Consent for discharge of effluents under the Water (Prevention and Control of Pollution) Act, 1974 and emission under the Air (Prevention and Control of Pollution) Act, 1981

Ref: 1. Application filed by the applicant/organization on 02/04/2016
2. Inspection of the industry/organization by RO on 02/04/2016
3. Proceedings of the CCM dated 27/06/2016 held on 21/06/2016

Consent is hereby granted to the Occupier under Section 25(4) of the Water (Prevention & Control of Pollution) Act, 1974 (herein referred to as the Water Act) & Section 21 of Air (Prevention & Control of Pollution) Act, 1981, (herein referred to as the Air Act) and the Rules and Orders made there under and authorized the Occupier to operate the industry/activity & to make discharge of the effluents & emissions confirming to the stipulated standards from the premises mentioned below and subject to the terms and conditions as detailed in the Schedule Annexed to this order.

Location:
Name of the Industry: Udupi Power Corporation Ltd (Upd) (Formerly Nagarjuna Power Corporation Ltd)
Address: Birth No 15, UPCL Jetty for Coal Handling NMFT Premises
Industrial Area: Not In IA, Mangalore,
Taluk: Mangalore,
District: Dakshina Kannada

Conditions:

a) Discharge of effluents under the Water Act:

<table>
<thead>
<tr>
<th>Sr</th>
<th>Water Code</th>
<th>WC(KLD)</th>
<th>WWG(KLD)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Domestic Purpose</td>
<td>2.000</td>
<td>1.600</td>
<td>Septic tank &amp; Soak Pit</td>
</tr>
<tr>
<td>2</td>
<td>Others ......</td>
<td>2400.000</td>
<td>0.800</td>
<td>Settling tank over flow is discharged into sea during monsoon at point no 5 of NMFT</td>
</tr>
</tbody>
</table>

b) Discharge of Air emissions under the Air Act from the following stacks etc.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of chimney/outlet</th>
<th>Limits specified refer schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The consent for operation is granted considering the following activities/Products:

<table>
<thead>
<tr>
<th>Sr</th>
<th>Product Name</th>
<th>Applied Qty/Month</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coal unloading, stacking and loading into railway wagons</td>
<td>1.000</td>
<td>TON</td>
</tr>
</tbody>
</table>

This consent is valid for the period from 01/07/2016 to 30/06/2021

For and on behalf of the Karnataka State Pollution Control Board

S VINKATESH SHEKAR

To,
Udupi Power Corporation Ltd (Upd) (Formerly Nagarjuna Power Corporation Ltd)
Panambur
COPY TO:
The Environmental Officer, KSPCB, Regional Office Mangalore for information and necessary action.

2. Master Register.

I. Consent Fee paid : Rs. 200000

SCHEDULE

TERMS AND CONDITIONS

A. TREATMENT AND DISPOSAL OF EFFLUENTS UNDER THE WATER ACT,
1. The discharge from the premises of the occupier shall pass through the terminal manhole/manholes where from the Board shall be free to collect samples in accordance with the provisions of the Act/Rules made there under.

2(a). The sewage/domestic effluent shall be treated in septic tank and with soak pit. No overflow from the soak pit is allowed. The septic tank and soak pit shall be as per IS 2470 Part-I & Part-II.

2(b). The treated sewage effluent discharged shall conform to the standards specified in Annexure-I.

3(a). The trade effluent generated in the industry shall be treated in the ETP and treated effluent shall confirm to the standards stipulated by the Board in Annexure-I

3(b). The trade effluent shall be handed over to CETP and maintain logbook of effluent generated & sent every day.

4. The applicant shall install flow measuring/recording devices to record the discharge quantity and maintain the record.

5. The applicant shall not change or alter either the quality or the quantity of the discharge or temperature or the point of discharge without the previous consent/permission of the Board.

6. The applicant shall not allow the discharge from the other premises to mix with the discharge from his premises. Storm water shall not be allowed to mix with the effluents on the upstream of the terminal manhole where the flow measuring devices are installed.

7. The daily quantity of domestic effluent and trade effluent from the industry shall not exceed the limits as indicated in this consent order:

8. The applicant shall discharge the effluents only to the place mentioned in the Consent order and discharge of treated/untreated outside the premises is not permitted.

B. EMISSIONS:

1. The discharge of emissions from the premises of the applicant shall pass through the air pollution control equipment and discharged through stacks/chimneys mentioned in Annexure-II where from the Board shall be free to collect the samples at any time in accordance with the provisions of the Act and Rules made there under. The tolerance limits of the constituents forming the emissions in each of the stacks shall not exceed the limits laid down in Annexure-II.

2. The applicant shall provide port holes for sampling of emission, access platforms for carrying out stack sampling, electrical points and all other necessary arrangements including ladder as indicated in Annexure-II.

3. The applicant shall upgrade/modify/replace the control equipment with prior permission of the Board.

C. WATER CESS:

1. The applicant shall provide water meter at all the intake points as specified under Section (5) of the Water Cess Act, 1977 and shall file the Water Cess returns regularly before fifth of every month and also pay the Cess assessed with the time stipulated.
D. MONITORING & REPORTING:

1. The applicant shall get the samples of effluents & emissions collected and get them analyzed once a month either by in house monitoring laboratory or through EP approved laboratories for the parameters as indicated in Annexure I & II.

2. The applicant shall maintain log books to reflect the working condition of pollution control systems and also self monitoring results and keep it open for inspection.

E. SOLID WASTE (OTHER THAN HAZARDOUS WASTE) DISPOSAL:

1. The applicant shall segregate solid waste from Hazardous Waste, Municipal Solid Waste and store it properly till treatment/disposal without causing pollution to the surrounding Environment.

2. The solid waste generated shall be handled & disposed by scientific method without causing eye sore to the general public and to the surrounding environment.

F. NOISE POLLUTION CONTROL:

1. The industry shall ensure that the ambient noise levels within its premises shall not exceed the limits i.e 75 dB(A) Leq during day time and 70 dB(A) Leq during night time as specified in under the Air (Prevention and Control of Pollution) Act, 1981.

G. HAZARDOUS WASTES (MANAGEMENT, HANDLING & TRANSBOUNDARY MOVEMENT) 2008:

The applicant shall comply with the provisions of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules 2008.

H. GENERAL CONDITIONS:

1. The applicant shall not allow the discharge from the other premises to mix with the discharge from his premises.

2. The applicant shall promptly comply with all orders and instructions issued by the Board from time to time or any other officers of the Board duly authorized in this behalf.

3. The applicant shall set-up Environmental Cell comprising of qualified and competent personnel for complying with the conditions specified.

4. The Board reserves the right to review, impose additional conditions, revoke, change or alter terms and conditions of this consent.

5. The applicant shall forthwith keep the Board informed of any accidental discharge of emissions/effluents into the atmosphere in excess of the standards laid down by the Board. The applicant shall also take corrective steps to mitigate the impact.

6. The applicant shall provide alternative power supply sufficient to operate all Pollution control equipments.

7. The entire premises shall always be kept clean. The effluent holding area, inspection chambers, outlets, flow measuring points should made easily approachable.

8. The applicant shall display the consent granted in a prominent place for perusal of the inspecting officers of the Board.

9. The applicant his heirs, legal representatives or assignee shall have no claims whatsoever to the continuation or renewal of this consent after expiry of the validity of consent.
10. The applicant shall make an application for consent for subsequent period at least 45 days before expiry of this consent.

11. The applicant shall develop and maintain adequate green belt all around the periphery.

12. The applicant shall provide rain water harvesting system and shall provide proper storm water management system.

13. This consent is issued without prejudice to any Court Cases pending in any Hon'ble Court

14. The applicant shall furnish the Environmental statement for every financial year ending with 31st March in Form-V as per Environment (Protection) Rules, 1986. The statement shall be furnished before the end of September.

15. The applicant shall display flow diagram of the pollution control system near the pollution control system/s.

**NOTE:**
The following Conditions A(2b,3b) mentioned in the schedule are not applicable.

**Additional Conditions:**

Additional condition is enclosed as annexure

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For and on behalf of the
Karnataka State Pollution Control Board

S VENKATESH SHEKAR

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Note: All efforts should be made to remove colour and unpleasant odour as far as practicable.

<table>
<thead>
<tr>
<th>Chimney No.</th>
<th>Chimney attached to</th>
<th>Capacity/ KVA Rating</th>
<th>Minimum chimney height to be provided above ground level (in Mts)</th>
<th>Constituents to be controlled in the emission</th>
<th>Tolerance limits mg/NM3</th>
<th>Fuel</th>
<th>Air pollution Control equipment to be installed in addition to chimney height as per col(3)</th>
<th>Date of which air pollution control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D.G. Seds</td>
<td>125 KVA</td>
<td>12 PM(mg/NM3), SO2 (PPM), NOx(PPM)</td>
<td>150,100,50</td>
<td>DI/E</td>
<td>AEC</td>
<td>Before commissioning.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

1. The Noise levels within the premises shall not exceed 75 dB (A) leq during day time and 70 dB(A) leq during night time respectively.

2. The DG set shall be provided with acoustic measures as per Sl.No.94 in Schedule-I of Environment (Protection) Rules.

3. There shall be no smell or odour nuisance from the industry.
LOCATION OF SAMPLING PORTHOLES, PLATFORMS, ELECTRICAL OUTLET.

1. Location of Portholes and approach platform:

Portholes shall be provided for all chimneys, stacks and other sources of emission. These shall serve as the sampling points. The sampling point should be located at a distance equal to at least eight times the stack or duct diameters downstream and two diameters upstream from source of low disturbance such as a Bend, Expansion, Construction Valve, Fitting or Visible Flame for rectangular stacks, the equivalent diameter can be calculated from the following equation.

\[
\text{Equivalent Diameter} = \frac{2 (\text{Length} \times \text{Width})}{(\text{Length} + \text{Width})}
\]

2. The diameter of the sampling port should not be less than 100 mm dia". Arrangements should be made so that the porthole is closed firmly during the non-sampling period.

3. An easily accessible platform to accommodate 3 to 4 persons to conveniently monitor the stack emission from the portholes shall be provided. Arrangements for an Electric Outlet Point of 230 V 15 A with suitable switch control and 3 Pin Point shall be provided at the Porthole location.

4. The ladder shall be provided with adequate safety features so as to approach the monitoring location with ease.
Additional Conditions

The consent is issued for operation of 2x600 MW imported coal based Thermal Power Plant

The Consent is granted for the period from 01.07.2016 to 30.06.2021

<table>
<thead>
<tr>
<th>Consent fee paid</th>
<th>Rs. 4,00,000/- Paid on 27.02.2015, UTR NO. SYNBR92015022700169191</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs. 16,00,000/- Paid on 09.04.2016 UTR NO. SYNBR92015040900305981</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>Rs. 6,288 Crores</td>
</tr>
</tbody>
</table>

A. TREATMENT AND DISPOSAL OF EFFLUENTS UNDER THE WATER ACT

I. Quantity of water usage & Specification of Coal

1. The entire quantity of water required for industrial purpose shall be drawn from Sea. Total Sea water quantity usage shall not exceed 10,000 M³/hr for industrial and domestic purpose.

2. The Applicant shall use imported coal with ash and Sulphur content as specified in the Comprehensive Environmental Clearance dated 01.09.2011.

II. Treatment and disposal of trade and sewage effluent:

9. The details of water consumption and waste water discharge shall be as follows.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Description</th>
<th>Permitted Quantity of discharge</th>
<th>Place of discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trade effluent</td>
<td>1,77,288 KLD</td>
<td>Condenser Cooling water, Boiler Blow down, Cooling tower blow down, Ash pond effluent shall be treated to the standards as stipulated in Annexure-I. The treated trade effluent shall be re-circulated and reused within the plant. Excess shall be disposed into Guard pond before discharging into Sea.</td>
</tr>
<tr>
<td>2</td>
<td>Domestic effluent</td>
<td>500 KLD</td>
<td>Shall be treated in STP as to the standard as stipulated in Annexure-II.</td>
</tr>
</tbody>
</table>

10. No effluent will be discharged into the Mulki River. The treated effluents shall be discharged through a pipeline in the Arabian Sea ensuring that the differential temperature is maintained at 50C. The area and location of the intake and discharge point shall be finalized in consultation with the National Institute of Oceanography (NIO), Goa/Central Water and Power Research Station, Pune.

11. Brine management from desalination plant, its disposal mechanism and status of implementation shall be submitted to the Regional Office of the Board from time to time.

12. Closed Circuit Cooling Tower shall be installed and sea water shall be used for cooling purpose. The sweet water requirement shall be met from the desalination plant.

13. The applicant shall maintain log books of flow measuring devices at both inlet and outlet of ETP and energy meter readings for verification by inspecting officers.

14. All the treatment units of ETP shall be totally impervious.

15. The applicant shall ensure continuous and effective operation and maintenance of pollution control systems.

16. The applicant shall not allow the ash pond to dry. Always a film of water shall be allowed to stagnate over the collected ash.
17. A storage tank of sufficient capacity shall be provided to hold the untreated effluent in the event of emergency arising out of imbalance in treatment system etc., within the premises.

18. Arrangements shall be made that effluent and storm water do not get mixed.

19. The applicant shall operate the integrated flow measuring/recording devices on the effluent line leading to sea. A record of daily effluent discharge shall be maintained.

20. The on-line monitoring system provided at the outlet of the Guard Pond to monitor the parameters pH level, Dissolved Oxygen and temperature of discharged water shall be operated continuously. Results shall be displayed on real time basis in company web site.

21. The industry shall maintain alternate power supply to the ETP for its continuous operation.

B. EMISSIONS

1. The discharge of emissions from the premises of the Applicant shall pass through the stacks/chimneys mentioned in Annexure-III where from the Board shall be free to collect the samples at any time in accordance with the provisions of the Act and Rules made there under. The stacks/chimneys heights shall be as per Annexure-III.

2. The hourly rate of emissions discharged and the tolerance limits of the constituents forming the emissions in each of the chimneys/stacks shall not exceed the limits laid down in Annexure-III.

3. The applicant shall provide port holes for sampling the emissions, access platforms for carrying out stack sampling, electrical points and all other necessary arrangements including ladder.

4. The applicant shall operate the Air pollution control equipment as specified in the Annexure-III continuously so as to ensure that the emission does not exceed the limits specified. The operation of the control equipment shall be synchronized with the operation of the emission source.

5. The Applicant shall maintain access platforms for carrying out stack sampling with electrical outlet points for sampling the emissions from port holes for all the stacks, as per the guidelines.

6. The industry shall install opacity meters/continuous monitoring system for stack with proper calibration system.

7. All efforts shall be made to control fugitive emissions. For all the transfer points in the coal conveyor system dusting equipment should be provided.

8. The applicant shall operate the Flue Gas De sulphurisation (FGD) plant to control SO\textsubscript{2} emission.

9. Coal storage yard and ash management areas should be suitably lined with impervious liner to avoid any leaching in to the groundwater.

10. The applicant shall provide adequate dust control measure for coal handling area and coal transfer points.

11. The applicant shall monitor Mercury content on monthly basis in the ash generated and as well as in the emissions and submit monthly report to the Board.

12. Sulphur and ash contents in the coal to be used in the project shall not exceed 0.8% and 12% (average) respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Board.

13. A single bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for SO\textsubscript{x}, NO\textsubscript{x} and particulate Matter (PM\textsubscript{2.5} & PM\textsubscript{10}). Exit velocity of flue gases shall not be less than 22 m/sec. mercury emissions from stack shall also be monitored on periodic basis.
14. High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm³. Low NOₓ Burner shall be installed.

15. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling point, transfer areas and other vulnerable dusty areas shall be provided.

16. Transportation coal from Mangalore Port to the project site shall be undertaken by rail with adequate provisions to prevent fugitive emissions.

17. Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc) will be monitored in bottom ash as also in the effluents emanating from the existing ash pond. Nc ash shall be disposed off in low lying area. To prevent ground water contamination, the ash pond area should be lined with impervious layer.

18. Extensive monitoring of air quality in and around the power plant and extending up to Western Ghat should be carried out and records should be scientifically maintained. The monitoring programme should cover the key stone species for any potential acid deposition effects.

19. No leachate shall takes place at any point of time from the Coal storage area and Ash pond and adequate safety measures such as a lining with impermeable membrane/liner shall be adopted. Precautionary measures shall be taken to protect the ash dyke from getting breached and in built monitoring mechanism shall be formulated.

20. Fugitive emission of fly as (dry or wet) shall be controlled so that no agricultural of non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local panchayat.

D. MONITORING & REPORTING

The applicant shall:

1. Continue self monitoring system of emissions and effluents. Industry shall abide by the directions issued by the CPCB/SPCB in implementing the continuous online monitoring system.

2. Submit the monitoring results as under:
   a) Data monitored as per prescribed schedule shall be submitted to the Board every month in PDF format to the following e-mail IDs cat17@kspcb.gov.in & udupi@kspcb.gov.in.
   b) A compiled data of all monitoring conducted as per schedule during the consent period shall be submitted in hard copy along with Consent application.

I) Water pollution Control:

1. The treated trade effluent shall be analyzed for the parameters stipulated in Annexure-I, II and III once in a week.

2. A record of daily effluent discharge shall be maintained and once in a month the extract shall be submitted to Regional Officer, Udupi.

3. The applicant shall get the plankton studies conducted in the sea through a competent agency at its cost. This shall be conducted to verify whether any heavy metals or any other pollutants are getting accumulated in the vicinity of the discharge and any impact on marine life. This study shall be conducted twice a year i.e. once in the month of April/May and other in September/October every year. The results of the study shall be evaluated by the monitoring agency and inferences shall also be reported. The study
shall include study of photo plankton and zoo plankton, fish flesh analysis for heavy metal etc., and the report shall contain the comments, observations and inference by the monitoring agency. The results shall be furnished to the Regional Office of the Board immediately after the receipt of the results.

4. The applicant shall check the submarine pipeline for any damage, anchorage, etc., through NIO, Goa or any competent agency once in two years and report should be furnished to the Board.

II) Air Pollution Control:

1. The applicant apart from providing the porthole and plat form for the stack shall also install opacity meters/continuous monitoring systems with proper calibration for instantaneous monitoring of the emissions.

2. The emission monitoring shall be recorded in the proper formats in a log book and the monitored results shall be submitted to the Regional office of the Board once in a month.

3. The applicant shall establish adequate number of ambient air quality monitoring stations both in the core zone and in the radius of impact a representative station to monitor the air quality in the predominant wind-ward direction. The report of analysis shall be maintained in both soft and hard format and monthly extract sent the Regional office. Once in a year the analysis shall be statistically evaluated for all the stations and the report as required under the National Ambient Air Quality Standards shall be furnished to the Regional Office of the Board. The monitoring shall be carried out for the parameters as stipulated in the MoEF notification dated 16.11.2009.

4. The applicant shall monitor the noise levels at the boundary of the industry at 5 locations and shall submit the monitoring reports to the Regional Office.

5. The industry shall provide and maintain at its own cost a meteorological station to collect the data on wind velocity, direction, temperature, humidity, rainfall etc., and daily reading shall be recorded and shall be stored in soft copy and a monthly average data in graphical format shall be submitted to Regional Office, Udupi.

6. The applicant shall submit results of online AAQM & stack monitoring to the Regional Office. The industry shall take action to post the results on real time in their website.

7. The applicant monitor the treated effluent through on line continuous effluent quality monitoring system for the measurement of parameters flow, pH, TSS, Temperature and monitoring data shall be connected & up loaded to KSPCB and CPCB’s servers.

8. The applicant shall maintain the online continuous stack emission monitoring system installed for measurement of emission parameters viz PM, NOx, SO2 in good conditions. The monitored data shall be connected and uploaded to KSPCB and CPCB servers.

9. Once in a month by 5th, the max min and Avg values and also the number of times, the exigencies recorded shall be submitted to RO.

G. The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
   The applicant shall comply with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

H. GENERAL

1) This consent for discharging sewage and/or trade effluents from the factory shall not be taken or construed as the Board’s permission to continue to discharge the sewage and/or trade effluents from the factory into the place (as mentioned in this consent Order) which pollutes the water there-in endangering the life and property of the persons using the said water before, during or after the periods indicated in the Terms and Conditions of this Consent Order.
2) The applicant shall not change or alter either the quality or quantity or rate of emission or install/replace or alter the air pollution control equipment, change in raw material or manufacturing process resulting in change in quality and/or quantity of emissions without the prior permission of the Board.

3) The industry shall not change or alter (a) raw materials or manufacturing process,
(b) change the products or product mix (c) the quality, quantity or rate of discharge/emissions and (d) install/replace/alter the water or air pollution control equipments without the prior approval of the Board.

5) The applicant shall not store any raw materials on mined ground.

6) The applicant shall appoint a qualified environmental engineer/scientist for environment management in the factory and also establish an environmental cell.

7) Applicant shall maintain the Environmental Management System in conformity with ISO 14001:2004 standards.

8) The applicant shall comply with the guidelines under Corporate Responsibilities for Environment Protection (CREP) 2003 issued by Ministry of Environmental Forests and CPCB.

9) The applicant shall continue the self monitoring system for monitoring the effluents and emissions.

10) The applicant shall maintain register recording the ambient air quality, stack monitoring and analysis report of treated effluents. The register shall be open for inspection by the Board Officers at all time.

11) An inspection Book shall be opened and made available to the Board Officers during their visit to the factory.

12) The industry shall transport and store the raw materials in a manner so as not to cause any damage to environment, life and property. The applicant shall be solely responsible for any damages to environment.

13) Industry shall comply with all the consent conditions and furnish report within 30 days to the Regional Office.

14) The applicant shall display EC, Environmental Statement and Consent orders in the website of the industry and update regularly.

I. **FLY ASH & SOLID WASTE (OTHER THAN HAZARDOUS WASTE) DISPOSAL:**

1. The applicant shall provide with water sprinkling arrangement in ash pond area to avoid any fugitive emission due to wind.

2. The Ash & solid waste shall be handled & disposed as indicated below.

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Category</th>
<th>Quantity</th>
<th>Disposal details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bottom Ash</td>
<td>310 TPD*</td>
<td>Collected in dry form in water impounded hopper and this ash after grinding should be dewatered and transported in trucks (dumper trucks) to ash dump area.</td>
</tr>
<tr>
<td>2</td>
<td>Fly Ash</td>
<td>1240 TPD*</td>
<td>The industry shall send 100% fly ash to Cement plants, brick manufacturing industries etc.</td>
</tr>
</tbody>
</table>
3. The industry shall maintain records of quantity and characteristics with respect to sulphur and ash content for every consignment received. Also, the industry shall maintain record of the quantity the quality of the blended coal burnt in the boiler and quantity of ash generated and disposed of which shall be open for inspection by the Board officers.

4. The industry shall submit compliance report to the above conditions once in a month to Board.

5. The solid waste collected in the Factory premises as sweepings wastage packaging, empty containers, Residue, sludge including those from air pollution control equipments shall be disposed of scientifically to the satisfaction of the Board so as not to cause fugitive emissions, dust problems or water pollution problems through leaching etc., of any kind.

**ANNEXURE-I**

<table>
<thead>
<tr>
<th>Condense Cooling water (once through cooling system)</th>
<th>pH</th>
<th>6.5-8.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td></td>
<td>Not more than 5°C higher than the intake water temperature</td>
</tr>
<tr>
<td>Free available chlorine mg/l Max</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Cooling tower blow down</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free available Chlorine mg/l Max</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Zinc mg/l. Max</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Chromium (Total) mg/l Max</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Phosphate mg/l Max</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Other corrosion inhibiting material</td>
<td></td>
<td>Limit to be established on case by case basis by Central Board in case of union territories and State Board in case of States</td>
</tr>
<tr>
<td>Boiler blow down</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suspended Solids mg/l. Max.</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Oils and Grease mg/l. Max.</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Copper (Total) mg/l. Max</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Iron (Total) mg/l. Max</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Ash Pond Effluent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.5-8.5</td>
<td></td>
</tr>
<tr>
<td>Suspended Solids, mg/l. Max.</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Oils and Grease mg/l. Max.</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
### ANNEXURE-II

Standards for sewage treatment plant

<table>
<thead>
<tr>
<th>SL. No</th>
<th>Parameters</th>
<th>Tolerance Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>6.5-9.0</td>
</tr>
<tr>
<td>2</td>
<td>BOD, mg/L</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>COD, mg/L</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>TSS, mg/L</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>NH4-N, mg/L</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>N-total, mg/L</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Fecal Coliform, MPM/100ml</td>
<td>&lt; 230</td>
</tr>
<tr>
<td>8</td>
<td>PO4-P, mg/L</td>
<td>2</td>
</tr>
</tbody>
</table>

### ANNEXURE-III

<table>
<thead>
<tr>
<th>Chim. No.</th>
<th>Chimney attached to</th>
<th>Minimum chimney height to be provided above ground level/roof level (AGL/ARL)</th>
<th>Rate of emission Nm³/Hr.</th>
<th>Constituents to be controlled in the emission</th>
<th>Tolerance limits mg/Nm³</th>
<th>Air pollution control equipment to be installed, in addition to chimney height as per Col.(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 no. of 2028 TPH Boiler</td>
<td>275 M AGL with twin flue and ESP and FGD</td>
<td>-</td>
<td>Particulate matter</td>
<td>50</td>
<td>Electrostatic Precipitator &amp; FGD</td>
</tr>
<tr>
<td>2-3</td>
<td>Individual chimney of 30 M AGL</td>
<td>-</td>
<td>NOx</td>
<td>710 ppmv</td>
<td>100</td>
<td>Acoustic enclosures</td>
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<td></td>
<td></td>
<td></td>
<td>NMHC</td>
<td>100</td>
<td>150</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>75</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>CO</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The applicant shall provide Dust extraction and dust suppression systems in coal crusher Plant and transfer points.

The ambient noise levels shall not exceed 75 dB(A) leq. and 70 dB(A) leq. during day and night time respectively.

**Copy to Regional officer,** for information and ensure compliance to following directions issued by CPCB.

While issuing Consent to operate or renewing CTO to a plant, industry or process under the Water Act and Air Act & installation handling hazardous substance(s) beyond the prescribed threshold limits as listed under the PLI Act, 1991, the SPCB shall ensure compliance to the following from the occupier;

1. Details on current PLI policy would be compulsorily sought (as a checklist).
2. Shall seek a copy of successive Public Liability Insurance Policies (year wise) since undertaking the use, trade or sewage of listed hazardous chemicals as under the PLI Act, 1991.
4. The SPCBs shall seek a copy of on-site emergency plan.