



**Reliance**

**Industries Limited**

**Patalganga Manufacturing Division**

B-1 to B5, A3, MIDC Industrial Area, Patalganga - 410 220, Tal. Khalapur, Dist, Raigad, Maharashtra

Tel: 02192 - 356000/667000 Fax: 02192 356199

CIN Number L17110MH1973PLCO19786

**By E mail Submission**

**1<sup>st</sup> December , 2023**

**To,**

**Additional Principal Chief Conservator of Forest**  
Ministry of Environment , Forests & Climate Change  
Regional Office , Western Central Zone ,  
New Secretariat Building, Civil Lanes,  
NAGPUR – 440001, Maharashtra

Respected Sir,

**Subject :** Half yearly EC Compliance report for the period April 2023 to September 2023.

Reference : EC granted by MOEF vide file no F.No. J-11011/224/2018-IA-II(I) dated 03.12.2020 issued for 'Expansion and Change in Product Mix by way of Debottlenecking and Modernization by M/s Reliance Industries Limited at Raigad, Maharashtra'

Sir,

Please find enclosed Half yearly EC Compliance report for the period April 2023 to September 2023 for the above Environment Clearance.

This is for your information and records please

Yours faithfully,

For **Reliance Industries Limited**

  
**Authorized Signatory**

**Reliance Industries Limited – Patalganga Manufacturing Division**

**Compliance status for the Environment Clearance Order No. F.No. J-11011/224/2018-IA-II(I) dated 03.12.2020 issued for 'Expansion and Change in Product Mix by way of Debottlenecking and Modernisation by M/s Reliance Industries Limited at Raigad, Maharashtra', as on 30.09.2023 - Project under implementation**

**Sr. No. Conditions of the Environment Clearance (EC)**

**Compliance of the EC conditions**

**A. Specific Conditions**

|   |   |   |
|---|---|---|
| 1 | The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.                              | Complied. All actions are included in the plant design at the implementation stage. |
| 2 | Total fresh-water requirement shall not exceed 16960 cum/day, proposed to be met from MIDC water supply. Necessary permission in this regard shall be obtained from the concerned regulatory authority.<br><br>The fresh-water requirement shall be reduced after installation of rainwater harvesting system in the unit/project area. | Agreed. Fresh water will not exceed 16,960 cum / day.                               |
| 3 | Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.   | Agreed  |
| 4 | Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.   | Complied. Included in the design.   |
| 5 | Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.  | Yes it is being followed and requisite precautions are being taken in the design.   |

|    |  |   |
|----|--|---|
| 6  | Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers / cement industry.  | Will be implemented after Project commission.   |
| 7  | Regular VOC monitoring shall be done at vulnerable points.   | LDAR program implemented for VOC Monitoring.  |
| 8  | The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system  | The Oil Containing sludge is collected in drums and then disposed through Registered Recyclers. The same procedure will be continued. |
| 9  | Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.   | Will be installed at the time of project implementation.  |
| 10 | <p>The company shall undertake waste minimization measures as below:</p> <ol style="list-style-type: none"> <li>Metering and control of quantities of active ingredients to minimize waste.</li> <li>Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</li> <li>Use of automated filling to minimize spillage.</li> <li>Use of Close Feed system into batch reactors.</li> <li>Venting equipment through vapour recovery system .</li> <li>Use of high pressure hoses for equipment cleaning etc. to reduce wastewater generation .</li> </ol> | Will be complied by inclusion in the design stage.  |

|    |  |  |
|----|--|--|
| 11 | The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road-sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. | Plantation completed .   |
| 12 | As proposed, Rs 5.76 crores shall be allocated for Corporate Environment Responsibility (CER) shall be utilized for meeting the commitment of the social-economic issues and as per the proposed action plan. The CER plan shall be completed within three year of the proposed project.               | Being done   |
| 13 | The project proponent shall ensure 70% of the employment to the local people, as per the applicable law. The project proponent shall set up a skill development centre/provide skill development training to village people.   | Will be implemented during Project Execution and after commissioning.  |
| 14 | A separate Environmental Management Cell (having qualified person with Environmental Science/ Environmental Engineering / specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.     | Already in place   |
| 15 | The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.  | At RIL PMD we have full fledged fire fighting systems in place along with competent staff . We also have 2 full fledged Fire Stations to respond in case of Emergency. |

|                                 |   |  |
|---------------------------------|---|--|
| 16                              | Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. In case of the treated effluent to be utilized for irrigation/ gardening, real time monitoring system shall be installed at the ETP outlet. | It will be implemented for the new Stack. For Existing stacks already installed.   |
| 17                              | PP to set up occupational health Centre for surveillance of the worker 's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.   | Occupational Health centre already in place  |
| 18                              | The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.  | National Emission Standards for Petrochemical ( Basic & intermediates ) issued by the Ministry vide G.S.R.820 E dated 9th November,2012 as amended time to time is followed. |
| 19                              | Recommendations of mitigation measures from possible accident shall be implemented based on advanced risk Assessment studies conducted for worst case scenarios using latest techniques   | Bing followed for the unit being implemented.  |
| 20                              | The project proponent shall develop at least 1 MW green energy/solar energy   | The 1 .5 MW solar power project implemented outside PMD Complex  |
| <b>13.1. General Conditions</b> |   |  |

|   |   |   |
|---|---|---|
| 1 | <p>No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/ SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.</p> | <p>Will be followed</p>   |
| 2 | <p>The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.</p>   | <p>Offices, control rooms etc and street lights are converted into LED. Plant lighting approx. 25% converted into LED and planned to complete balance in next 3 years</p> |
| 3 | <p>The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).</p>   | <p>Ambient Noise levels are well within the prescribed limits.<br/>Monthly monitoring conducted through MOEF recognized Laboratory / consultant</p>                       |
| 4 | <p>The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-development measures including community welfare measures in the project area for the overall improvement of the environment.</p>   | <p>Yes will be followed</p>   |

|   |  |  |
|---|--|--|
| 5 | <p>The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.</p>                             | <p>Yes it is being planned.</p>  |
| 6 | <p>A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.</p>  | <p>Not applicable as the Manufacturing Unit is in MIDC Industrial Area.</p>        |
| 7 | <p>The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&amp;CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.</p>                 | <p>Will be followed</p>  |
| 8 | <p>The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted 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 environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&amp;CC by e-mail.</p> | <p>Environment Statement is submitted to State Pollution Control Board Yearly.</p> |



|    |   |  |
|----|---|--|
| 9  | <p>The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at <a href="https://parivesh.nic.in/">https:// parivesh.nic.in/</a>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.</p> | <p>Completed by advertising in the Local language and English Language news papers within 7 days of receiving the Environment Clearance.</p> |
| 10 | <p>The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.</p>   | <p>Yes will inform the Regional Office as well as Ministry.</p>  |
| 11 | <p>This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.</p>  | <p>Noted</p>   |



Tree Plantation at the periphery of Boundary wall



Installation of Solar Panel outside the PMD Site



## Six Monthly Ambient Air Monitoring Results

| LAB - L1 Laboratory Terrace             |                   |      |      |         |  |
|---|-------------------|------|------|---------|--|
| Parameter                               | Units             | Max  | Min  | Average |  |
| Sulphur dioxide as SO <sub>2</sub>      | µg/m <sup>3</sup> | 29.1 | 13.3 | 23.6    |  |
| Nitrogen dioxide as NO <sub>2</sub>     | µg/m <sup>3</sup> | 47.7 | 20.7 | 37.5    |  |
| PM <sub>10</sub>                        | µg/m <sup>3</sup> | 84   | 28.2 | 68.8    |  |
| PM <sub>2.5</sub>                       | µg/m <sup>3</sup> | 32.5 | 10   | 23.9    |  |
| Carbon monoxide as CO                   | µg/m <sup>3</sup> | 1.16 | 0.52 | 0.8     |  |
| Ozone as O <sub>3</sub>                 | µg/m <sup>3</sup> | 21.7 | 6.97 | 12.5    |  |
| Ammonia as NH <sub>3</sub>              | mg/m <sup>3</sup> | 32.9 | 0.33 | 20.5    |  |
| Benzo(a)pyrene as BaP                   | ng/m <sup>3</sup> | 0    | 0    | 0       |  |
| Lead as Pb                              | ng/m <sup>3</sup> | 0    | 0    | 0       |  |
| Nickel as Ni                            | ng/m <sup>3</sup> | 0    | 0    | 0       |  |
| Arsenic as As                           | µg/m <sup>3</sup> | 0    | 0    | 0       |  |
| Benzene[C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0       |  |
| NMHC                                    | ppm               | 0.52 | 0.23 | 0.4     |  |
| LAB - B1 Tank farm                      |                   |      |      |         |  |
| Sulphur dioxide as SO <sub>2</sub>      | µg/m <sup>3</sup> | 30.7 | 15.6 | 24.4    |  |
| Nitrogen dioxide as NO <sub>2</sub>     | µg/m <sup>3</sup> | 44.3 | 22.7 | 38.1    |  |
| PM <sub>10</sub>                        | µg/m <sup>3</sup> | 87.5 | 32   | 71.8    |  |
| PM <sub>2.5</sub>                       | µg/m <sup>3</sup> | 35   | 11.2 | 26.1    |  |
| Carbon monoxide as CO                   | µg/m <sup>3</sup> | 0.95 | 0.38 | 0.7     |  |

|   |                   |      |      |      |
|---|-------------------|------|------|------|
| Ozone as O <sub>3</sub>                 | µg/m <sup>3</sup> | 18.4 | 7.17 | 11.2 |
| Ammonia as NH <sub>3</sub>              | mg/m <sup>3</sup> | 35.7 | 15.4 | 29.1 |
| Benzo(a)pyrene as BaP                   | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Lead as Pb                              | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Nickel as Ni                            | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Arsenic as As                           | µg/m <sup>3</sup> | 0    | 0    | 0    |
| Benzene[C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0    |
| NMHC                                    | ppm               | 0.48 | 0.23 | 0.4  |
| <b>LAB – A3 Tank farm substation</b>    |                   |      |      |      |
| Sulphur dioxide as SO <sub>2</sub>      | µg/m <sup>3</sup> | 33.8 | 17.3 | 27   |
| Nitrogen dioxide as NO <sub>2</sub>     | µg/m <sup>3</sup> | 45.6 | 25.2 | 39.2 |
| PM <sub>10</sub>                        | µg/m <sup>3</sup> | 86.1 | 36.8 | 73.9 |
| PM <sub>2.5</sub>                       | µg/m <sup>3</sup> | 37.5 | 14.2 | 27.5 |
| Carbon monoxide as CO                   | µg/m <sup>3</sup> | 0.85 | 0.46 | 0.6  |
| Ozone as O <sub>3</sub>                 | µg/m <sup>3</sup> | 24.2 | 7.6  | 11.6 |
| Ammonia as NH <sub>3</sub>              | mg/m <sup>3</sup> | 36.7 | 19.2 | 30.2 |
| Benzo(a)pyrene as BaP                   | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Lead as Pb                              | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Nickel as Ni                            | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Arsenic as As                           | µg/m <sup>3</sup> | 0    | 0    | 0    |
| Benzene[C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0    |
| NMHC                                    | ppm               | 0.31 | 0.22 | 0.3  |
| <b>PTA – Safety Building Terrace</b>    |                   |      |      |      |
| Sulphur dioxide as SO <sub>2</sub>      | µg/m <sup>3</sup> | 32.2 | 14.3 | 26.2 |

|  |                   |      |      |      |
|--|-------------------|------|------|------|
| Nitrogen dioxide as NO <sub>2</sub>      | µg/m <sup>3</sup> | 44.1 | 23.3 | 36.7 |
| PM <sub>10</sub>                         | µg/m <sup>3</sup> | 88.4 | 32.6 | 71.5 |
| PM <sub>2.5</sub>                        | µg/m <sup>3</sup> | 36.3 | 11.3 | 25.8 |
| Carbon monoxide as CO                    | µg/m <sup>3</sup> | 0.9  | 0.34 | 0.6  |
| Ozone as O <sub>3</sub>                  | µg/m <sup>3</sup> | 21.9 | 7.27 | 11.1 |
| Ammonia as NH <sub>3</sub>               | mg/m <sup>3</sup> | 36.7 | 14.7 | 27.7 |
| Benzo(a)pyrene as BaP                    | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Lead as Pb                               | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Nickel as Ni                             | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Arsenic as As                            | µg/m <sup>3</sup> | 0    | 0    | 0    |
| Benzene [C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0    |
| NMHC                                     | ppm               | 0.47 | 0.21 | 0.3  |
| PTA – Energy center                      |                   |      |      |      |
| Sulphur dioxide as SO <sub>2</sub>       | µg/m <sup>3</sup> | 32.2 | 14.3 | 26.2 |
| Nitrogen dioxide as NO <sub>2</sub>      | µg/m <sup>3</sup> | 44.1 | 23.3 | 36.7 |
| PM <sub>10</sub>                         | µg/m <sup>3</sup> | 88.4 | 32.6 | 71.5 |
| PM <sub>2.5</sub>                        | µg/m <sup>3</sup> | 36.3 | 11.3 | 25.8 |
| Carbon monoxide as CO                    | µg/m <sup>3</sup> | 0.9  | 0.34 | 0.6  |
| Ozone as O <sub>3</sub>                  | µg/m <sup>3</sup> | 21.9 | 7.27 | 11.1 |
| Ammonia as NH <sub>3</sub>               | mg/m <sup>3</sup> | 36.7 | 14.7 | 27.7 |
| Benzo(a)pyrene as BaP                    | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Lead as Pb                               | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Nickel as Ni                             | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Arsenic as As                            | µg/m <sup>3</sup> | 0    | 0    | 0    |
| Benzene [C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0    |
| NMHC                                     | ppm               | 0.47 | 0.21 | 0.3  |

| LAB – L1 Laboratory Terrace              |                   |      |      |      |
|--|-------------------|------|------|------|
| Sulphur dioxide as SO <sub>2</sub>       | µg/m <sup>3</sup> | 27.6 | 22.9 | 25.2 |
| Nitrogen dioxide as NO <sub>2</sub>      | µg/m <sup>3</sup> | 46.3 | 31.4 | 41.4 |
| PM <sub>10</sub>                         | µg/m <sup>3</sup> | 79.1 | 36.7 | 68.5 |
| PM <sub>2.5</sub>                        | µg/m <sup>3</sup> | 30   | 13.4 | 25.3 |
| Carbon monoxide as CO                    | µg/m <sup>3</sup> | 0.95 | 0.27 | 0.6  |
| Ozone as O <sub>3</sub>                  | µg/m <sup>3</sup> | 16.2 | 7.95 | 10.6 |
| Ammonia as NH <sub>3</sub>               | mg/m <sup>3</sup> | 36.7 | 17.9 | 30.1 |
| Benzo(a)pyrene as BaP                    | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Lead as Pb                               | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Nickel as Ni                             | ng/m <sup>3</sup> | 0    | 0    | 0    |
| Arsenic as As                            | µg/m <sup>3</sup> | 0    | 0    | 0    |
| Benzene [C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0    |
| NMHC                                     | ppm               | 0.46 | 0.22 | 0.3  |
| LAB – B1 Tank farm                       |                   |      |      |      |
| Sulphur dioxide as SO <sub>2</sub>       | µg/m <sup>3</sup> | 30.5 | 19.3 | 24.9 |
| Nitrogen dioxide as NO <sub>2</sub>      | µg/m <sup>3</sup> | 48.4 | 27.8 | 38.7 |
| PM <sub>10</sub>                         | µg/m <sup>3</sup> | 82.7 | 47.5 | 69.1 |
| PM <sub>2.5</sub>                        | µg/m <sup>3</sup> | 32.5 | 17.2 | 27.1 |
| Carbon monoxide as CO                    | µg/m <sup>3</sup> | 0.85 | 0.5  | 0.6  |
| Ozone as O <sub>3</sub>                  | µg/m <sup>3</sup> | 19.2 | 8.25 | 11.5 |
| Ammonia as NH <sub>3</sub>               | mg/m <sup>3</sup> | 40.2 | 18.7 | 31.8 |
| Benzo(a)pyrene as BaP                    | ng/m <sup>3</sup> | 0    | 0    | 0    |

|  |                   |      |      |      |   |
|--|-------------------|------|------|------|---|
| Lead as Pb                               | ng/m <sup>3</sup> | 0    | 0    | 0    | 0 |
| Nickel as Ni                             | ng/m <sup>3</sup> | 0    | 0    | 0    | 0 |
| Arsenic as As                            | µg/m <sup>3</sup> | 0    | 0    | 0    | 0 |
| Benzene[C <sub>6</sub> H <sub>6</sub> ]  | µg/m <sup>3</sup> | 0    | 0    | 0    | 0 |
| NMHC                                     | ppm               | 0.37 | 0.21 | 0.3  |   |
| LAB – A3 Tank farm substation            |                   |      |      |      |   |
| Sulphur dioxide as SO <sub>2</sub>       | µg/m <sup>3</sup> | 33   | 20.4 | 26.5 |   |
| Nitrogen dioxide as NO <sub>2</sub>      | µg/m <sup>3</sup> | 51.3 | 28.4 | 40.3 |   |
| PM <sub>10</sub>                         | µg/m <sup>3</sup> | 87.7 | 50.4 | 72.6 |   |
| PM <sub>2.5</sub>                        | µg/m <sup>3</sup> | 33.8 | 19.4 | 27.5 |   |
| Carbon monoxide as CO                    | µg/m <sup>3</sup> | 0.98 | 0.47 | 0.7  |   |
| Ozone as O <sub>3</sub>                  | µg/m <sup>3</sup> | 14.5 | 8.68 | 10.4 |   |
| Ammonia as NH <sub>3</sub>               | mg/m <sup>3</sup> | 39.4 | 19.4 | 31.4 |   |
| Benzo(a)pyrene as BaP                    | ng/m <sup>3</sup> | 0    | 0    | 0    |   |
| Lead as Pb                               | ng/m <sup>3</sup> | 0    | 0    | 0    |   |
| Nickel as Ni                             | ng/m <sup>3</sup> | 0    | 0    | 0    |   |
| Arsenic as As                            | µg/m <sup>3</sup> | 0    | 0    | 0    |   |
| Benzene [C <sub>6</sub> H <sub>6</sub> ] | µg/m <sup>3</sup> | 0    | 0    | 0    |   |
| NMHC                                     | ppm               | 0.42 | 0.23 | 0.3  |   |

## Six Monthly Stack Monitoring Results

| PTA – Px Heater<br>1042             |                    | Units | Max   | Min  | Average |
|-------------------------------------|--------------------|-------|-------|------|---------|
| Parameter                           |                    |       |       |      |         |
| Particulate Matter                  | mg/Nm <sup>3</sup> | 8.7   | 4.66  | 7    |         |
| Sulphur dioxide as SO <sub>2</sub>  | Kg/day             | 11.43 | 2.37  | 7    |         |
| Nitrogen dioxide as NO <sub>2</sub> | PPM                | 39.27 | 18    | 25.5 |         |
| Carbon monoxide as CO               | PPM                | 19.84 | 8.84  | 14   |         |
| PTA – Px Heater 2001                |                    |       |       |      |         |
| Particulate Matter                  | mg/Nm <sup>3</sup> | 8.99  | 4.4   | 6.9  |         |
| Sulphur dioxide as SO <sub>2</sub>  | Kg/day             | 3.45  | 0.96  | 2.4  |         |
| Nitrogen dioxide as NO <sub>2</sub> | PPM                | 41.29 | 17.99 | 27.4 |         |
| Carbon monoxide as CO               | PPM                | 17.34 | 8.6   | 13.4 |         |
| PTA – Px Heater 2002                |                    |       |       |      |         |
| Particulate Matter                  | mg/Nm <sup>3</sup> | 25.19 | 4.36  | 11   |         |
| Sulphur dioxide as SO <sub>2</sub>  | Kg/day             | 25.19 | 0.77  | 6.1  |         |
| Nitrogen dioxide as NO <sub>2</sub> | PPM                | 36.67 | 19.05 | 26.5 |         |



| Carbon monoxide as CO               | PPM                | 14.75 | 5.81  | 11.1 |
|-------------------------------------|--------------------|-------|-------|------|
| PTA – Px Heater 3001,2,3            |                    |       |       |      |
| Particulate Matter                  | mg/Nm <sup>3</sup> | 8.06  | 4.26  | 6.4  |
| Sulphur dioxide as SO <sub>2</sub>  | Kg/day             | 20.42 | 5.41  | 12.8 |
| Nitrogen dioxide as NO <sub>2</sub> | PPM                | 34.19 | 15.19 | 23.3 |
| Carbon monoxide as CO               | PPM                | 15.1  | 10.3  | 12.9 |
| PTA – Boiler C                      |                    |       |       |      |
| Particulate Matter                  | mg/Nm <sup>3</sup> | 8.44  | 4.76  | 6.8  |
| Sulphur dioxide as SO <sub>2</sub>  | Kg/day             | 51.13 | 43.5  | 47.8 |
| Nitrogen dioxide as NO <sub>2</sub> | PPM                | 29.23 | 23.05 | 26.4 |
| Carbon monoxide as CO               | PPM                | 18.63 | 15.44 | 16.8 |
| PTA – Boiler A                      |                    |       |       |      |
| Particulate Matter                  | mg/Nm <sup>3</sup> | 8.54  | 8.54  | 8.5  |
| Sulphur dioxide as SO <sub>2</sub>  | Kg/day             | 62.1  | 16.89 | 34.2 |
| Nitrogen dioxide as NO <sub>2</sub> | PPM                | 39.27 | 24.85 | 33.1 |
| Carbon monoxide as CO               | PPM                | 14.5  | 6.2   | 9.6  |

## Six Monthly Treated Effluent Analysis

| Sr. No. | PTA -Treated Effluent                             | Apr<br>1 23 | May -<br>23 | Jun-<br>23 | July-<br>23 | Aug-23 | Sept-<br>23 | Max   | Min   | Avg    |
|---------|---|-------------|-------------|------------|-------------|--------|-------------|-------|-------|--------|
| 1       | pH @ 25°C   | 7.18        | 7.10        | 7.12       | 7.21        | 6.95   | 6.89        | 7.21  | 6.95  | 7.07   |
| 2       | Suspended Solids @ 103°C, mg/l                    | 28          | 22          | 18         | 16          | 12     | 10          | 28    | 10    | 17.66  |
| 3       | Chemical Oxygen Demand, mg/l                      | 60          | 70          | 60         | 70          | 10     | 20          | 70    | 10    | 48.33  |
| 4       | Biochemical Oxygen Demand @ 27°C for 3 days, mg/l | 22          | 24          | 28         | 24          | 3.6    | 6.8         | 28    | 3.6   | 8.06   |
| 5       | Total Dissolved Solids @ 180°C, mg/l              | 1120        | 1210        | 1320       | 1290        | 1340   | 1290        | 1340  | 1120  | 1261.6 |
| 6       | Chloride as Cl <sup>-</sup> , mg/l                | 220         | 225         | 230        | 220         | 268    | 260         | 268   | 220   | 237.16 |
| 7       | Sulphates as SO <sub>4</sub> <sup>2-</sup> , mg/l | 155         | 160         | 158        | 150         | 170    | 175         | 175   | 150   | 161.33 |
| 8       | Oil & Grease, mg/l                                | < 2.0       | < 2.0       | < 2.0      | < 2.0       | < 2.0  | < 2.0       | < 2.0 | < 2.0 | < 2.0  |