.50	9.0	2.20	0.6	1.6
8.	**Village- Tadali**	Grampanchayat Dugwell Near Z. P. Primary School	DIL 8	21-08-2015	3.65	12.35	2.40	0.8	1.60
9.	**Village- Morwa**	Dugwell near Jagnath Baba Mandir	DIL 9	21-08-2015	2.40	14.80	2.0	0.8	1.20
10.	**Village- Mursa**	Grampanchayat. Dugwell near Z.P. Primary School	DIL 10	21-08-2015	7.0	10.8	6.70	4.4	3.30

Enclosure-2
WATER QUALITY STATUS

Sr. No.	Parameters	Acceptable/ Permissible Limit (IS 10500: 2012)	Concentration		
			Location		
			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)
			14-04-2015	14-04-2015	14-04-2015
1.	Colour, Hazen units	5/15	Below 5 Hz.	Below 5 Hz.	Below 5 Hz.
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	6.89	7.29	7.94
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	Nil	Nil	Nil
6.	Total dissolved solids, mg/l	500/2000	959.1	517.9	485.8
7.	Boron (as B) mg/l	0.5/1.0	<0.01	0.09	0.09
8.	Calcium (as Ca) ,mg/l	75/200	99.2	46.4	24.0
9.	Chloride (as Cl), mg/l	250/1000	153.6	19.5	12.71
10.	Copper (as Cu), mg/l	0.05/1.5	<0.006	<0.006	<0.006
11.	Fluoride (as F), mg/l	1.0/1.5	0.56	0.82	1.30
12.	Free Residual Chlorine, mg/l	0.2/1.0	0.1	Nil	Nil

13	Iron (as Fe), mg/l	0.3	0.06	0.1	0.15
14	Magnesium (as Mg), mg/l	30/100	47.8	18.5	12.6
15	Manganese (as Mn), mg/l	0.1/0.3	<0.003	<0.003	<0.003
16	Nitrate (as NO_3), mg/l	45	7.21	4.71	2.98
17	Sulphate (as SO_4), mg/l	200/400	146.0	44.2	49.3
18	Total Alkalinity (as $CaCO_3$) mg/l	200/600	300.0	310.0	305.0
19	Total Hardness(as $CaCO_3$) mg/l	300/600	444.0	192.0	112.0
20	Zinc (as Zn) mg/l	5/15	<0.03	<0.03	<0.03
21	Lead (as Pb) mg/l	0.01	<0.01	<0.01	<0.01
22	Mercury (as Hg) mg/l	0.05	<0.001	<0.001	<0.001
23	Total Arsenic (as As) mg/l	0.01	<0.01	<0.01	<0.01
24	Total Chromium (as Cr) mg/l	0.001	<0.005	<0.005	<0.005

Sr. No.	Parameters	Acceptable / Permissible Limit (IS 10500: 2012)	Concentration			
			Location			
			Borewell Water (Grampanchyat Borewell near Mr. Vijay Pandurang Bulki House, Village Yerur)	Dugwell Water (Near Jagnath Baba Mandir, Marwa)	Dugwell Water (Shiv Mandir , Village – Ghodpeth)	Dugwell Water (Grampanchyat Dugwell Near ZP Primary School, Village – Tadali)
			14-04-2015	14-04-2015	14-04-2015	14-04-2015
1.	Colour, Hazen units	5/15	Below 5 Hz.	Below 5 Hz.	Below 5 Hz.	Below 5 Hz.
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	7.19	7.59	7.87	7.86
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	Nil	Nil	Nil	Nil
6.	Total dissolved solids, mg/l	500/2000	814.7	377.0	148.4	848.5
7.	Boron (as B) mg/l	0.5/1.0	<0.01	0.3	0.14	<0.01
8.	Calcium (as Ca) ,mg/l	75/200	54.4	65.6	25.6	86.4
9.	Chloride (as Cl), mg/l	250/1000	94.2	34.8	8.4	121.6
10.	Copper (as Cu), mg/l	0.05/1.5	<0.006	<0.006	<0.006	0.01
11.	Fluoride (as F), mg/l	1.0/1.5	0.76	0.34	0.2	0.69
12.	Free Residual Chlorine, mg/l	0.2/1.0	Nil	0.2	0.1	Nil

13	Iron (as Fe), mg/l	0.3	0.05	<0.01	0.02	0.03
14	Magnesium (as Mg), mg/l	30/100	41.0	22.4	10.7	78.0
15	Manganese (as Mn), mg/l	0.1/0.3	<0.003	<0.003	<0.003	<0.003
16	Nitrate (as NO_3), mg/l	45	6.8	0.10	0.07	7.3
17	Sulphate (as SO_4), mg/l	200/400	21.7	7.9	11.8	154.0
18	Total Alkalinity (as $CaCO_3$) mg/l	200/600	345.0	230.0	95.0	230.0
19	Total Hardness (as $CaCO_3$) mg/l	300/600	304.0	256.0	108.0	536.0
20	Zinc (as Zn) mg/l	5/15	<0.03	<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	<0.005	<0.005	<0.005	<0.005

Water Quality Status					
Sr. No.	**Parameters**	**Acceptable / Permissible Limit (IS 10500: 2012)**	**Ground Water from Intake Well near Wadha Village**	**Water From water Cooler, Main Office Canteen**	**Water From water Cooler, Technical Building**
			20-05-2015	21-08-2015	21-08-2015
1.	Colour, Hazen units	5/15	Below 5 Hz.	Below 5 Hz.	<5.0
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3.	pH value	6.5 to 8.5	7.89	7.69	7.72
4.	Taste	Agreeable	Agreeable	Agreeable	Agreeable
5.	Turbidity, NTU	1/5	Nil	<0.1	<0.1
6.	Total dissolved solids, mg/l	500/2000	385.9	261.3	257.9
7.	Boron (as B) mg/l	0.5/1.0	0.05	0.08	0.06
8.	Calcium (as Ca) ,mg/l	75/200	22.4	17.6	19.2
9.	Chloride (as Cl), mg/l	250/1000	16.6	31.0	28.0
10.	Copper (as Cu), mg/l	0.05/1.5	<0.006	<0.006	<0.006
11.	Fluoride (as F), mg/l	1.0/1.5	0.15	0.485	0.48
12.	Free Residual Chlorine, mg/l	0.2/1.0	Nil	<0.1	<0.1
13	Iron (as Fe), mg/l	0.3	0.03	0.03	0.01
14	Magnesium (as Mg), mg/l	30/100	17.5	25.4	20.5
15	Manganese (as Mn), mg/l	0.1/0.3	<0.003	<0.003	<0.006
16	Nitrate (as NO3), mg/l	45	0.31	0.02	0.1
17	Sulphate (as SO4), mg/l	200/400	31.0	51.2	41.4
18	Total Alkalinity (as CaCO3) mg/l	200/600	220.4	149.6	140.8
19	Total Hardness (as CaCO3) mg/l	300/600	128.0	148.0	132.0
20	Zinc (as Zn) mg/l	5/15	<0.03	<0.03	<0.03
21	Lead (as Pb) mg/l	0.01	<0.01	<0.01	<0.01
22	Mercury (as Hg) mg/l	0.05	<0.001	<0.001	<0.001
23	Total Arsenic (as As) mg/l	0.01	<0.01	<0.01	<0.01
24	Total Chromium (as Cr) mg/l	0.001	<0.005	<0.005	<0.005

ENCLOSURE - 3

STACK EMISSION QUALITY STATUS

Sr. No.	Parameters	Concentration							
		April 2015				July 2015			
		D.G. Set No.1 1500 KVA (Right Bank)	D.G. Set No.1 1500 KVA (Left Bank)	D.G. Set No.2 1500 KVA (Right Bank)	D.G. Set No.2 1500 KVA (Left Bank)	D.G. Set No.1 1500 KVA (Right Bank)	D.G. Set No.1 1500 KVA (Left Bank)	D.G. Set No.2 1500 KVA (Right Bank)	D.G. Set No.2 1500 KVA (Left Bank)
1.	Total Particulate Matter, mg/Nm^3	23.3	28.0	22.0	34.8	37.8	41.6	28.3	11.3
2.	Sulphur Oxides as SOx, mg/ Nm^3	39.68	91.0	86.9	85.0	93.5	73.7	76.8	72.1
3.	Sulphur Oxides as SOx, Kg/Hr	0.19	0.20	0.19	0.19	0.26	0.20	0.22	0.20
4.	Nitrogen Dioxide as NOx, mg/Nm^3	2.26	1.56	2.64	2.08	7.97	18.8	5.61	9.46
5.	Nitrogen Dioxide as NOx, ppm	1.2	0.83	1.40	1.10	4.23	9.99	2.98	5.02

ENCLOSURE – 4

AMBIENT NOISE QUALITY STATUS

Location			VIP gate		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 (Leq) in dB (A)	**April-2015**	Leq	65.3	58.9	74.4	62.9	66.2	56.2
	May-2015	Leq	64.3	54.0	68.8	61.8	63.4	56.0
	June-2015	Leq	60.0	53.0	63.8	54.7	63.2	56.4
	July-2015	Leq	57.0	51.3	63.2	52.5	61.2	52.4
Norms		**Industrial Area**	**75**	**70**	**75**	**70**	**75**	**70**

AMBIENT NOISE QUALITY STATUS

Location			VIP gate		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)	**August-15**	Leq	46.4	41.4	41.5	36.5	44.4	39.4
	September- 15	Leq	58.0	53.1	53.7	48.6	55.2	49.9
Norms		**Industrial Area**	**75**	**70**	**75**	**70**	**75**	**70**

ENCLOSURE – 5

AMBIENT AIR QUALITY STATUS

1. Location: - Near Storm Water Harvesting Pond at DIL

Sr. No.	Parameters	Norms	Concentration							
			April-2015		May-2015		June-2015		July-2015	
1.	Sulphur Dioxide (SO_2) $\mu g/m^3$	80	12.6	15.3	9.4	11.0	18.6	7.3	25.7	16.2
2.	Nitrogen Dioxide (NO_2) $\mu g/m^3$	80	18.2	19.2	22.0	18.3	14.9	12.6	10.6	12.6
3.	Particulate Matter of size less than 10 µm (PM_{10}) $\mu g/m^3$	100	55.2	45.4	60.3	62.6	51.6	76.3	56.4	52.9
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)$\mu g/m^3$	60	37.6	22.0	42.1	33.2	29.0	45.5	17.3	27.8

2. **Location: - Besides Stack near Fabrication Shop Area at DIL**

Sr. No.	Parameters	Norms	Concentration							
			April-2015		May-2015		June-2015		July-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	9.3	11.5	13.3	25.9	13.9	18.5	27.6	23.4
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	16.4	15.5	17.6	16.5	11.3	14.2	9.80	5.62
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	35.8	40.7	41.8	47.6	79.5	87.3	60.9	44.6
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	17.1	20.4	22.6	15.2	23.1	25.3	42.2	22.5

3. **Location: - Near Security Main Gate**

Sr. No.	Parameters	Norms	Concentration							
			April-2015		May-2015		June-2015		July-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	8.8	7.2	9.7	7.1	11.1	4.39	20.8	19.0
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	18.5	18.7	19.2	16.3	10.5	7.9	6.17	7.61
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	47.1	62.4	62.8	56.5	32.3	55.3	51.6	64.3
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	23.6	40.4	23.5	29.8	18.4	16.3	26.6	17.7

Villages			No.		in mtr. (m)	measuring point in mtr.(depth in mbmp)	Measuring Point in mtr.(level in mbmp)	distance above ground level in mtr. (magl)	ground level (level in mbmp - magl = mbgl)
		Primary School							
7.	**Village-Ghodpeth**	Dugwell of Shiv Mandir	DIL 7	14-04-2015	4.50	9.0	7.95	0.6	7.35
8.	**Village- Tadali**	Grampanchayat Dugwell Near Z. P. Primary School	DIL 8	14-04-2015	3.65	12.35	8.32	0.8	7.52
9.	**Village-Morwa**	Dugwell near Jagnath Baba Mandir	DIL 9	14-04-2015	2.40	14.80	3.85	0.8	3.05
10.	**Village- Mursa**	Grampanchayat. Dugwell near Z.P. Primary School	DIL 10	14-04-2015	7.0	10.8	8.70	4.4	4.30
11.	**MIDC,Tadali**	Piezometer Well No.5 near Chimney Area	DIL 11	14-04-2015	0.1	15.0	8.30	0.2	8.10
12.	**MIDC,Tadali**	Piezometer Well No.4 behind Site Office near Cooling Tower, DIL	DIL 12	14-04-2015	0.1	15.0	8.90	0.1	8.80

4. **Location: - Shri Bapurao Pimpalkar House village Wandhri**

Sr. No.	Parameters	Norms	Concentration											
			April-2015		May-2015		June-2015		July-2015		August-2015		September-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	13.4	12.5	13.4	9.5	20.5	31.0	23.5	11.9	7.2	20.3	3.19	10.8
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	15.5	15.4	14.8	13.3	11.7	10.4	6.48	7.09	4.3	4.5	2.60	6.38
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	52.2	50.7	42.4	63.1	50.8	49.1	45.5	57.2	38.3	45.5	18.7	58.1
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	24.1	20.6	26.6	31.8	24.2	38.2	20.1	12.4	22.0	18.7	12.5	36.1

5. **Location: - Terrace of Gram Panchayat, Village-Yerur**

Sr. No.	Parameters	Norms	Concentration											
			April-2015		May-2015		June-2015		July-2015		August-2015		September-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	27.4	8.9	10.6	10.7	14.6	21.5	31.8	18.1	14.0	13.3	3.49	5.00
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	19.2	14.6	15.0	12.7	18.0	6.2	4.81	5.10	3.7	7.1	2.97	3.62
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	55.2	39.0	32.3	44.5	41.1	37.0	24.2	38.8	33.2	36.0	19.6	49.8
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	35.1	19.9	23.9	31.9	7.40	14.5	12.8	17.8	19.8	24.8	9.70	33.3

6. **Location: - Shri Gajananrao Navghre House, Village - Morwa**

Sr. No.	Parameters	Norms	Concentration											
			April-2015		May-2015		June-2015		July-2015		August-2015		September-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	16.0	14.1	9.4	12.3	10.2	5.6	10.7	19.1	10.7	16.7	5.33	8.83
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	18.2	16.6	12.8	13.8	6.6	6.1	8.72	7.38	8.1	3.7	2.60	5.01
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	39.3	51.3	28.6	28.1	49.9	30.0	59.7	63.5	29.9	22.6	17.6	41.2
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	22.8	29.2	18.6	14.1	24.5	21.1	28.4	11.8	16.7	12.6	10.5	20.6

Note: All concentrations are in µg/m^3.

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

Sr. No.	Parameters	Norms	Concentration			
			August-2015		September-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	22.7	11.3	3.21	3.48
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	3.0	7.95	3.29	4.20
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	43.2	58.9	19.5	26.2
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	24.3	31.4	14.1	17.4

Note: All concentrations are in µg/m^3.

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

Sr. No.	Parameters	Norms	Concentration			
			August-2015		September-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	12.5	10.5	5.10	4.16
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	4.3	6.6	4.62	3.28
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	33.6	62.4	54.8	58.1
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	18.2	24.6	28.8	37.4

Note: All concentrations are in µg/m^3.

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

Sr. No.	Parameters	Norms	Concentration			
			August-2015		September-2015	
1.	Sulphur Dioxide (SO_2) µg/m^3	80	10.2	11.3	3.92	3.65
2.	Nitrogen Dioxide (NO_2) µg/m^3	80	4.6	5.8	3.62	3.76
3.	Particulate Matter of size less than 10 µm (PM_{10}) µg/m^3	100	47.6	24.6	28.8	33.8
4.	Particulate Matter of size less than 2.5 µm ($PM_{2.5}$)µg/m^3	60	26.3	20.2	19.0	18.9

Note: All concentrations are in µg/m^3.

Enclosure - 6.

eco bhar

Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Form V is to be filled before 30th September annually; for the period from 1st April to 31st March

PART A

Company Information

Company Name :	Dhariwal Infrastructure Ltd.
Facility Name :	C-6, C-7 & C-8
Person Name * :	Devendra Tripathi
Designation * :	Manager HSE
Premise Name :	C-6, C-7 & C-8
Road Name :	Tadali, Growth Centre MIDC,Tada
Area / Locality :	Dist.- Chandrapur
City :	Chandrapur
Pin code :	442406
Region :	Chandrapur
Telephone No * :	07172645911
FAX No :	07172237992
Email Id * :	devendra.tripathi@rp-sg.in
Industry Category * :	Red
Industry Sub-Category * :	Power generating plants (excl
Date of Last Environmental statement submitted online:	NA
Consent No:	BO/EIC No.CH-1663-14/CAC-CEI
Consent Issue Date:	8/2/2014
Consent Valid Upto Date:	8/31/2015
Submission Of Financial Year:	09/30/2015
Year Of Establishment :	2014
Industry Type * :	LSI (Large Scale Industry)

Industry Sub-Type * : Manufacturer

Production

Product/By-Product Name	Consent Quantity	Actual Quantity	Unit
power	5256.000	429.239	Others

PART B

1) Water Consumption m3/day

Sr.No	Water Consumption for	Consent Quantity	Actual Quantity
1	Process	5280.000	763.900
2	Cooling	49440.000	16281.600
3	Domestic	40.000	15.000
4	All Others		
5	Total	54760.000	17060.500
6	Total water consumption as per cess bill for the year (m3/annum)		

Sr.No	Particulars	Consent Quantity	Actual Quantity
1	Daily quantity of trade effluent from the factory	7776.000	120.000
2	Daily quantity of sewage effluent from the factory	36.000	10.000
3	Daily quantity of treated effluent	0.000	130.000

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

Sr.No	Name of Products (Production)	During the Previous Financial year	During the Current Financial year
1	power	0.000	0.004

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

Sr.No	Name of Raw Materials	During the Previous Financial year	During the Current Financial year	Unit Name
1	Water	0.000	0.004 per unit of product	Kilo Liter

4) Fuel Consumption

Sr.No	Fuel Name	Consent Quantity	Actual Quantity	Unit
1	Coal	2014800.000	328068.000 per annum	MetricTon
2	LDO(Light Diesel Oil)	2033.050	1370.000 per annum	Kilo Liter

PART C

Parameter Details for WATER - mass/day (Kg/day)

Sr.No	Parameters	Quantity Of Pollutant Discharged(mass/day)	Actual	Unit
1	pH		7.040	
2	Suspended Solids	1.673	12.870	mg/l
3	BOD 3 Days	0.403	3.100	mg/l
4	COD	8.736	67.200	mg/l
5	Oil and Grease	0.000	0.000	mg/l
6	TDS	127.088	977.600	mg/l

Sr.No	Parameters	Quantity Of Pollutant Discharged(mass/day)	Range	Standard	Actual

Parameter Details for STACK

stack1

Parameters	Quantity Of Pollutant Discharged(mass/day)	Actual	Unit
Particulates	690.500	33.400	mg/Nm3
HCL			mg/Nm3
SO2			mg/Nm3
CO			mg/Nm3
Total Organic			mg/Nm3
HF			mg/Nm3
NOx			mg/Nm3
Total dioxines			ng[TEQ]Nm3
cd+Th			mg/Nm3
Hg			mg/Nm3
Heavy metal			mg/Nm3

stack2

Parameters	Quantity Of Pollutant Discharged(mass/day)	Actual	Unit
Particulates	583.400	28.800	mg/Nm3
HCL			mg/Nm3
SO2			mg/Nm3
CO			mg/Nm3
Total Organic			mg/Nm3
HF			mg/Nm3
NOx			mg/Nm3
Total dioxines			ng[TEQ]Nm3
cd+Th			mg/Nm3
Hg			mg/Nm3
Heavy metal			mg/Nm3

PART D - Hazardous Waste

[as specified under Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008]

1) From Process

Sr.No	Category no: Type of waste	Consent Quantity	Unit	During Previous Financial year	During Current Financial year
1	5.1 Used / spent oil	1.440	MetricTon	0.000	1.200
2	34.2 Spent ion exchange resin containing toxic metals	3.600	MetricTon	0.000	3.200
3	34.4 Oil and grease skimming residues	12.000	MetricTon	0.000	0.000
4	33.3 Discarded containers / barrels / liners contaminated with hazardous wastes / chemicals	240.000	Numbers	0.000	0.000

2) From Pollution Control Facility

Sr.No	Category no: Type of waste	Consent Quantity	Unit	During Previous Financial year	During Current Financial year

PART E - Solid Waste

[as specified under Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008]

1) From Process

Sr.No	Type of Waste	Consent Quantity	During Previous Year	During Financial Year	Unit
1	FLY ASH	1321300.000	0.000	85475.530	MetricTon
2	BOTTOM ASH	328500.000	0.000	15963.380	MetricTon

2) From Pollution Control Facility

Sr.No	Type of Waste	Consent Quantity	During Previous Year	During Financial Year	Unit
1	Biological Sluge	6.000	0.000	0.000	MetricTon

PART F

Hazardous Waste

Sr.No	Type of Hazardous Waste Generated	Qty of Hazardous Waste	Consistency of Hazardous Waste	Disposal
1	5.1 Used / spent oil	1.200	Oily	Sell
2	34.2 Spent ion exchange resin containing toxic metals	3.200	Solid	MEPL (Maharashtra Enviro Power Ltd.) Land Fill
3	34.4 Oil and grease skimming residues	0.000	Oily	MEPL (Maharashtra Enviro Power Ltd.)

[as specified under Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008]

1) From Process

Sr.No	Category no: Type of waste	Consent Quantity	Unit	During Previous Financial year	During Current Financial year
1	5.1 Used / spent oil	1.440	MetricTon	0.000	1.200
2	34.2 Spent ion exchange resin containing toxic metals	3.600	MetricTon	0.000	3.200
3	34.4 Oil and grease skimming residues	12.000	MetricTon	0.000	0.000
4	33.3 Discarded containers / barrels / liners contaminated with hazardous wastes / chemicals	240.000	Numbers	0.000	0.000

2) From Pollution Control Facility

Sr.No	Category no: Type of waste	Consent Quantity	Unit	During Previous Financial year	During Current Financial year

PART E - Solid Waste

[as specified under Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008]

1) From Process

Sr.No	Type of Waste	Consent Quantity	During Previous Year	During Financial Year	Unit
1	FLY ASH	1321300.000	0.000	85475.530	MetricTon
2	BOTTOM ASH	328500.000	0.000	15963.380	MetricTon

2) From Pollution Control Facility

Sr.No	Type of Waste	Consent Quantity	During Previous Year	During Financial Year	Unit
1	Biological Sluge	6.000	0.000	0.000	MetricTon

PART F

Hazardous Waste

Sr.No	Type of Hazardous Waste Generated	Qty of Hazardous Waste	Consistency of Hazardous Waste	Disposal
1	5.1 Used / spent oil	1.200	Oily	Sell
2	34.2 Spent ion exchange resin containing toxic metals	3.200	Solid	MEPL (Maharashtra Enviro Power Ltd.) Land Fill
3	34.4 Oil and grease skimming residues	0.000	Oily	MEPL (Maharashtra Enviro Power Ltd.)

				Incineration
4	33.3 Discarded containers / barrels / liners contaminated with hazardous wastes / chemicals	0.000	Solid	MEPL (Maharashtra Enviro Power Ltd.) Incineration

Solid Waste

Sr.No	Type of Solid Waste Generated	Qty of Solid Waste	Consistency of Solid Waste	Disposal
1	FLY ASH	85475.530	Powder / Powdery	Sell
2	BOTTOM ASH	15963.380	Slurry	Other
3	Biological Sluge	0.000	Semi Solid	Other

PART G

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

Sr.No	Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel and Solvent Consumption (Kg/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment (Rs)	Reduction in Maintainance (Rs)
1	Since plant started in this financial year, Hence	0.000	0.000	0.000	0.000	0.000	0.000

PART H

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

Sr.No	Description	Environmental Protection Measures	Capital Investment (Rs)
1	Expenditure made on various pollution control measures in the plant premises such as, water spray sy	water spray system, Tree plantation, storage facilities, Road concreting etc	26779000.000

PART I

Any other particulars for improving the quality of the environment.

High efficiency Electrostatic Precipitator (ESP),at Boiler, Bag filters, Dust suppression system, and Shed has been provided CHP & AHP storage and transfer points. Development of extensive green belt is under progress.

* Maximum 200 characters

Print

High efficiency Electrostatic Precipitator (ESP),at Boiler, Bag filters, Dust suppression system, and Shed has been provided CHP & AHP storage and transfer points. Development of extensive green belt is under progress.

* Maximum 200 characters

Print

ENCLOSURE –7

Monitoring the Implementation of Environmental Safeguards
Ministry of Environment & Forests
Regional Office (W), Bhopal

Monitoring Report				
PART- I				
DATA SHEET				
Ref No.	DIL/MoEF//HSE/		**Date :**	30-10-2015
1.	Project type : River-valley/Mining / Industry/Thermal/Nuclear/other (specify)	:	Thermal Power Project	
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 **Annexure-1**	
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		Rs. 135.39 Crores

Sr.No.	Particular	Capital Cost Incurred (Rs. Crores)	Recurring Cost Projected for April 2014 to March 2015 (Rs. Crores)
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	135.39	3.16

	c.	Benefit cost ratio/Internal rate of Return and the year of assessment	:	The construction work is started in the financial year 2010-11and Plant is commissioned in two phases in October 2013 and July 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	:	Capital Cost : Rs. 135.39 Crores Recurring Cost : Rs. 3.16 Crores

		far		Total : 138.55 Crores
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)	:	July 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^3 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 are employed to maximum extent and the outside laborers are 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 is resorted at regular intervals
- The total noise effect on nearest villages during the construction stage is negligible.
- The onsite workers using high noise equipment and working in the noisy area adopt noise protection devices like ear muffs / plugs.
- Construction equipments are limited to the construction area only and the site is secured by boundary wall with adequate secured entry points.

- ❖ Adequate security arrangements are 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 in 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.