Atul Limited

Project: Expansion of agro-chemicals (Pesticides/Herbicides) and bulk drug and pharmaceuticals manufacturing unit
EC Compliance Report for the period November 2018-April 2019 to EC F. No. J -11011/48/2003-IA II (I)
dated 20.02.2004.

<table>
<tr><th>No.</th><th>Condition</th><th>Compliance</th></tr>
<tr><td></td><td>A. Specific Conditions :</td><td></td></tr>
<tr><td>i</td><td>The gaseous emissions (SO_2, NOx, and HCl) and particulate matters from various process units should confirm to the standards prescribed by the concerned authorities from time to time.</td><td>Complied.

The gaseous emissions (SO_2, NOx, and HCl) and particulate matters from various process units confirms to the standards prescribed by GPCB through CCA.

Details are given in below Table:

Summary of Process Stack results:
<table>
<tr><th rowspan="2">No.</th><th rowspan="2">Parameter</th><th rowspan="2">Standard values as per CCA</th><th rowspan="2">Unit</th><th colspan="3">Values for the period Nov18 – Apr19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>SO_2</td><td>40</td><td>mg/Nm^3</td><td>3.8</td><td>17.8</td><td>8.97</td></tr>
<tr><td>2</td><td>SO_2 (kg/T)</td><td>2</td><td>kg/T</td><td>0.5</td><td>1.7</td><td>0.977</td></tr>
<tr><td>3</td><td>NOx</td><td>25</td><td>mg/Nm^3</td><td>10.5</td><td>13.5</td><td>10.98</td></tr>
<tr><td>4</td><td>HCl</td><td>20</td><td>mg/Nm^3</td><td>4.1</td><td>9.9</td><td>6.11</td></tr>
<tr><td>5</td><td>PM</td><td>150</td><td>mg/Nm^3</td><td>8.5</td><td>85</td><td>45.18</td></tr>
<tr><td>6</td><td>PM with Pesticide compound</td><td>20</td><td>mg/Nm^3</td><td>4.2</td><td>9.5</td><td>7.0</td></tr>
</table>
Summary of Flue Stack results:
<table>
<tr><th rowspan="2">No.</th><th rowspan="2">Parameter</th><th rowspan="2">Standard values as per CCA</th><th rowspan="2">Unit</th><th colspan="3">Values for the period Nov18 – Apr19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>PM</td><td>100</td><td>mg/Nm^3</td><td>50</td><td>80</td><td>61.83</td></tr>
<tr><td>2</td><td>PM (New Boiler)</td><td>50</td><td>mg/Nm^3</td><td>35</td><td>49</td><td>41.5</td></tr>
<tr><td>3</td><td>SO_2</td><td>600</td><td>mg/Nm^3</td><td>75</td><td>128</td><td>96.41</td></tr>
<tr><td>4</td><td>NOx</td><td>600</td><td>mg/Nm^3</td><td>105</td><td>145</td><td>120.09</td></tr>
<tr><td>5</td><td>NOx (NewBoiler)</td><td>300</td><td>mg/Nm^3</td><td>71</td><td>95</td><td>79.67</td></tr>
</table>
Details of stack results for the compliance period is given in Table 1.
(Pl. see pg. no. 11)</td></tr>
<tr><td></td><td>At no time, the emission levels should go beyond the stipulated standards.</td><td>Complied.

Monthly monitoring is being done by GPCB approved, NABL approved agencies. At no time, the emissions exceeded the prescribed limits during report period.

Summary of stack results given in specific condition no. i as above.</td></tr>
<tr><td></td><td>In the event of failure of pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.</td><td>Complied.

No such case happened during compliance period.</td></tr>
</table>

<table>
<tr>
<td>ii</td>
<td>Ambient air quality monitoring Station should be set up in down wind direction as well as where max. ground level concentration of SPM anticipated in consultation with the state pollution control board.</td>
<td>Complied.

10 Ambient air quality monitoring Station have been set up in down wind direction as well as where max. ground level concentration of SPM anticipated in consultation with GPCB. The same had been shown to authority like SPCB, CPCB & MoEF during their visit to our factory.

List of our ambient air monitoring station is given below:
<table>
<tr><th>No.</th><th>Location</th></tr>
<tr><td>1</td><td>66 KVA GEB substation</td></tr>
<tr><td>2</td><td>Opposite Shed D</td></tr>
<tr><td>3</td><td>Near ETP (West Site)</td></tr>
<tr><td>4</td><td>ETP Plat (North site)</td></tr>
<tr><td>5</td><td>Near TSDF</td></tr>
<tr><td>6</td><td>Near Main Guest House</td></tr>
<tr><td>7</td><td>At Wyeth Colony</td></tr>
<tr><td>8</td><td>Gram panchayat hall</td></tr>
<tr><td>9</td><td>Near Main office, North site</td></tr>
<tr><td>10</td><td>Water tank at Haria Road</td></tr>
</table>
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<tr>
<td>iii</td>
<td>Fugitive emission in work zone environment, product, raw material storage areas must be regularly monitored.</td>
<td>Complied.

Fugitive emissions in the work zone environment and raw material storage area is being regularly monitored by NABL approved third party.

The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards. Parameter wise summery is given below:
<table>
<tr><th rowspan="2">Plant</th><th rowspan="2">Area</th><th rowspan="2">Parameter</th><th rowspan="2">Prescribed Limit</th><th colspan="3">Values of VOCs in Milligram per NM^3 for the period Nov18 –Apr19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td rowspan="2">2,4 D</td><td>Reactor</td><td>Phenol</td><td>19</td><td>9.2</td><td>14.1</td><td>12.0</td></tr>
<tr><td>Buffer tank</td><td>Chlorine</td><td>3</td><td>0.8</td><td>2.1</td><td>1.3</td></tr>
<tr><td rowspan="2">Resorcinol</td><td>Benzene storage tank area near vent</td><td>Benzene</td><td>15</td><td>5.4</td><td>14.0</td><td>9.4</td></tr>
<tr><td>Near Extraction/scrubber unit</td><td>Butyl acetate</td><td>-</td><td>1.6</td><td>10.8</td><td>5.9</td></tr>
<tr><td rowspan="2">Pharma</td><td>At second floor work area</td><td>Ammonia</td><td>18</td><td>9.9</td><td>14.6</td><td>11.7</td></tr>
<tr><td>Ammonia recovery area</td><td>Ammonia</td><td>18</td><td>3.1</td><td>12.2</td><td>7.4</td></tr>
<tr><td rowspan="2">Epoxy - I</td><td>At vacuum pump 2nd floor</td><td>ECH</td><td>10</td><td>2.6</td><td>5.4</td><td>3.6</td></tr>
<tr><td>At vessel POS 1208 G.F</td><td>ECH</td><td>10</td><td>3.1</td><td>6.2</td><td>5.0</td></tr>
<tr><td>Shed H</td><td>At second floor work area</td><td>Nitrobenzene</td><td>5</td><td>1.3</td><td>4.4</td><td>2.8</td></tr>
<tr><td>Shed J</td><td>Buffer Tank</td><td>Chlorine</td><td>3</td><td>1.1</td><td>2.6</td><td>1.9</td></tr>
</table>
</td>
</tr>
</table>

		Results for the compliance period is given in **Table 2.** (Pl. see pg. no. 15)
	The company should install alkali scrubbers for scrubbing of HCl.	Complied. Alkali scrubbers for scrubbing of HCl have been installed. In fact we have installed dual scrubbing system i.e. combination of caustic and water scrubber system for scrubbing of HCl in majority of plants like 2,4 D plant, Shed C, Shed F, Shed H etc.
	pH of the scrubber tank should be monitored regularly.	Complied. pH of the scrubber tank is monitored regularly and logged. It is a regular operating practice.
	Liquid effluent generated from the scrubber should be sent to effluent treatment plant.	Complied. Liquid effluent generated from the scrubber is being sent to ETP along with plant effluent stream.
	All the process equipment/reaction vessels should be connected with central exhaust system.	Complied. Central exhaust system has been provided at strategic locations and the critical operations evolving the hazardous gases are routed through multiple stage scrubbing system.
	Further measures should be taken to reduce the losses of solvents.	Complied. Reactors are connected to chilled brine condenser system. Breather valves have been provided to all solvent storage tanks.
	Cooling arrangement should be made for all the solvent storage tanks to minimize evaporation losses.	Complied. Our Most of solvent storage tanks are underground. All the storage tanks are in close loop which is connected to condenser to minimize evaporation losses.
	The company should monitor VOCs from the incinerator and data submitted regularly to SPCB and Ministry of Environment and forests.	Complied. Incinerator stack has been regularly monitored and data submitted regularly to GPCB and MoEF through six monthly EC compliance report. Details of stack results for the compliance period is given in **Table 1.** (Pl. see pg. no. 11)

<table>
<tr>
<td>iv</td>
<td>The effluent generation should not exceed 1191 m3/day (936 m3/d of process effluent and 255 m3/d of domestic effluent).</td>
<td>Complied.

However, since we have another EC granted in 2009 for expansion, we request to consider latest figures given in same.
According to specific condition No. i) of EC F No. J 11011/85/2009 IA II (I) dated 13.05.2009, Industrial Waste water generation shall not exceed 17,283 m³/d.

The average wastewater generation for the report period is 8636 m³/day only. Detail break up is given below:
<table>
<tr><th>Wastewater generation m³/day</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>256660</td><td>251819</td><td>243284</td><td>238044</td><td>300815</td><td>272559</td><td>1563181</td></tr>
<tr><td>Per day</td><td>8555</td><td>8123</td><td>7848</td><td>8502</td><td>9704</td><td>9085</td><td>Avg. 8636</td></tr>
</table>

The maximum values during the compliance period confirms that at no time the wastewater generation went beyond the stipulated standards. Summary is given below:
<table>
<tr><th rowspan="2">Wastewater generation</th><th rowspan="2">Stipulated value</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Wastewater generation m³/d</td><td>17283</td><td>7848</td><td>9704</td><td>8636</td></tr>
</table>
</td>
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<tr>
<td></td>
<td>The effluent should be segregated at source of generation.</td>
<td>Complied.

Concentrated effluent is segregated and chemicals are being retrieved through recovery process/distillation.</td>
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<tr>
<td></td>
<td>The Concentrated effluent stream should be incinerated and non-concentrated effluent after tertiary treatment should be discharged into the CETP.</td>
<td>Complied.

Among the referred expansion project, only one stream from 2, 4 D is concentrated. We have installed distillation plant where the stream is distilled and product so obtained are sold. After recovery of product, lean effluent is sent to ETP where it is treated without any difficulty. Hence no incineration is required.</td>
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<table>
<tr>
<td></td>
<td>The treated effluent should be discharged into estuary zone of river Par through 4.0 km long HDPE pipe line only after it meets the standards stipulated by the Gujarat Pollution Control Board/EPA rules.</td>
<td>Complied.

The discharged effluent is meeting all state pollution control board limits and values of various parameters of treated effluent is given in Table 3. (Pl. see pg. no. 15) Apart from the same, we have carried out EIA study of river Par in 2009 & 2015.

The maximum values during the compliance period confirms that at no time the emission went beyond the stipulated standards. Summary is given below:
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Parameter</th><th rowspan="2">Norms</th><th colspan="3">Values for the period Nov18 –Apr19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>pH</td><td>5.5-9.0</td><td>7.08</td><td>7.95</td><td>7.44</td></tr>
<tr><td>2</td><td>Temperature</td><td>40 deg C</td><td>30.1</td><td>32.6</td><td>31.05</td></tr>
<tr><td>3</td><td>Colour (pt. co. scale)in units</td><td>---</td><td>40</td><td>130</td><td>65.00</td></tr>
<tr><td>4</td><td>Suspended solids</td><td>100 mg/l</td><td>23</td><td>86</td><td>52.00</td></tr>
<tr><td>5</td><td>Phenolic Compounds</td><td>5 mg/l</td><td>0.28</td><td>0.75</td><td>0.48</td></tr>
<tr><td>6</td><td>Cyanides</td><td>0.2 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>7</td><td>Fluorides</td><td>2 mg/l</td><td>0.32</td><td>1.2</td><td>0.60</td></tr>
<tr><td>8</td><td>Sulphides</td><td>2 mg/l</td><td>0.4</td><td>1.8</td><td>1.33</td></tr>
<tr><td>9</td><td>Ammonical Nitrogen</td><td>50 mg/l</td><td>32</td><td>48</td><td>39.67</td></tr>
<tr><td>10</td><td>Total Chromium</td><td>2 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>11</td><td>Hexavalent Chromium</td><td>1 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>12</td><td>BOD (3 days at 27°C)</td><td>100 mg/l</td><td>44</td><td>70</td><td>61.50</td></tr>
<tr><td>13</td><td>COD</td><td>250 mg/l</td><td>202</td><td>232</td><td>216.67</td></tr>
</table>
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<tr>
<td></td>
<td>The domestic waste water should be disposed off through septic tank / soak pit system.</td>
<td>Complied.

Domestic waste water goes to septic tank and subsequently in to ETP for further treatment.

Detail of Domestic effluent generation is given in below table:
<table>
<tr><th>Domestic Wastewater generation m^3</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>11100</td><td>10832</td><td>10493</td><td>10283</td><td>12276</td><td>11856</td><td>66840</td></tr>
<tr><td>Per day</td><td>370</td><td>349</td><td>338</td><td>367</td><td>396</td><td>395</td><td>Avg. 369</td></tr>
</table>

The maximum, minimum and average values are given below:
<table>
<tr><th rowspan="2">Domestic Wastewater generation</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Domestic Wastewater generation m^3/d</td><td>338</td><td>396</td><td>369</td></tr>
</table>
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</tr>
<tr>
<td>v</td>
<td>The Company should also Set up a separate online fish pond using treated effluent, to ensure that the quality of treated effluent discharged into the par estuary does not have any adverse impact on the aquatic life.</td>
<td>Complied.

We have set up a separate online fish pond using treated effluent at our ETP.</td>
</tr>
</table>

<table>
<tr><td></td><td>The effluent quality at the discharge point must also be monitored periodically by an independent agency authorized by CPCB and report of the independent agency should be submitted to the Ministry's Regional office at Bhopal/CPCB/GPCB</td><td>Complied.

The effluent quality at the ETP discharge point is regularly being monitored by the Environmental auditors appointed by GPCB.

GPCB also monitor the treated effluent quality at regular intervals. Recent monitoring results of GPCB is attached as Annexure A.

The river water quality at the discharge point is regularly being monitored by GPCB. Agencies like Pollucon Laboratories Pvt. Ltd- MoEF approved agency, Envision Enviro Technologies Pvt. Ltd- NABET accredited have also done the monitoring in 2009 & 2105 respectively. Relevant extracts from latest reports were submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.</td></tr>
<tr><td>vi</td><td>As reflected in the EIA/EMP report, the solid waste and ETP sludge should be incinerated and incinerator ash should be disposed off in the landfill facility within the plant premises.</td><td>Complied.

ETP waste is disposed into our TSDF instead of incineration for which we have taken permission from MoEF vide letter dated 6.5.04 and same is also approved by GPCB through our CCA. We also send our incinerable waste for co-processing as per GPCB approval given through our CCA.</td></tr>
<tr><td></td><td>The ground water quality in and around the unit and the hazardous waste storage site should be regularly monitored and the data recorded to ensure that there is no contamination of the groundwater.</td><td>Complied.

Ground water quality is being checked regularly for in and around the unit and the hazardous waste storage site. Latest Groundwater analysis report is attached as Annexure B.</td></tr>
<tr><td>vii</td><td>The destructive efficiency of the incinerator should be assessed by an agency like CPCB and a report submitted to the Ministry.</td><td>Complied.

The destructive efficiency of the incinerator was assessed by M/s. SGS, a reputed agency in field on environmental monitoring. Report already submitted vide our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.</td></tr>
<tr><td>viii</td><td>The company should comply with the provisions of coastal Regulation Zone Notification of 1991 and Coastal Zone Management Plan of Gujarat.</td><td>Complied.</td></tr>
<tr><td></td><td>Further, specific conditions stipulated by the Forest and Environment Department, Government of Gujarat vide its letter No. ENV-1097-2942-P dated 27th January, 1998 for laying of pipe line for discharge of treated effluents through the estuary zone of the River Par Zone should be strictly adhered to.</td><td>Complied.

Detailed compliance report is already submitted to the Ministry vide our letter our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.</td></tr>
<tr><td>ix</td><td>Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.</td><td>Complied.

Occupational health surveillance of the workers is being done on regular basis and record maintained as per the factory act which is shown in below table:
<table><tr><th>Sr. No.</th><th>Month of Examination</th><th>Total No. of Employees</th></tr><tr><td>1</td><td>Quarter 3</td><td>571</td></tr><tr><td>2</td><td>Quarter 4</td><td>579</td></tr></table></td></tr>
<tr><td>x</td><td>The company should develop rainwater harvesting structures to the harvest the run off water from the rooftops and by laying a separate</td><td>Complied.

Company has expanded its harvesting pond capacity to 9000 KL capacity pond to harvest rain water. We are creating facility/ capacity to cater our consumption with</td></tr>
</table>

	storm water drains system for recharge of ground water and to reduce the drawl from the river Par.	rain harvested water with zero river drawls of water during the rainy days. Besides this, there are three check dams and pumping facility to harvest rain water. We are also constructing temporary sand bag dam on top of dam towards the end of monsoon to store additional free flowing rain water in river Par.
xi	The project authorities may undertake a survey to assess the impact of gaseous emissions/pollutants on the health including respiratory and digestive system of the population within and vicinity of the plant and report submitted to the State Government and to this Ministry within six months.	Complied. The survey was carried out to assess the impact of emission/pollutants on the health including respiratory & digestive systems of population within & vicinity of the plant. So far no major illness have been identified. Report submitted vide our letter ref. Atul/MoEF/Reg/4 dated 16.8.04.
xii	The Company should developed a green belt in an 25% of the plant area as per the CPCB guidelines.	Complied. Company has developed green belt and dense plantation inside the factory in area more than 33 % of total land. Company is having green belt development plan and planting more than about 50000 plants per year on regular basis.
xiii	As per the policy decision taken vide this Ministry's circular no. J-21011/8/98- IA II (I) dated 14th May 2002 and 23rd June, 2003, the company shall earmark a separate fund i.e. 1% of the total cost of the project (Rs. 25 Crores) for eco-development measures including community welfare measures in the project area.	Complied. We had submitted the Eco fund earmarked for eco development to GPCB with an intimation to MoEF vide our letter NRK/ECC/GPCB/3 dated 17.05.2004. Action plan related to Eco-fund also made as per process and communicated to authority wide our letter Atul/ECC/GPCB/ECO-fund/2 dated 2.11.2004. Copy of same again submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.
	The amount shall be deposited within three months in a separate account to be maintained by GPCB.	Complied. We had submitted the Eco fund earmarked for eco development to GPCB with an intimation to MoEF vide our letter NRK/ECC/GPCB/3 dated 17.05.2004.
	The plans in this regard should be submitted to the SPCB as well as to the Ministry within three months of issue of this letter.	Complied. Action plan related to Eco-fund also made as per process and communicated to authority vide our letter Atul/ECC/GPCB/ECO-fund/2 dated 2.11.2004.
	After approval of the action plan by GPCB, the amount deposited will be released to the project authorities in two installments based on the progress of implementation.	Complied.
B.	General Conditions	
i	The project authorities must strictly adhere to stipulations made by GPCB.	Complied. The company adheres to the compliances and has not exceeded the stipulation. This has been certified by our Environmental auditors, an authorized agency and nominated by GPCB; through Environmental audit every year. Latest compliance report by GPCB appointed Environmental auditor Faculty of Pacific school of Engineering, Dist. Surat for year 18-19 is attached as Annexure C.

<table>
<tr><td>ii</td><td>At no time, the emissions should not go beyond standards.</td><td>Complied.

Monthly monitoring is being done by NABL approved third party.
At no time, the emissions exceeded the prescribed limits during report period.

The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.

Summary of stack results given in specific condition no. i as above.</td></tr>
<tr><td></td><td>In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.</td><td>Complied.

No such incident happened during compliance period.</td></tr>
<tr><td>iii</td><td>The overall noise level in and around the plant area shall be kept well within the standard by providing noise control measures including acoustic hoods silencers, enclosures etc. on all source of noise generation.</td><td>Complied.

Acoustic hood, silencer and acoustic enclosures and insulation are provided at appropriate high noise area like turbine, DG set, vents etc.</td></tr>
<tr><td></td><td>The ambient noise levels should confirm to the standards prescribed under EPA Rules, 1989, viz. 75 (daytime) and 70bBA(night time)</td><td>Complied.

The ambient noise level is regularly monitored and its data are given in Table 4 and 5. (Pl. see pg. no. 16,)
The maximum values during the compliance period confirms that at no time the noise emission level went beyond the stipulated standards. Summary is given below:
Noise level monitoring data (Day Time)
<table>
<tr><th>Sr. No.</th><th>Location</th><th>Permissible Limits, dBA</th><th colspan="3">Values for the period Nov18- Apr19</th></tr>
<tr><td></td><td></td><td>75</td><td>Min.</td><td>Max.</td><td>Avg.</td></tr>
<tr><td>1</td><td>Near Main guest house</td><td>75</td><td>63.6</td><td>68.9</td><td>65.3</td></tr>
<tr><td>2</td><td>Near TSDF</td><td>75</td><td>63.2</td><td>66.2</td><td>64.1</td></tr>
<tr><td>3</td><td>At Wyeth Colony</td><td>75</td><td>60.4</td><td>66.8</td><td>64.1</td></tr>
<tr><td>4</td><td>Gram Panchayat Hall</td><td>75</td><td>61.3</td><td>69.5</td><td>63.8</td></tr>
<tr><td>5</td><td>Near Main Office North site</td><td>75</td><td>65.5</td><td>67.9</td><td>66.7</td></tr>
<tr><td>6</td><td>ETP North site</td><td>75</td><td>66.5</td><td>70.2</td><td>68.0</td></tr>
<tr><td>7</td><td>Opposite shed D</td><td>75</td><td>64.7</td><td>68.9</td><td>66.3</td></tr>
<tr><td>8</td><td>ETP West site</td><td>75</td><td>65.4</td><td>68.7</td><td>67.2</td></tr>
<tr><td>9</td><td>Water tank Haria road</td><td>75</td><td>62.5</td><td>64.9</td><td>63.7</td></tr>
<tr><td>10</td><td>Near 66KVA substation</td><td>75</td><td>64.3</td><td>67.8</td><td>65.9</td></tr>
</table>
Noise level monitoring data (Night Time)
<table>
<tr><th>Sr. No.</th><th>Location</th><th>Permissible Limits, dBA</th><th colspan="3">Values for the period Nov18- Apr19</th></tr>
<tr><td></td><td></td><td>70</td><td>Min.</td><td>Max.</td><td>Avg.</td></tr>
<tr><td>1</td><td>Near Main guest house</td><td>70</td><td>53.1</td><td>56.1</td><td>55.0</td></tr>
<tr><td>2</td><td>Near TSDF</td><td>70</td><td>56.4</td><td>60.3</td><td>58.3</td></tr>
<tr><td>3</td><td>At Wyeth Colony</td><td>70</td><td>50.5</td><td>52.5</td><td>51.7</td></tr>
<tr><td>4</td><td>Gram Panchayat Hall</td><td>70</td><td>52.1</td><td>55.1</td><td>53.7</td></tr>
</table></td></tr>
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<table>
<tr><td></td><td></td><td>
<table>
<tr><td>5</td><td>Near Main Office North site</td><td>70</td><td>55.7</td><td>58.9</td><td>57.3</td></tr>
<tr><td>6</td><td>ETP North site</td><td>70</td><td>52.2</td><td>55.1</td><td>53.6</td></tr>
<tr><td>7</td><td>Opposite shed D</td><td>70</td><td>53.8</td><td>55.9</td><td>54.8</td></tr>
<tr><td>8</td><td>ETP West site</td><td>70</td><td>54.7</td><td>56.3</td><td>55.6</td></tr>
<tr><td>9</td><td>Water tank Haria road</td><td>70</td><td>53.4</td><td>55.8</td><td>54.7</td></tr>
<tr><td>10</td><td>Near 66KVA substation</td><td>70</td><td>51.7</td><td>56.2</td><td>53.9</td></tr>
</table>
</td></tr>
<tr><td>iv</td><td>The project authorities will provide adequate funds to recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.</td><td>Complied.

EMP measures are implemented by 2010 and many things have already been at place.

Non recurring cost: 6.3 Cr
Recurring cost: A budget is prepared for every coming six months and separate fund is allocated towards environmental management. Total expenditure for the report period is given in below table:
<table>
<tr><th>Expenditure for months</th><th>Particular</th><th>Expenses Rs.</th></tr>
<tr><td rowspan="7">Nov-18–Apr 19 Including, recurring maintenance, modifications and monitoring.</td><td>Fuel</td><td>2489262</td></tr>
<tr><td>Chemicals(Raw Material)</td><td>194312779</td></tr>
<tr><td>Electricity</td><td>23083536</td></tr>
<tr><td>Waste disposal</td><td>20301875</td></tr>
<tr><td>Salary</td><td>13430602</td></tr>
<tr><td>Maintenance & modifications</td><td>27370856</td></tr>
<tr><td>Monitoring</td><td>1966640</td></tr>
<tr><td></td><td>Total</td><td>282955550</td></tr>
</table>
</td></tr>
<tr><td rowspan="2">v</td><td>The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management & Handling) Rules, 2003.</td><td>Complied.

The company complies with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management & Handling) Rules, 2003. We have valid authorization under our current CCA No. AWH-67717 for handling, storage and disposal of hazardous waste. Stipulation made in CCA by GPCB are being complied. This has been certified by our Environmental auditors, an authorized agency and nominated by GPCB; through Environmental audit every year.
Latest compliance report by GPCB appointed Environmental auditor Faculty of Pacific school of Engineering, Dist. Surat for year 18-19 is attached as Annexure C.</td></tr>
<tr><td>Authorization from the GPCB must be obtained for collections /treatment/ storage/ disposal of hazardous waste.</td><td>Complied.

We have valid authorization under our current CCA No. AWH-67717 for handling, storage and disposal of hazardous waste.</td></tr>
<tr><td rowspan="2">vi</td><td>The stipulated conditions will be monitored by the Regional office of this Ministry at Bhopal/ GPCB.</td><td>Noted.</td></tr>
<tr><td>A six monthly compliance report and the monitored data should be submitted to them regularly.</td><td>Complied.

Six monthly compliance report and the monitored data are being submitted to the Ministry at Bhopal with copy marked to GPCB regularly.</td></tr>
</table>

Vii	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 of Environment and Forest at http://www.envfor.ni.in.	Complied. We informed the public through advertisement and by sending our EC to local Panchayat, Zila parishad, District Industrial Centre for further actions at their end.
	This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspaper 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 Ministry's Regional office at Bhopal.	Complied. Advertisement was published as directed and copy of the same was submitted to Ministry.
3.0	The ministry or any competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions will be monitored by the Regional Office of this Ministry located at Bhopal.	Noted. Noted.
4.0	The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Noted.
5.0	Any other conditions or alternation in the above conditions will have to be implemented by the project authorities in a time bound manner.	Noted and will be complied.
6.0	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air ((Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Amendment Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted.

Details of Process and Flue stack

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
Atul East Site															
1	Phosgene Plant (Old Plant)	Phosgene	0.1 ppm	-	Not in use	-	Not in use	-	Not in use	-	Not in use	-	Not in use	-	Not in use
Caustic Chlorine Plant															
2	Dechlorination Plant	Cl_2	9.0 mg/Nm3	1.11.18	2.7	27.12.18	2.5	19.1.19	2.6	21.2.19	2.8	28.3.19	2.7	5.4.19	3.2
		HCl	20.0 mg/Nm3		4.9		4.5		4.1		4.3		4.1		4.8
3	Common stack of HCl Sigri unit 1&2	Cl_2	9.0 mg/Nm3	1.11.18	5.4	27.12.18	5.7	19.1.19	5.8	21.2.19	6.2	28.3.19	5.5	5.4.19	6.5
		HCl	20.0 mg/Nm3		5.6		5.1		5.5		5.6		6.1		6.8
FCB Paint															
4	Foul Gas Scubber	SO_2	40.0 mg/Nm3		Not in use		Not in use		Not in use		Not in use		Not in use		Not in use
		NOx	25.0 mg/Nm3												
Sulfuric Acid (East Site)															
5	Sulfuric Acid Plant	SO_2	2.0 kg/T	1.11.18	0.5	21.12.18	0.6	24.1.19	0.8	annual shutdown		Not Runnig During Visit		19.4.19	0.9
		Acid Mist	50.0 mg/Nm3		5.9		5.7		5.4						6.3
6	ChloroSulfonic Acid plant reactor	Cl_2	9.0 mg/Nm3	2.11.18	4.4	21.12.18	4.3	24.1.19	4.1	annual shutdown		Not Runnig During Visit			Not Runnig During Visit
		HCl	20.0 mg/Nm3		5.6		5.7		5.6						
Incinerator															
7	Incinerator	PM	150.0 mg/Nm3	17.11.18	56	15.12.18	48	24.1.19	45	7.2.19	53	9.3.19	60	4.4.19	80
		SO_2	40.0 mg/Nm3		17.4		14.6		14.1		15.2		16.4		17.8
		NOx	25.0 mg/Nm3		11.2		11.4		10.5		10.8		12.3		13.5
NI Plant															
8	Foul Gas Scubber	SO_2	40.0 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		NOx	25.0 mg/Nm3												
NBD Plant .															
9	Spray Dryer	PM	150.0 mg/Nm3		Not in use		Not in use		Not in use		Not in use		Not in use		Not in use
2-4-D Plant															
10	Common Scrubber; 2,4D Plant	Cl_2	9.0 mg/Nm3	4.11.18	4.8	15.12.18	5.1	18.1.19	5.3	21.2.19	6.2	8.3.19	6.7	18.4.19	7.3
		HCl	20.0 mg/Nm3		6.9		6.7		6.8		7.1		7.8		8.1
		Phenol	--		ND		ND		ND		ND		ND		ND
11	Dryer-1	PM with Pesticide compound	20.0 mg/Nm3	4.11.18	4.4	15.12.18	4.6	18.1.19	4.2	21.2.19	5.3	8.3.19	5.9	18.4.19	7.2
12	Dryer-2	PM with Pesticide compound	20.0 mg/Nm3		6.9		6.4		6.1		7.2		7.6		7.9
13	Dryer-3	PM with Pesticide compound	20.0 mg/Nm3		7.6		7.9		7.8		8.5		8.9		9.5
14	Dryer-4	PM with Pesticide compound	20.0 mg/Nm3		6.5		6.8		6.5		7.8		8.5		8.1

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
CP Plant															
15	MCPA	Cl_2	9 mg/NM^3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20 mg/NM^3												
		SO_2	40 mg/NM^3												
16	Fipronil	SO_2	40 mg/NM^3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20 mg/Nm3												
17	Imidacloprid	NH_3	175 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
18	Pyrathroids	SO_2	40 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20 mg/Nm3												
19	Stack at Amine Plant	NH_3	175 mg/Nm3	5.11.18	5.8	13.12.18	5.5	3.1.19	5.8	7.2.19	6.2	8.3.19	6.5	4.4.19	7.9
MPSL Plant															
20	Phosgene Scrubbr at MPSL	Phosgene	0.1 ppm	5.11.18	ND	28.12.18	ND	11.1.19	ND	8.2.19	ND	28.3.19	ND	12.4.19	ND
21	Central Scrubber at MPSL	Phosgene	0.1 ppm	5.11.18	ND	28.12.18	ND	11.1.19	ND	8.2.19	ND	28.3.19	ND	12.4.19	ND
NICO plant															
22	Central scrubber at Nico Plant	Acetonytryle, IPA	---	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit
Ester Plant															
23	Scrubber at Ester plant for Glyphosate	Formaldehyde	10 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
24	Central Scrubber MCPA Plant	HCl	20 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
25	MPP plant scrubber	HCl	20 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		Phosgene	0.1 ppm												
Atul West Site															
26	Shed A05/03/44	Cl_2	9 mg/NM^3	23.11.18	3.2	6.12.18	3.1	4.1.19	3.2	1.2.19	3.5	1.3.19	3.8	3.4.19	4.2
		HCl	20 mg/NM^3		5.5		5.9		5.6		6.1		6.5		7.1
27	Shed B2/12/24 Reaction Vessel	Cl_2	9.0 mg/Nm3	16.11.18	5.4	6.12.18	5.2	3.1.19	5.4	2.2.19	5.8	2.3.19	6.1	4.4.19	6.8
		HCl	20.0 mg/Nm3		4.5		4.8		4.9		5.2		5.3		5.8
28	Shed B18/02/24 Fan	SO_2	40 mg/NM^3	16.11.18	3.9	6.12.18	3.8	3.1.19	3.9	2.2.19	4.3	2.3.19	4.6	4.4.19	5.2
		Cl_2	9 mg/NM^3		4.8		4.5		4.6		4.5		4.3		4.6
		HCl	20 mg/NM^3		5.6		5.5		5.3		5.1		5.3		5.1
29	Shed C5/20/15 Chlorinator	Cl_2	9.0 mg/Nm3	17.11.18	5.6	6.12.18	5.7	3.1.19	5.8	2.2.19	6.1	1.3.19	6.2	5.4.19	6.4
		HCl	20.0 mg/Nm3		7.4		7.5		7.2		6.8		7.1		7
30	Shed D Niro Spray dryer No. 45	PM	150.0 mg/Nm3	22.11.18	8.6	13.12.18	8.5	10.1.19	8.6	not running during visit	8.6	2.3.19	60	11.4.19	75
31	Shed D Niro Spray dryer No.50	PM	150.0 mg/Nm3		13.5		13.8		13.1		13.1		55		58
32	Shed E 7/12/49 Spray Dryer	PM	150.0 mg/Nm3		not running during visit		not running during visit		not running during visit	7.2.19	12.4	7.3.19	12.8	4.4.19	13.2
33	Shed F F6/1/15 Reaction Vessel	Cl_2	9.0 mg/Nm3	17.11.18	4.8	6.12.18	4.9	3.1.19	4.8	2.2.19	5.2	1.3.19	5.8	4.4.19	6.3
		HCl	20.0 mg/Nm3		5.4		5.6		5.8		5.9		6.2		6.7
34	Shed G 10/8/1 (receiver)	Cl_2	9.0 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20.0 mg/Nm3												
35	Shed H 11/6/17 chlorinator	Cl_2	9.0 mg/Nm3	22.11.18	4.2	14.12.18	4.5	11.1.19	5.1	7.2.19	5.7	7.3.19	6.1	11.4.19	6.5
		HCl	20.0 mg/Nm3		6.4		6.6		6.5		6.1		6.3		6.8
36	Shed K K-13/3/4 Final of Sulfuric acid plant	SO_2	2.0 kg/T	17.11.18	0.9	13.12.18	0.8		Not Runnig During Visit	7.2.19	1.2	7.3.19	1.4	11.4.19	1.7
		Acid Mist	50.0 mg/Nm3		11.8		11.4				10.5		10.8		13.5
37	Shed J15/09/25	HBr	--	17.11.18		13.12.18	ND	10.1.19	ND	6.2.19	ND	7.3.19	ND	11.4.19	ND
		SO_2	40 mg/NM^3		6.5		6.8		6.4		6.9		7.3		8.9

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
38	Shed J12/01/42	SO_2	40 mg/NM^3		Not Runnig During Visit	13.12.18	6.3	10.1.19	4.9	6.2.19	5.8	7.3.19	6.1	11.4.19	7.5
		Cl_2	9.0 mg/Nm3				4.5		4.6		5.6		6.2		7.2
		HCl	20.0 mg/Nm3				4.1		4.1		4.8		5.2		6.3
39	Shed J12/03/36	SO_2	40 mg/NM^3	17.11.18	9.5	13.12.18	9.8	10.1.19	9.1	6.2.19	8.2	7.3.19	8.7	11.4.19	9.1
		HCl	20.0 mg/Nm3		4.5		4.9		4.8		5.3		5.9		6.5
40	Shed N Scrubber Fan N20/08/24	Cl_2	9 mg/NM^3	17.11.18	5.5	13.12.18	5.8	10.1.19	5.7	7.2.19	5.4	9.3.19	5.9	11.4.19	6.3
		HCl	20 mg/NM^3		9.3		9.7		9.9		8.9		9.3		9.8
41	Shed N Scrubber Fan N20/02/41	SO_2	40 mg/NM^3	17.11.18	7.6	13.12.18	7.2	10.1.19	7.3	7.2.19	7.5	9.3.19	7.8	12.4.19	8.3
42	Sulfer Black Plant	H_2S	--	29.11.18	ND	14.12.18	ND	4.1.19	ND	22.2.19	ND	7.3.19	ND	19.4.19	ND
		NH_3	175 mg/NM^3		14.4		14.8		14.4		15.3		16.8		18.2
43	Sulfer Dyes plant	H_2S	--	29.11.18	ND	14.12.18	ND	4.1.19	ND	22.2.19	ND	7.3.19	ND	19.4.19	ND
		NH_3	175 mg/NM^3		15.8		15.9		15.7		16.8		15.9		16.5
Atul North Site															
44	N-FDH Plant Catalytic Incinerator	PM	150.0 mg/Nm3	21.11.18	45	19.121.18	48	9.1.19	49	15.2.19	52	14.3.19	55	12.4.19	60
		SO_2	40.0 mg/Nm3		11.2		11.7		11.2		11.8		12.5		13.5
		NOx	25.0 mg/Nm3		9.9		9.4		9.1		10.6		11.2		11.8
		Formaldehyde	10.0 mg/Nm3		N.D		N.D		N.D		N.D		N.D		ND
45	PHIN Plant vessel	Phosgene	0.1 ppm	22.11.18	ND	15.12.18	ND	9.1.19	ND	14.2.19	ND	14.3.19	ND	10.4.19	ND
46	DCDPS Plant	SO_3	---	22.11.18	ND	20.12.18	ND	17.1.19	ND	14.2.19	ND	14.3.19	ND	10.4.19	ND
47	DDS Plant	NH_3	175 Mg/Nm3	22.11.18	13.8	20.12.18	13.6	17.1.19	12.8	14.2.19	13.2	14.3.19	14.3	10.4.19	15.8
48	SPIC II Plant	SO_3	---	22.11.18	ND	19.12.18	ND	17.1.19	ND	14.2.19	ND	14.3.19	ND	13.4.19	ND
49	SPIC I Plant	NH_3	175 mg/Nm3	22.11.185	12.4	20.12.18	12.2	17.1.19	12.5	15.2.19	13.2	14.3.19	14.6	13.4.19	15.8
50	SPIC IV Plant	NH_3	175 mg/NM^3	23.11.18	14.9	20.12.18	15.2	17.1.19	14.9	15.2.19	14.3	14.3.19	15.3	10.4.19	16.5
		SO_3	---		5.3		5.4		5.8		6.2		7.5		8.5
51	Furnace (Phosgene plant-New)	PM	150 mg/NM^3	30.11.18	56	28.12.18	59	25.1.19	62	22.2.19	65	28.3.19	70	25.4.19	85
52	Reactor (Phosgene plant- New)	CO	--	30.11.18	ND	28.12.18	ND	25.1.19	ND	22.2.19	ND	28.3.19	ND	25.4.19	ND
		Phosgene	0.1 ppm		ND		ND		ND		ND		ND		ND

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
East site															
1	FBC boiler EI	PM	100 mg/Nm3	28.11.18	50	14.12.18	52	19.1.19	55	6.2.19	58	13.3.19	62	18.4.19	75
		SO_2	600 mg/Nm3		98		95		96		99		95		98
		NOx	600 mg/Nm3		110		115		118		121		115		120
2	FBC boiler E2	PM	100 mg/Nm3	28.11.18	58	13.12.18	59	18.1.19	62	7.2.19	65	15.3.19	68		Not Runnig During Visit
		SO_2	600 mg/Nm3		97		92		95		97		90		
		NOx	600 mg/Nm3		105		108		110		116		112		
3	FBC boiler No.3	PM	100 mg/Nm3	28.11.18	62	14.12.18	65	18.1.19	66	6.2.19	68	13.3.19	70	18.4.19	80
		SO_2	600 mg/Nm3		107		109		115		118		125		128
		NOx	600 mg/Nm3		119		121		125		128		135		145
4	Hot Oil Unit	PM	150.0 mg/Nm3	23.11.18	ND	6.12.18	ND	3.1.19	ND	23.2.19	ND	27.3.19	ND	10.4.19	ND
	(Resorcinol Plant)	SO_2	100 ppm		ND		ND		ND		ND		ND		ND
		NOx	50 ppm		35		39		41		43		40		45
5	DG set 1010 KVA (Standby)	PM	150 mg/Nm^3		Stand by		Stand by		Stand by		Stand by		Stand by		Stand by
		SO_2	100 ppm												
		NOx	50 ppm												
West Site															
6	FBC boiler W1	PM	100 mg/Nm3	28.11.18	51	6.12.18	58	25.1.19	55	25.2.19	57	15.3.19	61	10.4.19	65
		SO_2	600 mg/Nm3		75		79		75		79		85		95
		NOx	600 mg/Nm3		115		123		115		123		128		135
7	Hot Oil Plant shed-B	PM	150.0 mg/Nm3	23.11.18	ND	6.12.18	ND	3.1.19	ND	1.2.19	ND	27.3.19	ND	25.4.19	ND
		SO_2	100 ppm		ND		ND		ND		ND		ND		ND
		NOx	50 ppm		36		38		39		41		43		55
8	Oil burner Shed B	PM	150.0 mg/Nm3		Stand by		Stand by		Stand by		Stand by		Stand by		Stand by
	(Stand By)	SO_2	100 ppm												
		NOx	50 ppm												
9	Boiler (50 TPH 2 Nos) (New boilers) W2,W3	PM	50 mg/Nm3	21.11.18	38	26.12.18	35	25.1.19	38	22.2.19	41	15.3.19	49	12.4.19	55
		SO_2	600 mg/Nm3		88		85		88		91		97		105
		NOx	300 mg/Nm3		73		71		75		79		85		95
		Mercury	0.03 mg/Nm3		ND		ND		ND		ND		ND		ND
10	DG set 1500 KVA	PM	150.0 mg/Nm3		Stand by		Stand by		Stand by		Stand by		Stand by		Stand by
	(Stand By)	SO_2	100 ppm												
		NOx	50 ppm												
North Site															
11	Thermic fluid heater of	PM	150.0 mg/Nm3	21.11.18	ND	27.12.18	ND	24.1.19	ND	23.2.19	ND	6.3.19	ND	12.4.19	ND
	DCO/DAP Plant	SO_2	100 ppm		ND		ND		ND		ND		ND		ND
		NOx	50 ppm		28		29		31		35		39		40

Table 2 : Fugitive Emission Monitoring details

Plant	Area	Parameter	Prescribed Limit	Results of VOCs in Milligram per NM^3					
				Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
2,4 D	Reactor	Phenol	19	10.2	14.1	9.2	12.6	13.2	12.4
	Buffer tank	Chlorine	3.0	1.4	1.1	0.8	1	1.6	2.1
Resorcinol	Benzene storage tank area near vent	Benzene	15	9.6	11.1	14	9.2	7.1	5.4
	Near Extraction/scrubber unit	Butyl acetate	-	1.6	2.9	5.5	7.1	10.8	7.5
Pharma	At second floor work area	Ammonia	18	13.2	12.2	9.9	14.6	10.4	10.1
	Ammonia recovery area	Ammonia	18	3.1	7.2	12.2	6.4	8.1	7.5
Epoxy - I	At vacuum pump 2nd floor	ECH	10	2.6	3.6	5.4	3.1	2.9	3.8
	At vessel POS 1208 G.F	ECH	10	4.1	5	3.1	6.2	5.3	6.1
Shed H	At second floor work area	Nitrobenzene	5	1.3	2.5	1.8	2.8	3.7	4.4
Shed J	Buffer Tank	Chlorine	3	1.1	1.8	2.2	1.6	2.6	2.1

Table 3 : Quality of treated effluent

Sr. No.	Parameter	Results						GPCB Limits
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	
1	pH	7.08	7.25	7.4	7.48	7.95	7.45	5.5 to 9.0
2	Temperature °C	30.2	30.8	30.1	30.7	32.6	31.9	40 °C
3	Colour (pt. co. scale)in units	50	50	40	50	70	130	---
4	Suspended solids, mg/l	38	54	36	23	75	86	100
5	Phenolic Compounds, mg/l	0.28	0.35	0.46	0.56	0.75	0.45	5
6	Cyanides, mg/l	ND	ND	ND	ND	ND	ND	0.2
7	Fluorides, mg/l	0.55	0.45	0.32	0.45	0.65	1.2	2
8	Sulphides, mg/l	0.4	1.2	1.8	1.2	1.8	1.6	2
9	Ammonical Nitrogen, mg/l	42	48	40	36	32	40	50
10	Total Chromium, mg/l	ND	ND	ND	ND	ND	ND	2
11	Hexavelent Chromium, mg/l	ND	ND	ND	ND	ND	ND	1
12	BOD (3 days at 27°C), mg/l	44	58	68	64	70	65	100
13	COD, mg/l	210	232	226	202	220	210	250

Note : ND is Not Detectable.

Table 4 : Noise level monitoring data (Day Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	75
1	Near Main guest house	63.6	63.8	64.2	65.2	65.9	68.9	75
2	Near TSDF	63.8	63.3	63.8	64.3	63.2	66.2	75
3	At Wyeth Colony	63.6	63.9	64.5	65.3	66.8	60.4	75
4	Gram Panchayat Hall	61.9	61.3	62.4	63.5	64.2	69.5	75
5	Near Main Office North site	65.5	65.8	66.9	67.8	67.9	66.5	75
6	ETP North site	66.5	66.7	67.3	68.3	69.1	70.2	75
7	Opposite shed D	64.7	64.9	65.4	66.5	67.2	68.9	75
8	ETP West site	65.9	65.4	66.8	67.9	68.5	68.7	75
9	Water tank Haria road	62.9	62.5	63.1	64.2	64.9	64.5	75
10	Near 66KVA substation	64.3	64.5	65.3	66.3	67.1	67.8	75

Table 5 : Noise level monitoring data (Night Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	70
1	Near Main guest house	53.1	53.5	55.6	56.1	55.7	56.1	70
2	Near TSDF	56.9	56.4	57.8	58.3	60.1	60.3	70
3	At Wyeth Colony	50.8	50.5	51.3	52.4	52.5	52.4	70
4	Gram Panchayat Hall	52.7	52.1	53.4	54.2	54.7	55.1	70
5	Near Main Office North site	55.7	55.9	56.8	57.8	58.5	58.9	70
6	ETP North site	52.5	52.2	53.7	54.1	54	55.1	70
7	Opposite shed D	53.8	53.8	54.9	55.2	55.3	55.9	70
8	ETP West site	54.8	54.7	55.8	55.9	56.2	56.3	70
9	Water tank Haria road	53.7	53.4	54.9	55.2	55.8	55.2	70
10	Near 66KVA substation	51.8	51.7	53.7	54.8	55.1	56.2	70

Annexure A

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:254051 - Analysis Completion:11/03/2019

Dyes and Dye- Intermediates / LAB Inward : 48708

Gujarat Pollution Control Board, Vapi
C5/124, GIDC Vapi,
Near Hotel Pritam,
Vapi - 396 195
Tele:(0260) 2432089

TEST REPORT

Test Report No. : 48708 **Date: 12/03/2019**

1. Name of the Customer	**: Atul Limited - 23158**
2. Address	**: 5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91, etc.,AT & P.O.ATUL, Dist. Valsad, Pin: ATUL-396020, Taluka : Valsad, District : Valsad, GIDC : Not In Gidc**
3. Nature of Sample	**: REP-Representative/Grab, (Insp Type : ROU-Routine Visit)**
4. Sample Collected By	**: Rachana M. Kantharia, SO**
5. Quantity of Sample Received	**: 5 lit**
6. Code No. of the Sample	**: 254051**
7. Date & Time of Collection & Inwarding	**: 27/02/2019 , (1800 to 1800) & 01/03/2019**
8. Date of Start & Completion of Analysis	**: 01/03/2019 & 11/03/2019**
9. Sampling Point	**: From final outlet of ETP (Central ETP) ~ -**
10. Flow Details (Remarks)	**: yes**
11. Mode of Disposal	**: Estuary zone of River Par**
12. Ultimate Receiving Body	**: Estuary zone of river par**
13. Temperature on Collection	**: 29 & pH Range on pH Strip :@ 7 to 8 On pH strip**
14. Carboys Nos for	**: barcode & Color & Appearance :Brownish**
15. Water Consumption & W.W.G (KLPD)	**: Ind :23726.000 , Dom :938.000 & Ind :21727.000 , Dom :939.000**

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 22nd edi.2012	1 – 14 pH value As or	6.98
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	125
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Methoc	10 – 200000 mg/L	3560
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Methoc	2 – 10000 mg/L	54
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.64
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	1163
8	Sulphate	mg/l	APHA(22nd edi)4500 SO4 E	2-40mg/l	600
9	Chemical Oxygen Demand	mg/l	APHA (22nd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	242
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	2.8
11	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	1.292
12	Sulphide	mg/l	APHA (22nd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	BDL
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmec	05–50000 mg/l	55

Laboratory Remarks : Freeze By:445-lab_445 Dt.: 12/03/2019

J.D.OZA, Lab Head

Field Observation :

Note :

1. * - These parameters are NOT covered under the scope of NABL.
2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 22nd Edition by APHA.
9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

Annexure B

"PRELIMINARY STUDY FOR GROUND WATER QUALITY & SOIL"

For

ATUL LIMITED
P.O ATUL-396 020,
DIST: - VALSAD.

DECEMBER-2018

Prepared By:

Pollucon Laboratories Pvt. Ltd.

Plot No.5/6, "Pollucon House",
Opp. Balaji Industrial Society, Old Shantinath Silk mill Lane,
Near Gayatri farsan Mart, Navjivan circle,
Udhana Magdalla Road, Surat 3905007.
PHONE/FAX: [0261] 2455751, 2601224, 2601106
Web: www.polluconlab.com E- mail: pollucon@gmail.com

"PRELIMINARY STUDY FOR GROUND WATER QUALITY & SOIL"

For

ATUL LIMITED
P.O. ATUL-396 020,
DIST: - VALSAD.

DECEMBER-2018

For and on behalf of Pollucon Laboratories Pvt. Ltd., Surat

Approved by	:	**Dr. Arun Kumar Bajpai**
Signed	:	
Designation	:	**Lab Manager (Q)**
Year	:	**December 2018**

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

This report is prepared by Pollucon Laboratories Pvt. Ltd. with all reasonable skills, care and diligence, incorporating our General Terms and Conditions of Business and taking account of the resources devoted.

CONTENT

LIST OF ANNEXURE

1. INTRODUCTION

OF

POLLUCON LABORATORIES PVT. LTD.

1. Introduction

Pollucon Laboratories Pvt. Ltd., Plot No.5/6 "Pollucon House", Opp. Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart,Navjivan Circle, Udhana Magdalla Road, Surat-395007, Gujarat, India have been in the analytical field since long time and have adequate expertise, trained man power and required infrastructure to render the uninterrupted service; Backed by a dedicated team we intend to give you a comprehensive analytical service with statutory interpretation and timely information vital for addressing the regulatory compliance.

We have so far a proven track record for successfully giving such services to various power plants , chemical factories and large scale set up and always met their demand for timely and effectively attendance to address the compliance solutions.

Apart from such set up as stated above following are our credential:

Laboratories are recognized by Ministry of Environment & Forest, Government of India, New Delhi under the EPA- article 12 A. along with the recognition as Environmental Auditors under the Honorable High Court; Gujarat Orders.

Laboratory set up is having international recognition from NABL (National accreditation board for Laboratories) under the ministry of Science & Technology as per ISO 17025:2005 for the relevant scope.

Entire administration and operations of the unit is as per ISO 9001:2008 quality systems and is certified by TUV consultants. (OHSAS 18000 & ISO 14001).

1.1 Sampling and Analytical Methods For Groundwater

Sampling and analytical methods are the important criteria for any tests and analysis as the accuracy of test results are dependent on the test methods selected for sampling and analysis besides the experience of the personnel. We have adopted IS (Indian Standards Methods), USDA (United States Department of Agriculture) & other standard methods for sampling and analysis.

Test Method:

SR. NO.	PARAMETERS	TEST METHOD
1	Colour	IS3025(P-4)83Re.02
2	pH	IS3025(P-11)83Re.02
3	Suspended Solids	IS3025(P-17)84Re.02
4	Total Dissolved Solids	IS3025(P-16)84Re.02
5	Chloride as Cl	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	IS 3025 (P-24)1986
10	Cyanide as CN	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	IS 3025 (P-44)1993
13	Sulphide as S	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	IS3025(P-23)86Re.03
17	Mercury as Hg	AAS APHA(22ndEdi)3112 B
18	Calcium as Ca	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	
20	Fluoride as F	APHA(22nd Edi) 4500 F D SPANDS Method

1.2 Sampling and Analytical Methods For Soil

Sampling and analytical methods are the important criteria for any tests and analysis as the accuracy of test results are dependent on the test methods selected for sampling and analysis besides the experience of the personnel. We have adopted IS (Indian Standards Methods), USDA (United States Department of Agriculture) & other standard methods for sampling and analysis.

Test Method:

SR. NO.	PARAMETERS	TEST METHOD
1	pH	IS:2720(P-26)1987
2	COD	SOP PLPL
3	Chloride	Soil Manual of India
4	Sulphate	IS:2720(P-27)
5	Organic Matter	IS:2720(P-22)1972
6	Colour	Soil Manual of India
7	Soil Texture	Soil Manual of India
8	Nature Moisture Content	IS:2720(P-2)
9	Bulk Density	Soil Manual of India
10	Mercury	USEPA 3050 B
11	Total Nitrogen	FCO 2018

2. Introduction

Of

ATUL LIMITED

P.O ATUL-396 020,

Introduction

The industrial activities of Atul Ltd. are situated at north bank of River Par in Valsad district.Atul Ltd was founded on September 15, 1947 – exactly a month after Indian independence – by Kasturbhai Lalbhai, an institution builder par excellence and a legendary Indian of his times. The Company was a manifestation of his dream to generate large-scale employment, create wealth in rural India and make the country self-sufficient in its requirements of chemicals. The first Prime Minister of the country, Mr. Jawaharlal Nehru inaugurated Atul Ltd.

Presently Atul Ltd is one of the largest integrated chemical companies of India and amongst the first five manufacturers of its chosen chemicals in the world. Atul is an improvement driven, integrated chemical company serving about 6,000 customers belonging to 31 industries across the world. The Company has established subsidiary companies in the USA (1994), the UK (1996), China (2004), Brazil (2012) and the UAE (2015) to serve its customers and thus enhance breadth and depth of its business.

The company manufactures different products like Dyes and Intermediates, Chloro – alkali products, variety of Pesticides, Bulk Drugs and Pharmaceuticals, Bulk chemicals and intermediates, Different types of Resins etc. products and serves to customers belonging to the Adhesives, Agriculture, Animal Feed, Automobile, Chemical, Composites, Construction, Cosmetic, Defence, Dyestuff, Electrical and Electronics, Flavour, Food, Footwear, Fragrance, Glass, Home Care, Horticulture, Hospitality, Paint and Coatings, Paper, Personal Care, Pharmaceutical, Plastic, Polymer, Rubber, Soap and Detergent, Sports and Leisure, Textile, Tyre and Wind Energy industries.Thecompanyuse variety of raw materials and consumption of fresh water is drawn from Par River.

As a part of Sp. Condition 3 of Environmental Clearance No. SEIAA/GUJ/EC/1(d)/340/2016, Atul Ltd has to submit the detailed study report to Gujarat Pollution Control Board (GPCB) at least once in a year, through the reputed institute or university to assess the impacts on soil and ground water quality. Hence the purpose of the present study is to evaluate soil and groundwater quality in and around Atul.

3. Importance of Ground Water

IMPORTANCE OF GROUND WATER

As ground water is an immensely important resource, However We Affect ground water Quantity Overuse of ground water for urban, rural and industrial uses can cause temporary or permanent declines in the quantity of available ground water.In coastal area fresh water supplies become contaminated with saltwater.

So, the chemistry of water is influenced as it flows downward through soil and the unsaturated zone.

Man-made depression in the ground that collects runoff water and stores it, permitting it to slowly percolate into the soil.

In nature, even the cleanest water contains some impurities that come from the erosion of natural rock formations. Water dissolves and absorbs substances that it touches, including calcium, magnesium, silica, and fluoride from dozens of naturally occurring minerals.

Another related problem concerns changes we make in the recharge rate. When recharge areas are paved with roads and parking lots or are covered with impervious surfaces such as rooftops, water cannot soak into the ground and replenish the ground water supplies. Adding to the problem, paved surfaces collect oils, salts, animal waste, antifreeze, and other pollutants. When it rains, these pollutants become part of the storm water runoff. So it is an important lesson – if we want clean GROUND WATER and surface water, we need to prevent all possible pollutants from being poured on the ground or spilled onto our parking lots and roads.

At low levels, most of these dissolved minerals do not cause health problems, and can even give water an appealing taste. Some of these minerals determine how “soft’ or "hard" our water is, and some may produce an unpleasant odor or taste. At higher levels, minerals can be considered contaminants, and like man-made chemicals, can make water unpalatable or unsafe to drink. In some areas, iron, manganese, and sulfate occur locally in objectionable concentrations.

Most GROUND WATER contamination is the result of human activity. Just as our surface freshwater resources (i.e., rivers, wetlands) are influenced by geologic processes and the activities of humans, so too is ground water

4. QA/QC PROCEDURE

4. QA/QC Procedure

4.1 Scope

The scope of QA plan for the above mentioned study includes a minimum of following elements.

- **preservation**
- **Chain of custody**
- **Laboratory**

4.2 Checklist for analysis and chain of custody

Sample Forwarding

After the registration of sample for analysis, the Draft Test report is prepared and handed over to concerned laboratory in-charge and analytical jobs were allotted to specific scientific staff. The concerned analysts have started the analysis after verifying the integrity of the samples.

Chain of Custody

Chain of custody records is maintained for each sample to accompany the sample or set of samples from the point final analysis.

4.3 Laboratory Analysis

Calibration

The Lab Manager has ensured that all the laboratory instruments are calibrated as per calibration plan.

Documentation

All the raw data have been recorded in the raw data register along with the details relating to the sample identification No., date etc.

Lab has also recorded the details relating various quality check procedures or deviation if any.

4.4 Check List for Sample integrity

Item	Yes or No	If No, reasons and Justification for Acceptance
Is the chain of custody recorded?	**Yes**	**Yes**
Is the chain of custody record filled in properly?	**Yes**	**Yes**
Is the seal on the sample containers intact?	**Yes**	**Yes**
Is the sample received in proper storage condition?	**Yes**	**Yes**
Is the sample quantity adequate for required analysis?	**Yes**	**Yes**
Checked By: Inspected By: Lab Manager		

Note: It is not necessary that this form be filled in for each sample/ sampling point.
It is sufficient if the deviations if any are recorded.

4.5 Check List for Analysis

Item	Yes or No	If No, reasons and Justification for Acceptance
Was the correct method used for the analysis?	**Yes**	**Yes**
Were the correct instruments, equipment and apparatus used for the analysis?	**Yes**	**Yes**
Was the competence of the analyst deployed for the analysis verified?	**Yes**	**Yes**
Were the instruments, equipment and apparatus used precalibrated as required?	**Yes**	**Yes**
Was the sample correctly and adequately identified?	**Yes**	**Yes**
Were all the raw data properly recorded in the Raw data register?	**Yes**	**Yes**
Were the correct equations and units used?	**Yes**	**Yes**
Checked By: Inspected By: Lab Manager		

Note: It is not necessary that this form be filled in for each sample/ sampling point.
It is sufficient if the deviations if any are recorded.

QC CHECK - I

Check List for Quality Check

Sr. No.	Parameters	Comment (Yes or No)	Remark
1.	Sample container labeled properly?	**Yes**	**Yes**
2.	Is Sample Container clean & dry?	**Yes**	**Yes**
3.	Are proper storage conditions are maintained?	**Yes**	**Yes**
4.	The sample quantity is adequate?	**Yes**	**Yes**
5.	Is sample properly identified?	**Yes**	**Yes**
6.	Is proper type of container used?	**Yes**	**Yes**
Inspected By: Lab Manager			

Note: It is not necessary that this form be filled in for each sample/ sampling point.

QC CHECK - II

Check List for Quality Check in the lab

Sr. No.	Parameters	Comment (Yes or No)	Remark
1.	Is the sample details entered into Sample Inventory code?	**Yes**	**Yes**
2.	Sample quantity measured	**Yes**	**Yes**
3.	Glassware is calibrated	**Yes**	**Yes**
4.	Balance / equipments are calibrated	**Yes**	**Yes**
5.	Data entered in the raw data register or not?	**Yes**	**Yes**
Inspected By: Lab Manager			

Note: It is not necessary that this form be filled in for each sample/ sampling point.
It is sufficient if the deviations if any are recorded.

5. SCOPE OF WORK

SAMPLING, ANALYSIS & RESULT

5. 1 Sampling Locations For Ground Water

Sr. No.	Sampling Location
1	Borewell near Spic 4 plant, North site, Atul Ltd
2	Borewell near R & D Lab, North Site, Atul Ltd
3	Borewell near R & D Lab, west Site, Atul Ltd
4	Borewell opp. East of New Boiler, West Site, Atul Ltd
5	Borewell at west of Old fire pond, West Site, Atul Ltd
6	Borewell at east of Shed A Plant, West Site, Atul Ltd
7	Borewell near Sulfa viofom Plant, East Site, Atul Ltd
8	Borewell near T acid Plant, East Site, Atul Ltd
9	Borewell at north of Caustic soda Plant, East Site, Atul Ltd
10	Borewell near Easter Plant, East Site, Atul Ltd
11	Borewell at Madan Mohan Goushala, Haria village
12	Borewell at down stream of TSDF (Borewell No. 3), Atul Ltd
13	Borewell at Up stream of TSDF (Borewell No. 5), Atul Ltd
14	Borewell near Main gate of GJK colony, Atul Village
15	Borewell near gate of Atik colony, Atul Village
16	Borewell near cross road of Down colony, Atul Village
17	Borewell near Hardner Plant, North Site, Atul Ltd
18	Well at Ishvarbhai's wadi, Haria Village
19	Hand Pump at Mahesh Park, Haria Village
20	Panchayat Hand Pump Near Railway Crossing, Haria Village
21	Hand Pump at First gate, poultry farm road, Parnera village
22	Hand Pump near Derasar, Second gate, Atul Village

: Detail given by customer

5.2 Sampling Locations For Soil

SR. NO.	SAMPLING LOCATION
1	NEAR BOILER PLANT WEST SITE
2	NEAR ETP PLANT NORTH SIDE
3	NEAR TE UNIT SOUTH SITE
4	NEAR MPP2 PLANT ABL
5	NEAR SULPHURIC PLANT EAST SIDE

: Detail given by customer

6 WATER SAMPLING TEST REPORT

TEST REPORT

QR/5.10/01

Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220036** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220036**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near Spic 4 Plant, North Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	2	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.12	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	11	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	478	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	45.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	29.15	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.70	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	110	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	90	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	34.4	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	5.76	Max 30	Max 100	
20	Fluoride as F	mg/L	0.59	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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TEST REPORT

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Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220037** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220037**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near R & D Lab, North Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.31	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	14	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	496	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	52.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	66.56	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.66	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	196	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	106	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	48.8	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	17.76	Max 30	Max 100	
20	Fluoride as F	mg/L	0.48	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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TEST REPORT

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Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220038** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220038**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near R & D Lab, West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	2	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.15	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	10	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	438	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	42.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	32.10	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	4.97	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	164	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	106	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	52.8	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	7.68	Max 30	Max 100	
20	Fluoride as F	mg/L	0.35	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220039** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220039**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell opp. East Of New Boiler,West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.47	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	3	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1012	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	112	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	97.15	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.51	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	336	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	276	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	76.0	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	35.04	Max 30	Max 100	
20	Fluoride as F	mg/L	0.82	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220040** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220040**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at West of Old fire pond,West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.49	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	17	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	568	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	38.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	25.78	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.59	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	236	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	156	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	77.6	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	10.08	Max 30	Max 100	
20	Fluoride as F	mg/L	0.13	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220041** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220041**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Eest of Shed A Plant,West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.56	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	13	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	592	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	31.99	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	27.65	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.68	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	262	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	258	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	67.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	22.56	Max 30	Max 100	
20	Fluoride as F	mg/L	1.25	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220042** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220042**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near sulfa Viofom Plant,East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	8.19	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	9	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	312	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	17.99	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	24.25	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.59	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	100	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	94	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	29.6	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	6.24	Max 30	Max 100	
20	Fluoride as F	mg/L	0.28	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220043** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220043**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near T acid Plant, East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.51	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	23	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	386	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	63.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	11.87	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.64	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	144	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	64	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	44.8	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	7.68	Max 30	Max 100	
20	Fluoride as F	mg/L	0.11	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220044** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220044**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell At north of Caustic soda plant,East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.32	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	22	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1376	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	135	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	28.68	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.66	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	526	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	524	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	127	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	49.92	Max 30	Max 100	
20	Fluoride as F	mg/L	0.44	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220045** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220045**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near Easter plant,East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.7	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	24	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1894	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	920	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	384	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.55	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	183	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	540	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	56	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	10.32	Max 30	Max 100	
20	Fluoride as F	mg/L	1.05	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220046** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220046**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Madan Mohan Goushala, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.42	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	11	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1264	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	87.97	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	95.28	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.59	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	556	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	306	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	126	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	57.60	Max 30	Max 100	
20	Fluoride as F	mg/L	0.58	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220047** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220047**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Down stream of TSDF (Borewell No.3),Atul ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.14	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	15	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1116	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	139	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	65.12	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	6.52	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	512	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	284	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	153	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	30.72	Max 30	Max 100	
20	Fluoride as F	mg/L	0.25	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220048** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220048**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Up stream of TSDF (Borewell No.5),Atul ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.96	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	7	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	892	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	107	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	66.44	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	4.72	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	544	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	210	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	152	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	39.36	Max 30	Max 100	
20	Fluoride as F	mg/L	0.57	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

Authorized Signatory

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220049** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220049**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near Main Gate of GJK colony, Atul village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.8	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	28	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	658	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	73.9	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	23.83	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.35	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	290	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	248	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	71.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	26.88	Max 30	Max 100	
20	Fluoride as F	mg/L	< 0.05	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220050** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220050**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near Gate of Atik colony, Atul Village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.48	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	ND$	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	672	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	50.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	28.76	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.16	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	302	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	266	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	23.52	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	81.60	Max 30	Max 100	
20	Fluoride as F	mg/L	0.18	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220051** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220051**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near cross road of Down colony, Atul Village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.93	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	ND$	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	688	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	51.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	23.65	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.86	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	338	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	288	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	91.20	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	26.40	Max 30	Max 100	
20	Fluoride as F	mg/L	0.57	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220052** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220052**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near Hardner Plant, North Site, Atul ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.85	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	16	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1910	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	920	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	140	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	10.40	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	190	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	280	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	55.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	12.48	Max 30	Max 100	
20	Fluoride as F	mg/L	0.99	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220053** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220053**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Well at Ishvarbhai's wadi, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.01	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	11	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1502	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	319	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	62.07	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.86	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	184	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	304	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	52	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	12.96	Max 30	Max 100	
20	Fluoride as F	mg/L	0.35	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220054** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220054**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Hand pump at Mahesh Park, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.20	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	17	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1444	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	283	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	83.57	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.21	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	528	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	428	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	129	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	48.96	Max 30	Max 100	
20	Fluoride as F	mg/L	0.87	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220055** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220055**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Panchayat hand pump near Railway Crossing, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.93	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	< 2	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	418	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	17.99	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	31.87	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.36	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	186	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	174	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	39.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	21.12	Max 30	Max 100	
20	Fluoride as F	mg/L	0.41	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220056** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220056**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Hand pump at First gate, poultry farm road, parnera village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.38	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	10	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1214	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	127	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	< 0.05	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	25.78	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.55	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	516	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	344	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	131	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	45.12	Max 30	Max 100	
20	Fluoride as F	mg/L	0.65	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220057** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220057**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Hand pump near derasar, second gate, Atul village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.19	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	8	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1084	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	119	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	< 0.05	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	39.63	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.10	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	512	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	388	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	118	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	51.84	Max 30	Max 100	
20	Fluoride as F	mg/L	0.58	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

7. SOIL SAMPLING TEST REPORT

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225011** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225011**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR BOILER PLANT WEST SITE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	7.87	IS:2720(P-26)1987
2	Chloride	mg/kg	34.31	Soil Manual of India
3	Sulphate	mg/kg	161	IS:2720(P-27)
4	Organic Matter	%	0.60	IS:2720(P-22)1972
5	Colour	--	Brownish	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	9.35	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.18	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	2.14	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225012** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225012**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR ETP PLANT NORTH SIDE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	7.93	IS:2720(P-26)1987
2	Chloride	mg/kg	43.06	Soil Manual of India
3	Sulphate	mg/kg	121	IS:2720(P-27)
4	Organic Matter	%	1.98	IS:2720(P-22)1972
5	Colour	--	Dark Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	15.40	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.17	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	1.14	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225013** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225013**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR TE UNIT SOUTH SITE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	8.27	IS:2720(P-26)1987
2	Chloride	mg/kg	14.99	Soil Manual of India
3	Sulphate	mg/kg	123	IS:2720(P-27)
4	Organic Matter	%	2.55	IS:2720(P-22)1972
5	Colour	--	Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	23.08	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.19	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	1.24	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225014** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225014**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR MPP2 PLANT ABL#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	8.38	IS:2720(P-26)1987
2	Chloride	mg/kg	24.85	Soil Manual of India
3	Sulphate	mg/kg	170	IS:2720(P-27)
4	Organic Matter	%	0.88	IS:2720(P-22)1972
5	Colour	--	Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	19.55	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.22	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	1.84	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225015** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225015**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR SULPHURIC PLANT EAST SIDE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	8.18	IS:2720(P-26)1987
2	Chloride	mg/kg	184	Soil Manual of India
3	Sulphate	mg/kg	185	IS:2720(P-27)
4	Organic Matter	%	0.097	IS:2720(P-22)1972
5	Colour	--	Ligh Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	12.80	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.09	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	0.90	FCO 2018

: Detail given by customer.

Authorized Signatory

8. CONCLUSION

- All Analyzed Parameters are within the norms of PERMISSIBLE LIMIT IN THE ABSENCE OF ALTERNATE SOURCE as per of IS 10500:2012 for drinking water (for parameters which limits are specified).
- Soil samples are taken from different location of site and no acidic soil is found at any location.
- Texture of soil is sandy loam at each sites.
- Toxic metal Mercury is not detected at all locations.

ANNEXURE I

CREDENTIALS OF POLLUCON LABORATORIES PVT. LTD.

A. NATIONAL ACCREDITATION BOARD FOR TESTING AND CALIBRATION LABORATORIES

National Accreditation Board for Testing and Calibration Laboratories
(A Constituent Board of Quality Council of India)

QCI

NABL

CERTIFICATE OF ACCREDITATION

POLLUCON LABORATORIES PVT. LTD.

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

5/6 "Pollucon House", Old Shantinath Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat, Gujarat

in the field of

TESTING

Certificate Number TC-5945 (In lieu of T-0821 & T-0820)

Issue Date 28/05/2017

Valid Until 27/05/2019

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

N. Venkateswaran
Program Director

Anil Relia
Chief Executive Officer

B. ISO 9001:2008

TÜV SÜD ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD South Asia

CERTIFICATE

The Certification Body
of TÜV SÜD South Asia Private Limited
certifies that

Pollucon Laboratories Pvt. Ltd.
"Pollucon House "Plot No. 80, Shed no. B/5 & B/6,
Opp Balaji Industrial Society, Nr. Navjivan Circle,
Udhana Magdalla Road,
Surat – 395007, Gujarat, INDIA

has implemented a Quality Management System
in accordance with ISO 9001:2008
For Scope of

Providing Environmental Audit, Consultancy, Monitoring & Testing Services for Water, Air, Hazardous waste & Food Products

The certificate is valid From 2017-03-21 until 2018-01-07
Subject to successful completion of annual periodic audits
The present status of the Certificate can be obtained on www.tuv-sud.in
Further clarifications regarding the scope of this certificate may be obtained by consulting the certification body

Certificate Registration No. 99 100 14114
Date of Initial certification : 2013-01-08

Certification Body
of TÜV SÜD South Asia Private Limited, Mumbai
Member of TÜV SÜD Group

NABCB QM011

C. ISO 14001:2004

CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group

certifies that

Pollucon Laboratories Pvt. Ltd.
444, 544- Belgium Tower, Opp. Linear Bus Stand,
Ring Road, Surat - 395 003, Gujarat, INDIA

has established and applies
an Environmental Management System for

Providing Environmental Audit,
Consultancy, Monitoring & Testing Services for Water, Air,
Hazardous waste & Food Products

An audit was performed. Report No. **20042248**
Proof has been furnished that the requirements
according to

ISO 14001:2004

are fulfilled. The certificate is valid until **2018-03-11**
Certificate Registration No. **TUV104 07 2153**

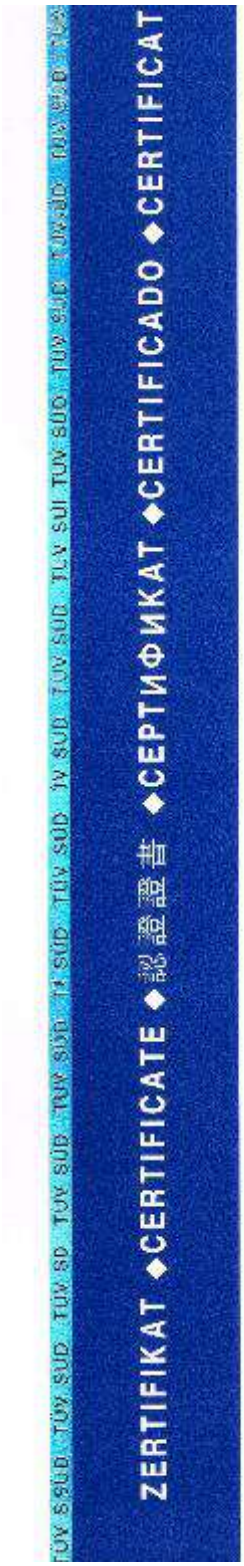
2015-01-26

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group

JAS-ANZ

TÜV

D. OHSAS 18001:2007



CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group

certifies that

Pollucon Laboratories Pvt. Ltd.
444, 544- Belgium Tower, Opp. Linear Bus Stand,
Ring Road, Surat - 395 003, Gujarat, INDIA

has established and applies
a Occupational Health and Safety Management System for

Providing Environmental Audit,
Consultancy, Monitoring & Testing Services for Water, Air,
Hazardous waste & Food Products

An audit was performed, Report No. **20042248**
Proof has been furnished that the requirements
according to

OHSAS 18001:2007

are fulfilled. The certificate is valid until **2018-03-11**
Certificate Registration No. **TUV116 07 2153**

2015-01-26

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group

JAS-ANZ

TÜV®

E. GUJARAT POLLUTION CONTROL BOARD ENVIRONMENTAL AUDIT RECOGNITION

GUJARAT POLLUTION CONTROL BOARD
Paryavaran Bhavan
Sector - 10 A, Gandhinagar - 382 010.
Environment Audit Cell

No. GPCB/EA-126(6)/ 43334 / **1 FEB 2019** **RPAD**

To,
Pollucon Laboratories Pvt. Ltd.
Plot No. 5/6, Pollucon House,
Opp. Balaji Industrial Soc.,
Old Shantinath Silk Mill Lane,
Navjivan Circle,Udhana Magdalla Road,
Surat – 395 007

Sub:- Recognition as Schedule- II Environmental Auditor.

Sir,

This refers to your application for the recognition as Environmental Auditor, subsequent interview by Environment Audit Committee members. It is recommended by the Environment Audit Committee members, to recognize your firm as Schedule-II Environmental Auditor for carrying out the Environmental Audit under Environment Audit Scheme with following conditions.

1) Recognition is valid upto **31/12/2020.**
2) You shall have maximum **Three** teams for the Environment Audit.
3) You shall carry out maximum **45** nos. of Environment Audit.
4) Team members shall be as under :

Sr. No.	Name	Designation
Team-1		
1	Mr. Mehul Chevli	Environment Engineer
2	Mr. Nimesh Prajapati	Chemical Engineer
3	Mr. Devang Gandhi	Chemist
4	Mr. Harshal Gandhi	Microbiologist
Team-2		
1	Ms. Dhruti Desai	Environment Engineer
2	Mr. Hitesh Rathod	Chemical Engineer
3	Mr. H.T.Shah	Chemist
4	Mr. Mukesh Patel	Microbiologist
Team-3		
1	Mr. Vishmay Rana	Environment Engineer
2	Mr. Nandlal Suthar	Chemical Engineer
3	Mr. Macky Suraliwala	Chemist
4	Mrs. Nikita Patel	Microbiologist

Clean Gujarat Green Gujarat
An ISO 9001: 2008 & ISO 14001: 2004 Certified Organization

रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

असाधारण
EXTRAORDINARY
भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)
प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

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पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 2 जून, 2016

का.आ. 1953(अ).—केन्द्रीय सरकार के साथ पठित पर्यावरण (संरक्षण) नियम, 1986 के नियम 10 पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 12 की उपधारा (1) के खंड (ख) और धारा 13 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए और भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 1174(अ), तारीख 18 जुलाई, 2007 में निम्नलिखित संशोधन और करती है, अर्थात :—

उक्त अधिसूचना से संलग्न तालिका में,–

(क) क्रम संख्यांक 5, 9,13 से 16, 20, 79, 80 और 83 से 85 तथा उनसे संबंधित प्रविष्टियों के स्थान पर निम्नलिखित क्रमशः क्रम संख्यांक और प्रविष्टियां रखी जाएंगी, अर्थात् :—

20	मेसर्स पॉल्यूकॉन लेबोरेटरीज प्रा. लि., 504, बेल्जियम टावर, रिंग रोड, लिनियर बस स्टैंड के पीछे, सूरत, गुजरात-395003	(1) डॉ. अरुण कुमार बाजपेई (2) श्री हेमंत मधुकर मांडी (3) श्री हर्षिल मधुकर गांधी	02.06.2016 से 01.06.2021

ENVIRONMENTAL AUDIT REPORT

OF

M/S. ATUL LIMITED.

Plot No. 5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91 &

Survey No. 274, 275, 276

AT & PO ATUL – 396020, Dist.: Valsad.

[Audit Period: April 2018 – March 2019]

Prepared By:

PACIFIC SCHOOL OF ENGINEERING

(Centre for Environmental Research & Technology)

GPCB RECOGNISED SCHEDULE – I ENVIRONMENTAL AUDITOR

Address:
Kadodara Palsana Highway (NH-8),
At. Sanki, Tal. Palsana, Dist. Surat - 394305.
Ph: +91 9904408978
Email: cert.pse@gmail.com

OBSERVATIONS

1. The unit has been granted consolidated consent vide no. AWH-67717 dated 04/11/2014 which is valid up to 03/11/2019.
2. Industry is an improvement driven, integrated chemical company serving about 4,000 customers belonging to 27 industries across the world. The salient features of their infrastructure are as follows:

Land Area	:	500 hectares.
Effluent Drainage system	:	4 Km.
Effluent Treatment Plants	:	30,000 m^3/day
Solid Waste Disposal	:	Incinerator, TSDF, Co processing
Captive Power Plants	:	56 MW
Water Storage	:	1.6 million m^3

3. Industry is ISO-14001:2004 certified company and has received more than 16 awards in the area of Environmental pollution control from prestigious organizations till 1998.
4. **Electricity consumption** is **decreased** by **0.14 %** in **April 2018 - March – 2019** as compared to previous audit period **April 2017 - March – 2018.**
5. **Water consumption and Wastewater generation** is **increased** by **7.81% and 9.39%** respectively in **April 2018 - March – 2019** as compared to previous audit period **April 2017 - March – 2018.**
6. Norms for production, final effluent discharge, ambient emission and stack emission are meeting the norms given by GPCB.
7. Final treated effluent is discharged in to an Arabian sea through Estuary Zone of Par River.
8. Industry owned TSDF site for disposal, recovery and incineration of hazardous waste.
9. Industry has employed full time medical officer. Also, satisfactory medical facilities have been provided.
10. Fatal accident at phosgene plant reported during the audit period. Industry has taken necessary safety corrective actions.
11. Industry strictly follows the safety rules for wearing personal protective devices.
12. Company has shifted to membrane cell system and completely phase out Hg cell system for chlor-alkali production.
13. Industry has implemented various steps in the area of environmental management system. They are mainly:

- First in Gujarat to have complete In-house Treatment facility for all types of waste.
- Liquid Waste: State-of-Art effluent treatment plant consisting of three operational Effluent Treatment Plants.
- Own 4 KM pipeline to discharge treated effluent in the estuary zone of river Par.
- Own incinerator and TSDF for hazardous waste treatment.
- Over 50,000 saplings planted every year in and around Atul Complex.
- Water harvesting (850 million litre) and bore well recharging.
- 100% utilization of fly-ash.

14. Industry has implemented various steps for smooth functioning of EMS. It mainly includes recovery from process, natural resources conservation and cleaner production. Details of the same are enclosed herewith.

RECOMMENDATIONS

1. Installation of effluent network system at above ground is underway. Recommendation for completion of job.
2. To control dustiness surrounding to ETP and Boiler, housekeeping is highly recommended.
3. It is recommended to install auto calibration system for OCEMS (Online Continuous Environmental Monitoring System) as per CPCB guidelines.
4. It is recommended to comply with conditions of Environmental Clearance received.
5. It is recommended to explore possibility of reusing condensate being generated from MEE.

ENVIRONMENTAL FRIENDLY REPLACEMENTS / IMPROVEMENTS IN, WITHIN AND AROUND THE INDUSTRY / ORGANIZATION /

Following are some examples of innovative approaches adopted to reduce the pollution load, saving renewable resources, adoption of cleaner technology in recent years:

❖ **RECOVERY FROM MANUFACTURING PROCESS:**

Recovery at source is proven to be the best solution for environmental treatment. The company has also focused on critical areas for various at source recovery for various purposes. This has not only reduced pollution load in EMS but also provided economic benefit. Details of some of at source treatment initiated in 18-19 and recent past are described below:

ANNEXURE – 23
COMPLIANCE REPORT

Detail		Has valid consent/authorization	Complying with standards & other conditions
(A)	Compliance Report of Water as per Water act, 1974. If No, Give comment	The consolidated consent vide no. AWH-67717 dated 04/11/2014 under the provision of water Act-1974, Air act-1981and Hazardous Rules-1989 is valid up to 03/11/2019.	Complied
(B)	Compliance Report for Air as per Air act, 1981. If No, Give comment		Complied
(C)	Compliance Report for the storage and handling of hazardous waste/chemicals under The hazardous Waste Management & Handling) Rule, 1989 & EPA-86. If No, Give comment		Complied

<table>
<tr><th>No.</th><th>Condition</th><th>Compliance</th></tr>
<tr><td colspan="3">A. Specific Conditions</td></tr>
<tr><td>i</td><td>Industrial Waste water generation shall not exceed 17,283 m³/d.</td><td>Complied.

The average wastewater generation for the report period is 8636 m³/day only which is well within the limit. Detail break up is given in below table:

<table>
<tr><th>Wastewater generation m³/day</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>256660</td><td>251819</td><td>243284</td><td>238044</td><td>300815</td><td>272559</td><td>1563181</td></tr>
<tr><td>Per day</td><td>8555</td><td>8123</td><td>7848</td><td>8502</td><td>9704</td><td>9085</td><td>Avg. 8636</td></tr>
</table>

The maximum values during the compliance period confirms that at no time the wastewater generation went beyond the stipulated value. Summary is given below:

<table>
<tr><th rowspan="2">Wastewater generation</th><th rowspan="2">Stipulated value</th><th colspan="3">Values for the period Nov-18 – Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Wastewater generation m³/d</td><td>17283</td><td>7848</td><td>9704</td><td>8636</td></tr>
</table>
</td></tr>
<tr><td></td><td>23 m³/d High COD effluent shall be incinerated.</td><td>Complied.

We have been segregating high COD streams (COD >50000 ppm) and same is being taken for recovery to get economic benefit. Rest lean effluent of COD <2000 ppm is finally sent to ETP for treatment.
All the high COD streams are being diverted to recovery system rather than incineration. Streams containing Ammonia, Methanol, Copper, Solvents, Phenolics, etc. are taken for the recovery of the same and reused. Hence, there is no High COD Waste water stream remaining and therefore no incineration was done during this period.</td></tr>
<tr><td></td><td>97 m³/d High TDS effluent shall be evaporated through MEE.</td><td>Complied.

The average 92.8 m³/d high TDS waste water was evaporated in MEE. Detail break up is given in below table:

<table>
<tr><th>High TDS effluent m³</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>2698</td><td>2780</td><td>2943</td><td>2533</td><td>2974</td><td>2876</td><td>16804</td></tr>
<tr><td>Per day</td><td>89.9</td><td>89.7</td><td>95.0</td><td>90.5</td><td>95.9</td><td>95.9</td><td>Avg. 92.8</td></tr>
</table>

The maximum, minimum and average values are given below:

<table>
<tr><th rowspan="2">High TDS effluent</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>m³/d</td><td>89.7</td><td>95.9</td><td>92.8</td></tr>
</table>

High TDS effluent generation is variable as per the production.</td></tr>
<tr><td></td><td>Total quantity of 17283 m³/d shall be treated at company's own effluent treatment plant.</td><td>Complied.

The average 8636 m³/day wastewater was treated in the company's own</td></tr>
</table>

<table>
<tr><td></td><td></td><td>effluent treatment plant during the reporting period.</td></tr>
<tr><td></td><td>Final Discharge of Treated effluent is being discharge into river par through 4 km line constructed by M/s Atul.</td><td>Complied.

Final discharged effluent meeting all state pollution control board's limit is being discharged into river Par through 4 km line.</td></tr>
<tr><td></td><td>Ammonia bearing effluent shall be subject to ammonia recovery before mixing with normal effluent stream.</td><td>Complied.

Ammonia bearing effluent streams generated from 4,4 DDS production is recovered by stripping in series of packed column. The ammonia contained water from the stripper is condensed in condenser and recovered ammonia is being recycled back in production of 4,4 DDS. Details are given in below table:

<table>
<tr><th>Recover Ammonia</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>KL</td><td>456</td><td>442</td><td>518</td><td>314</td><td>398</td><td>352</td><td>2480</td></tr>
</table></td></tr>
<tr><td></td><td>Phenol will be recovered from phenol containing effluent.</td><td>Complied.

20 Kgs phenol is recovered from effluent per one MT of 2,4 D production. A distillation column has been installed for phenol recovery. Resin tower are installed to recover phenol. Data is given in below table:

<table>
<tr><th></th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>DCP crude distilled</td><td>1339.5</td><td>1482</td><td>1276.8</td><td>1621.19</td><td>1681.5</td><td>1674.66</td><td>9075.65</td></tr>
<tr><td>2,4DCP recovered</td><td>1175</td><td>1300</td><td>1120</td><td>1402.5</td><td>1470.73</td><td>1469</td><td>7937.23</td></tr>
<tr><td>2.6DCP recovered</td><td>89.3</td><td>98.8</td><td>87.07</td><td>27.49</td><td>123.868</td><td>119.097</td><td>645.625</td></tr>
<tr><td>OCP/ Residue</td><td>75.2</td><td>83.2</td><td>69.73</td><td>91.206</td><td>86.907</td><td>86.563</td><td>492.806</td></tr>
</table></td></tr>
<tr><td></td><td>The treated effluent shall confirm the discharge norms.</td><td>Complied.

The treated effluent is meeting all the state pollution control board's discharge norms and values of various parameters of treated effluent is given in Table 1. (Pl. see pg. no. 17)
The maximum values during the compliance period confirms that at no time the emission went beyond the stipulated standards. Summary is given below:
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Parameter</th><th rowspan="2">Norms</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>pH</td><td>5.5-9.0</td><td>7.08</td><td>7.95</td><td>7.44</td></tr>
<tr><td>2</td><td>Temperature</td><td>40 deg C</td><td>30.1</td><td>32.6</td><td>31.05</td></tr>
<tr><td>3</td><td>Colour (pt. co. scale)in units</td><td>---</td><td>40</td><td>130</td><td>65.00</td></tr>
<tr><td>4</td><td>Suspended solids</td><td>100 mg/l</td><td>23</td><td>86</td><td>52.00</td></tr>
<tr><td>5</td><td>Phenolic Compounds</td><td>5 mg/l</td><td>0.28</td><td>0.75</td><td>0.48</td></tr>
<tr><td>6</td><td>Cyanides</td><td>0.2 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>7</td><td>Fluorides</td><td>2 mg/l</td><td>0.32</td><td>1.2</td><td>0.60</td></tr>
<tr><td>8</td><td>Sulphides</td><td>2 mg/l</td><td>0.4</td><td>1.8</td><td>1.33</td></tr>
<tr><td>9</td><td>Ammonical Nitrogen</td><td>50 mg/l</td><td>32</td><td>48</td><td>39.67</td></tr>
<tr><td>10</td><td>Total Chromium</td><td>2 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>11</td><td>Hexavalent Chromium</td><td>1 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>12</td><td>BOD (3 days at 27°C)</td><td>100 mg/l</td><td>44</td><td>70</td><td>61.50</td></tr>
<tr><td>13</td><td>COD</td><td>250 mg/l</td><td>202</td><td>232</td><td>216.67</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td>The domestic effluent shall be disposed off through septic tank / soak pit.</td><td>Complied.

Domestic effluent goes to septic tank / soak pit and finally diverted to ETP. Detail of Domestic effluent generation is given in below table:

<table>
<tr><th>Domestic Wastewater generation m^3</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>11100</td><td>10832</td><td>10493</td><td>10283</td><td>12276</td><td>11856</td><td>66840</td></tr>
<tr><td>Per day</td><td>370</td><td>349</td><td>338</td><td>367</td><td>396</td><td>395</td><td>Avg. 369</td></tr>
</table>

The maximum, minimum and average values are given below:
<table>
<tr><th rowspan="2">Domestic Wastewater generation</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Domestic Wastewater generation m^3/d</td><td>338</td><td>396</td><td>369</td></tr>
</table>
</td></tr>
<tr><td>ii</td><td>The process emissions (SO_2, NH_3, Cl_2, and HCl, shall be scrubbed with Scrubbers.</td><td>Complied.

All the SO_2, NH_3, Cl_2, and HCl vents are being routed through adequate and properly designed scrubbing system. Furthermore, most of the process and flue gas stacks have been monitored through online monitoring system and also connected to GPCB and CPCB website.</td></tr>
<tr><td></td><td>The emission shall be dispersed through stack of adequate height as per CPCB standard.</td><td>Complied.

The emission is dispersed through adequate height of stacks as per CPCB standard as given below:
For Incinerator: Minimum stack height shall be 30 meters above ground.
For Boilers : Stack Height $H=14(Q)^{0.3}$
Details of stack results along with its height data is given in Table 2. (Pl. see pg. no. 18) Gaseous emissions from process units are monitored regularly on monthly basis.
During the report period no case varies from standard.</td></tr>
<tr><td></td><td>The gaseous emission from the DG sets shall be dispersed through stack of adequate height as per CPCB standards.</td><td>Complied.

The gaseous emission from the DG sets is being dispersed through stack of adequate height as per CPCB standards given below:
The minimum height of stack is provided using the following formula (ref. CPCB):
$H = h+0.2x\sqrt{KVA}$
H =Total height of stack in meter
h =Height of the building in meters where the generator set is installed
KVA = Total generator capacity of the set in KVA

However, DG sets are being used only during emergency startups.</td></tr>
<tr><td></td><td>Acoustic enclosures shall be provided to the DG set to control the noise pollution.</td><td>Complied.

All DG sets are having inbuilt acoustic enclosures to control the noise pollution and meeting the prescribed norms.</td></tr>
<tr><td>iii</td><td>The company shall upload the status of compliance of stipulated environmental clearance conditions including results of monitored data on its web site.</td><td>Complied.

The status of compliance of stipulated environmental clearance conditions including results of monitored data is posted on our web site. And it can be viewed at: http://www.atul.co.in/sustainability/pdf/Atul-EC-Compliance-Report.pdf</td></tr>
<tr><td></td><td>Status of compliance of stipulated environmental clearance conditions to be sent to Regional office of</td><td>Complied.

Compliance status report to the stipulated environmental clearance</td></tr>
</table>

	MoEF, the respective Zonal office of CPCB and the state pollution control board.	conditions are regularly submitted to the regional office of MoEF, zonal office of CPCB and state pollution control board.
	The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (ambient levels as well as Stack emissions) or critical sectorial parameters like VOC, indicated for the project shall be monitored and displayed at a convenient location near the main gate of company in the public domain.	**Complied**. The critical pollutants parameters namely; SPM, RSPM, SO_2, NOx are monitored regularly on monthly basis and displayed at board at the company entrance. Details of stack results, ambient air monitoring and VOC measured in fugitive emission is given in **Table 2, 3 and 4** respectively. (Pl. see pg. no. 18,22,23) The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards. Parameter wise summary is given below:

Summary of Process Stack results:

No.	Parameter	Standard values as per CCA	Unit	Values for the period Nov18 – Apr19		
				Min.	Max.	Avg.
1	SO_2	40	mg/Nm^3	3.8	17.8	8.97
2	SO_2 (kg/T)	2	kg/T	0.5	1.7	0.977
3	NOx	25	mg/Nm^3	10.5	13.5	10.98
4	HCl	20	mg/Nm^3	4.1	9.9	6.11
5	PM	150	mg/Nm^3	8.5	85	45.18
6	PM with Pesticide compound	20	mg/Nm^3	4.2	9.5	7.0

Summary of Flue Stack results:

No.	Parameter	Standard values as per CCA	Unit	Values for the period Nov18 – Apr19		
				Min.	Max.	Avg.
1	PM	100	mg/Nm^3	50	80	61.83
2	PM (New Boiler)	50	mg/Nm^3	35	49	41.5
3	SO_2	600	mg/Nm^3	75	128	96.41
4	NOx	600	mg/Nm^3	105	145	120.09
5	NOx (NewBoiler)	300	mg/Nm^3	71	95	79.67

Summary of Ambient Air Quality results:

Station	Parameter	Limit microgm/N M^3	Values for the period Nov18 –Apr19		
			Min.	Max.	Avg.
66 KV	RSPM (PM2.5)	60	27	40	31.83
	PM10	100	31.1	50	35.97
	SO2	80	7.3	9.2	8.17
	NOx	80	6.8	8.9	8.05
	Ammonia	850	ND	9	1.5
	HCl	200	ND	ND	ND
Opposite Shed D	RSPM (PM2.5)	60	29	45	36.83
	PM10	100	35	50	42.00
	SO2	80	9.4	12.1	10.35
	NOx	80	8.7	10.1	9.22

			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Near West site ETP	RSPM (PM2.5)	60	28	35	30.83
			PM10	100	39	50	44.00
			SO2	80	8.5	10.1	9.07
			NOx	80	8.5	9.5	8.82
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Near North ETP	RSPM (PM2.5)	60	26	38	31.17
			PM10	100	38	60	44.00
			SO2	80	9.5	10.4	10.10
			NOx	80	9.1	9.8	9.48
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		TSDF	RSPM (PM2.5)	60	33	55	42.33
			PM10	100	33	55	42.83
			SO2	80	8.4	9.9	9.08
			NOx	80	7.9	9.1	8.45
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Main Guest House	RSPM (PM2.5)	60	27	35	29.17
			PM10	100	39	50	43.17
			SO2	80	9.5	10.1	9.83
			NOx	80	13.4	16.5	14.57
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Wyeth Colony	RSPM (PM2.5)	60	24	30	26.67
			PM10	100	39	46	43.33
			SO2	80	7.5	9.3	8.33
			NOx	80	11.8	13.5	12.45
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Gram panchayat hall	RSPM (PM2.5)	60	32	40	35.17
			PM10	100	35	45	40.17
			SO2	80	8.3	9.3	8.85
			NOx	80	12.5	13.2	12.83
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Main office, North site	RSPM (PM2.5)	60	25	30	26.83
			PM10	100	44	55	49.00
			SO2	80	8.7	9.2	8.93
			NOx	80	12.6	13.2	12.87
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND

Haria water tank	RSPM (PM2.5)	60	27	36	31.33
	PM10	100	31.3	40.5	34.87
	SO2	80	7.4	8.5	7.83
	NOx	80	7.9	9.5	8.48
	Ammonia	850	ND	ND	ND
	HCl	200	ND	ND	ND

Summary of VOC results :

Plant	Area	Parameter	Prescribed Limit	Values of VOCs in Milligram per NM^3 for the period Nov18 – Apr19		
				Min.	Max.	Avg.
2,4 D	Reactor	Phenol	19	9.2	14.1	12.0
	Buffer tank	Chlorine	3	0.8	2.1	1.3
Resorcinol	Benzene storage tank area near vent	Benzene	15	5.4	14.0	9.4
	Near Extraction/scrubber unit	Butyl acetate	-	1.6	10.8	5.9
Pharma	At second floor work area	Ammonia	18	9.9	14.6	11.7
	Ammonia recovery area	Ammonia	18	3.1	12.2	7.4
Epoxy - I	At vacuum pump 2nd floor	ECH	10	2.6	5.4	3.6
	At vessel POS 1208 G.F	ECH	10	3.1	6.2	5.0
Shed H	At second floor work area	Nitrobenzene	5	1.3	4.4	2.8
Shed J	Buffer Tank	Chlorine	3	1.1	2.6	1.9

iv	**The company shall adopt cleaner production technology to minimize the quantity of fresh water requirement and process effluent generation.**	**Complied**. Company is fully devoted towards protection of environment and has successfully completed many cleaner production projects and will continuously improve further. We have already converted few of our plants as ZLD and are in process of converting many other plants as ZLD. Our Ankleshwar unit is completely ZLD unit. Treated wastewater is being used in lime preparation at ETP, steam condensate is being collected and used in place of raw water, vacuum pump, gland cooling and other water is being collected and reused. Vacuum pumps are removed by installing centrifuge in place of neutch filter and water consumption is reduced. Cooling tower blow down water is used as fire hydrant make up and also used for dust suppression and fly ash quenching instead of fresh water. Water used for washing purpose is reused. Details of water consumption break up is given below:

<table>
<tr><td></td><td></td><td>Details of water consumption:
<table><tr><td colspan="5">Water Consumption Break up m^3</td></tr><tr><td rowspan="2">Period</td><td colspan="3">Water consumption in</td><td rowspan="2">Total</td></tr><tr><td>Process</td><td>Cooling</td><td>Domestic</td></tr><tr><td>Nov-18</td><td>215379</td><td>50812</td><td>13875</td><td>280066</td></tr><tr><td>Dec-18</td><td>208438</td><td>49005</td><td>13540</td><td>270983</td></tr><tr><td>Jan-19</td><td>203615</td><td>47698</td><td>13116</td><td>264429</td></tr><tr><td>Feb-19</td><td>199383</td><td>46832</td><td>12854</td><td>259069</td></tr><tr><td>Mar-19</td><td>252581</td><td>58936</td><td>15345</td><td>326862</td></tr><tr><td>Apr-19</td><td>228895</td><td>54718</td><td>14821</td><td>298434</td></tr></table></td></tr>
<tr><td rowspan="2">v</td><td>The company shall obtain Authorization for Collection; Storage and Disposal of Hazardous waste under the hazardous waste management (Handling and trans boundary movement rule-2008) for management of hazardous waste and prior permission from GPCB shall be obtained for disposal of solid waste in the TSDF.</td><td>Complied.

We have obtained authorization for our own TSDF through GPCB notification no. GPCB/HAZ/GEN-55/9647 dated 13th March 2000 and NOC no. CTE-65621 dated 19/11/2014. Also we have valid authorization under our current CCA No. AWH-67717 for handling, storage and disposal of hazardous waste. Copy of the same was submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.</td></tr>
<tr><td>The concerned company shall undertake measures for the firefighting facility in case of emergency.</td><td>Compiled.

Company is having two nos. of fire tenders, fully adequate hydrant system and trained staff, emergency response team(ERT) of trained workers, power supply from two source with emergency backup power provision from DG set as well grid and detailed on-site emergency plan. Mock drills are also carried out at regular interval.</td></tr>
<tr><td rowspan="2">vi</td><td>The project authorities shall strictly comply with the rules and guidelines under manufacturing, storage and import of hazardous chemicals rule 1989 as amended in October, 1994 and January, 2000.</td><td>Complied.

We are complying with all the requirement of MSIHC rule 1989 as amended in October, 1994 and January, 2000 and having proper storage and handling system, Onsite emergency plan, Licenses, reporting, etc.

The company complies with all stipulated norms of act made in CCA by GPCB are being complied. Latest compliance report by GPCB appointed Environmental auditor Faculty of Pacific school of Engineering, Dist. Surat for year 18-19 is attached as Annexure 1.</td></tr>
<tr><td>All Transportation of Hazardous chemicals shall be as per the MVA, 1989.</td><td>Complied.

Transportation of Hazardous chemicals are being done as per the MVA rule 1989. TREM (Transport Emergency) card and MSDS of chemicals are provided to transporter.</td></tr>
<tr><td>vii</td><td>The company shall undertake waste minimization measures :
Metering and control of quantities of active ingredients to minimize waste.</td><td>Complied.

All the liquid ingredients are being charged through measure vessels and/or flow meters to control on quantity as per the stoichiometry. All the solid ingredients are charged after proper weighment only. All these meters and weighing machines are calibrated and records are maintained.</td></tr>
</table>

	Reuse of by products from the process as raw materials or as raw material substitutes in other processes.	Complied. Sodium Sulfate, Sodium Thio Sulphate, Brine, MEE salt, Sodium hypochlorite, Copper Hydroxide, spent acid, etc. are few by-products from the process which are being sold for using the same either as raw material or as substitute to raw materials. Also, fly ash and Gypsum are being used as raw material for Brick Manufacturing. Sodium Hypochlorite, Sodium hydro sulfide, etc. are being used as raw material in other processes.
	Use of automated filling to minimize spillage.	Complied. Automated filling system for our agro products, polymers, resorcinol, dyes for small and bulk packing is provided to minimize spillage.
	Use of 'close feed' system into batch system.	Complied. Chemicals and solvents are handled in close handling system through pipe lines only.
	Venting equipment through vapor recovery system.	Complied. All the reactors are equipped with vents/stacks, which are connected to either vapor recovery system consisting of condensers, ejector/vacuum pumps and/or scrubbers. Genosorb technology for solvent vapor recovery is also installed and working perfectly.
	Use of high pressure hoses for equipment cleaning to reduce wastewater generation.	Complied. Many equipment like reactors, spray dryers, condenser wherever necessary are being cleaned with high pressure sparger / jet to reduce waste water generation.
viii	Fugitive emissions in the work zone environment, product, raw material storage area shall be regularly monitored. The emission shall conform to the limits imposed by I.	Complied. Fugitive emissions in the work zone environment and raw material storage area is being regularly monitored by NABL approved third party. Data for the reporting period is given in **Table 4** (Pl. see pg. no.23). Besides this online monitors in work area for parameters like Chlorine, HCl, Phosgene are also installed. The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards. Summary is given in specific condition iii.
ix	The project authority shall provide chilled brine solution in secondary condenser for condensation of the VOCs.	Complied. All the VOCs/solvent recovery systems are attached with chilled brine solution in secondary condenser for condensation of VOCs.
	The project authority shall ensure that solvent recovery shall not be less than 95%	Complied. On an average solvent recovery is 96%.
	The VOC monitoring shall be carried in the solvent storage area and data submitted to the Ministry.	Complied. We are monitoring VOC as well as other chemicals in work area as per Factories Act and records are being maintained in Form No. 37. VOC monitoring in solvent storage area is being done and data are submitted through EC compliance report. Data for the report period is given in **Table 4.** (Pl. see pg. no.23)
x	Solvent management shall be as follows: Reactor shall be connected to chilled brine condenser system.	Complied. All the reactors handling solvent are connected/attached with chilled brine condenser for solvent recovery.
	Reactor and solvent handling pump shall have mechanical seals to prevent leakages.	Complied. All the reactors and pumps handling solvent are equipped with mechanical seals to prevent leakages.
	The condensers shall be provided	Complied.

	with sufficient HTA and residence time so as to achieve more than 95% recovery.	The condensers provided are properly designed with respect to HTA and Residence time to achieve more than 95 % recovery. As mentioned above, average 96 % solvent recovery is being achieved.
	Solvents shall be stored in a separate space specified with all safety measures.	Complied. Solvents are stored in tank farms in separate tanks with proper earthing, flame arresters, lightening arresters, fencing, Fire hydrant system, Fire extinguishers, flame proof equipment, etc. safety measures.
	Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.	Complied. Double earthing is provided and regular checking and testing of the same is being done and recorded.
	Entire plant shall be flame proof.	Complied. Plants are equipped with Jumpers, flame proof electrical fittings and proper earthing as per the Hazardous area classification of PESO.
	The solvent storage tanks shall be provided with breather valve to prevent loses.	Complied. Breather valves have been provided to all the solvent storage tanks to minimize the loses.
xi	Hazardous chemicals shall be stored in tanks in tank farms, drums, carboys etc.	Complied. Hazardous chemicals are being stored in tanks, drums and carboys considering the storage quantity and chemical stored.
	Company shall develop an area of 33% green belt and selection of plant species shall be as per the guideline of CPCB.	Complied. Company has developed green belt and dense plantation inside and outside the factory in more than 33 % of total land. Company is having green belt development plan and planting more than about 50000 plants per year on regular basis.
xii	The company shall harvest surface as well as rain water from the roof tops of the building and storm water drain to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	Complied. Company has expanded its harvesting pond capacity to 9000 KL capacity pond to harvest rain water We are creating facility/ capacity to cater our consumption with rain harvested water with zero river drawls of water during the rainy days. Besides this, there are three check dams and pumping facility to harvest rain water. We also construct temporary sand bag dam on top of dam towards the end of monsoon to store additional free flowing rain water in river Par. In addition to above, surface runoff water and roof top water is used to recharge bore wells.
xiii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied. Occupational health surveillance of the workers is being done on regular basis and record maintained as per the factory act which is shown in below table: Sr. No. | Month of Examination | Total No. of Employees 1 | Quarter 3 | 571 2 | Quarter 4 | 579
B. General Conditions:		
i	The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board.	Complied. The company adheres to the compliances and has not exceeded the stipulation. This has been certified by our Environmental auditors, an authorized agency and nominated by GPCB; through Environmental audit every year. Latest compliance report by GPCB appointed Environmental auditor Faculty of Pacific school of Engineering, Dist. Surat for year 18-19 is attached as Annexure 1.
ii	No further expansion or	Complied.

<table>
<tr><td></td><td>modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
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 to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.</td><td>Any expansion will be done only after getting EC.</td></tr>
<tr><td>iii</td><td>At no time, the emissions shall exceed the prescribed limits.</td><td>Complied.
Monthly monitoring is being done by NABL approved third party.

At no time, the emissions exceeded the prescribed limits during report period.

Summary of stack results given in specific condition no. iii.</td></tr>
<tr><td></td><td>In the event of failure of any pollution control system adopted by the units, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.</td><td>Complied.

No such case happened during compliance period. Whenever such incident of failure of pollution control system happened, we will stop the operation and rectify the problem and then only restart.</td></tr>
<tr><td>iv</td><td>The Gaseous emission (NOx, HCl, SO2 and SPM) and Particulate matter along with RSPM levels from various process units shall conform to the standards prescribed by the concerned authorities from time to time.</td><td>Complied.

The gaseous emissions (SO_2, NOx, and HCl) and particulate matters from various process units confirms to the standards prescribed by GPCB through CCA.
Details of stack results for the compliance period is given in Table 2. (Pl. see pg. no. 18)</td></tr>
<tr><td></td><td>At no time, the emission levels shall go beyond the stipulated standards.</td><td>Complied.

We will ensure that at no time emission will go beyond the standards. The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.

Summary of stack results given in specific condition no. ii.</td></tr>
<tr><td></td><td>In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restricted until the control measures are rectified to achieve the desired efficiency. Stack monitoring for SO_2, NOx and SPM shall be carried.</td><td>Complied.

No such case happened during compliance period. Stack monitoring for SO_2, NOx and SPM has been carried out and details given in Table 2. (Pl. see pg. no. 18) Whenever such incident of failure of pollution control system happened, we will stop the operation and rectify the problem and then only restart.</td></tr>
<tr><td>v</td><td>The Location of ambient air quality monitoring stations shall be decided in consultation with state pollution control Board and it shall be ensured that at least one station is installed in the up wind and downwind direction as well as where maximum ground level concentration are anticipated.</td><td>Complied.

The Location of ambient air quality monitoring stations had been decided in consultation with GPCB so that at least one station is installed in the up wind and downwind direction as well as where maximum ground level concentration are anticipated. The same had been shown to authority like SPCB, CPCB & MoEF during their visit to our factory.

List of our ambient air monitoring station is given below:
<table>
<tr><th>No.</th><th>Location</th></tr>
<tr><td>1</td><td>66 KVA GEB substation</td></tr>
<tr><td>2</td><td>Opposite Shed D</td></tr>
<tr><td>3</td><td>Near ETP (West Site)</td></tr>
<tr><td>4</td><td>ETP Plat (North site)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>5</td><td>Near TSDF</td></tr>
<tr><td>6</td><td>Near Main Guest House</td></tr>
<tr><td>7</td><td>At Wyeth Colony</td></tr>
<tr><td>8</td><td>Gram panchayat hall</td></tr>
<tr><td>9</td><td>Near Main office, North site</td></tr>
<tr><td>10</td><td>Water tank at Haria Road</td></tr>
</table>
Details of ambient air quality results is given in Table 3. (Pl. see pg. no. 22)</td></tr>
<tr><td rowspan="2">vi</td><td>Dedicated Scrubbers and stacks of appropriate height as per the central pollution control board guideline shall be provided to control the emission from various vents.</td><td>Complied.

Dedicated Scrubbers with stacks of appropriate height (as per the central pollution control board guideline) have been provided to control the emission from various vents. Details of stack results along with its height data is given in Table 2. (Pl. see pg. no. 18)</td></tr>
<tr><td>The scrubber water shall be sent to ETP for further treatment or sell to actual end users.</td><td>Complied.

The scrubber water is being sent to ETP for further treatment.</td></tr>
<tr><td>vii</td><td>The overall noise level in and around the plant area shall be kept well within the standard by providing noise control measures including acoustic hoods silencers, enclosures etc. on all source of noise generation.</td><td>Complied.

In built Acoustic enclosure, silencer and insulation are provided on all source of noise generation to keep over all noise level within the stipulated standards like turbine, DG set, etc.</td></tr>
</table>

	The ambient noise level shall confirm to the standards prescribed under Environment(Protection) Act-1986 Rules,1989 viz 75 dBA (day time) and 70 dBA (night time)	**Complied**. The ambient noise level confirm to the standard prescribed under EPA. The same is being regularly monitored and its details are given in **Table 5 and 6**. (Pl. see pg. no. 24) The maximum values during the compliance period confirms that at no time the noise emission level went beyond the stipulated standards. Summary is given below: **Noise level monitoring data (Day Time)**

Sr. No.	Location	Permissible Limits, dBA	Values for the period Nov18- Apr19		
		75	**Min.**	**Max.**	**Avg.**
1	Near Main guest house	75	63.6	68.9	65.3
2	Near TSDF	75	63.2	66.2	64.1
3	At Wyeth Colony	75	60.4	66.8	64.1
4	Gram Panchayat Hall	75	61.3	69.5	63.8
5	Near Main Office North site	75	65.5	67.9	66.7
6	ETP North site	75	66.5	70.2	68.0
7	Opposite shed D	75	64.7	68.9	66.3
8	ETP West site	75	65.4	68.7	67.2
9	Water tank Haria road	75	62.5	64.9	63.7
10	Near 66KVA substation	75	64.3	67.8	65.9

Noise level monitoring data (Night Time)

Sr. No.	Location	Permissible Limits, dBA	Values for the period Nov18- Apr19		
		70	**Min.**	**Max.**	**Avg.**
1	Near Main guest house	70	53.1	56.1	55.0
2	Near TSDF	70	56.4	60.3	58.3
3	At Wyeth Colony	70	50.5	52.5	51.7
4	Gram Panchayat Hall	70	52.1	55.1	53.7
5	Near Main Office North site	70	55.7	58.9	57.3
6	ETP North site	70	52.2	55.1	53.6
7	Opposite shed D	70	53.8	55.9	54.8
8	ETP West site	70	54.7	56.3	55.6
9	Water tank Haria road	70	53.4	55.8	54.7
10	Near 66KVA substation	70	51.7	56.2	53.9

viii	Training shall be imparted to all employees on safety and health aspects of chemicals handling.	**Complied**. Company is imparting training to all new employees as well as regular employees at regular intervals on safety and health aspects of chemicals handling. Safety precautions and hazards are also being communicated through display boards at appropriate places in the plants.
	Pre-employment and routine periodical medical examination for all employees shall be undertaken on regular basis.	**Complied**. Pre medical checkup and routine medical checkup for the employees is being done on regular basis (Six monthly). Data are submitted in below table :

<table>
<tr><td></td><td></td><td>Summary of medical checkup given in specific condition no. xiii.</td></tr>
<tr><td>ix</td><td>Usage of PPE's by employee/ workers shall be ensured.</td><td>Complied.

Company have PPE policy in place and is strictly followed. Company is providing adequate PPEs to all the employees.</td></tr>
<tr><td>x</td><td>The project proponent shall also comply with all the environmental protection measures and safeguards proposed in project report submitted to the ministry.</td><td>Complied.

Company has complied with all the environmental protection measures and safeguards proposed in the report apart from the recommendations made their in.</td></tr>
<tr><td></td><td>All the recommendation made in respect of environmental management and risk mitigation measures relating to the project shall be implemented.</td><td>Since ToR didn't suggest for EIA or public hearing, no such recommendations mentioned. However, we are committed for healthy work environment and safe work practices.

However, Compliance to the recommendation made in respect of adequacy report for the referred project is given below:
<table>
<tr><th>No.</th><th>Recommendation</th><th>Compliance</th></tr>
<tr><td>1</td><td>Liquid incinerator also to be refurbished.</td><td>Complied. However, We have been segregating high COD streams (COD >50000 ppm) and same is being taken for recovery to get economic benefit. Rest lean effluent of COD <2000 ppm is finally sent to ETP for treatment. Hence no incineration required for high COD wastewater.</td></tr>
<tr><td>2</td><td>Online pH and DO measuring arrangement in aeration tank</td><td>Complied. Online pH and DO monitoring available.</td></tr>
<tr><td>3</td><td>ETP lab should be equipped with auto sampler, auto titrator, COD digester etc.</td><td>Complied. Our ETP lab has 5 nos. of auto samplers for various stages sample collections. The lab also have COD digesters.</td></tr>
<tr><td>4</td><td>Explore possibility of more efficient mode of aeration</td><td>Complied. We have replaced our surface aerators with more efficient jet aerators.</td></tr>
<tr><td>5</td><td>Company shall initiate rain water harvesting projects</td><td>Complied. Company has recently constructed 9000 KL capacity pond to harvest rain water.</td></tr>
<tr><td>6</td><td>Change fuel (CNG) in Incinerator</td><td>Complied. We use CNG at our incinerator.</td></tr>
<tr><td>7</td><td>Auto pH control system at new Incinerator plant.</td><td>Complied. Auto pH control system installed and being working at new Incinerator plant.</td></tr>
</table>
(ref: comprehensive study report by Atmiya Institute of Technology, Rajkot 2010)</td></tr>
<tr><td>xi</td><td>The company will undertake all relevant measures for improving the socio economic condition for the surrounding area, CSR activities will be undertaken by involving local villages and administration:</td><td>Complied.

Company is doing CSR activities through its Atul Rural Development Fund trust and is specially designed for up gradation of surrounding area and well fare of nearby localities. List of CSR activities carried out during 18-19 is given below table :
<table>
<tr><th>No.</th><th>CSR activities during 18-19</th></tr>
<tr><td>1</td><td>11 eye camp, 27 blood donation camps and 3 Yoga camps done, beneficiaries were 5,619.</td></tr>
<tr><td>2</td><td>1500 toilets made.</td></tr>
<tr><td>3</td><td>Distribution of relief kits to Kerala flood victims</td></tr>
<tr><td>4</td><td>Construction of paver block roads in 2 villages, Valsad</td></tr>
<tr><td>5</td><td>Recharging of ponds in 3 villages, Valsad</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>6</td><td>Provide assistance to 125 families to purchase 125 cows</td></tr>
<tr><td>7</td><td>Distribute 125 sewing machines to 125 disadvantaged women</td></tr>
<tr><td>8</td><td>Provide 125 science kits to 125 schools</td></tr>
</table>

The summary of expense occurred in CSR activities for last year is listed below:
<table>
<tr><th>Budget for Financial year 18-19 (Rs. in lakhs)</th><th>Actual Expense during year 18-19 (Rs. in lakhs)</th></tr>
<tr><td>790</td><td>789.9</td></tr>
</table>
</td></tr>
<tr><td>xii</td><td>The company shall undertake eco developmental measures including community welfare measures in the project area for the overall improvement of the environment.</td><td>Complied as mentioned in xi above.</td></tr>
<tr><td>xiii</td><td>A Separate environmental management cell equipped with full flagged laboratory facility shall be set up to carry out the environmental management and monitoring function.</td><td>Complied.

Company is having separate Environmental Management Cell equipped with full-fledged laboratory facility to carry out the environment management and monitoring functions. Apart from this, one Environment Research Lab is also established for research work for the study of various aspects related to environment and its remedial measures. Organogram of Environment Health & Safety was already submitted vide our letter Atul/SHE/EC Compliance/06 dated 12.7.17. Company has developed a separate laboratory equipped with equipment such as pH meter, TDS meter, COD meter, Glass ware, gas chromatography system, and oven, muffle furnace, etc. to carry out testing of routine parameters. However sampling and testing is carried out by GPCB approved and company appointed consultant also. Currently the parameters measured in-house are pH, COD, TDS, MLVSS, and MLSS.</td></tr>
<tr><td>xiv</td><td>The project authorities shall earmark adequate funds to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.</td><td>Complied.

EMP measures are implemented by 2010 and many things have already been at place.
Non recurring cost: Rs. 5.0 Cr
Recurring cost: A separate budget is being allocated every year to comply with all the legal requirement stipulated by SPCB, CPCB & MoEF apart from upkeep of pollution control systems and facilities. Total expenditure for the report period is given in below table.
<table>
<tr><th>Expenditure for months</th><th>Particular</th><th>Expenses Rs.</th></tr>
<tr><td rowspan="7">Nov-18–Apr 19 Including, recurring maintenance, modifications and monitoring.</td><td>Fuel</td><td>2489262</td></tr>
<tr><td>Chemicals(Raw Material)</td><td>194312779</td></tr>
<tr><td>Electricity</td><td>23083536</td></tr>
<tr><td>Waste disposal</td><td>20301875</td></tr>
<tr><td>Salary</td><td>13430602</td></tr>
<tr><td>Maintenance & modifications</td><td>27370856</td></tr>
<tr><td>Monitoring</td><td>1966640</td></tr>
<tr><td></td><td>Total</td><td>282955550</td></tr>
</table>
</td></tr>
<tr><td>xv</td><td>A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad/Municipal Corporation. Urban local body and the local NGO, if any, from who suggestions/representation, if any, were received while processing the proposal.</td><td>Complied.
Latest submission to the Panchayat, Zila parishad, District Industrial Centre was distributed on 11.11.2016. Copy of the same was submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.</td></tr>
</table>

	The clearance letter shall also be put on the web site of the company by the proponent.	Complied. Available at company's website at http://www.atul.co.in/sustainability/pdf/Atul-Environmental-Clearance-for-expansion-2009.pdf
xvi	The implementation of the project vis-à-vis environmental action plan shall be monitored by Ministry's Regional office at Bhopal / SPCB / CPCB.	Complied. SPCB and MoEF is monitoring through their regular visits.
xvii	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 of Environment and Forest at http://www.envfor.ni.in.	Complied. We informed the public through advertisement and by sending our EC to local Panchayat, Zila parishad, District Industrial Centre for further actions at their end.
	This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspaper 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 Ministry's Regional office at Bhopal.	Complied. Advertisement was published as directed and copy of the same was submitted to Ministry vide our letter dated 14.11.2009.
xviii	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closures and final approval of the project by the concerned authorities and the date of start of the project.	Complied. Start date : May 2009 Completion date : May 2010 Final approval : We have obtained NOC and CCA from GPCB. Company has funded the project internally and hence not submitted the financial closure details.
8	The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Noted.
9	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Noted and will be complied.
10	Any appeal against this Environment clearance shall lie with the national appellate authority, if preferred, within a period of 30 days as prescribed under section 11 of National Environment Appellate Authority Act, 1997.	Noted.
11	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air ((Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986, Hazardous Wastes (Management,	Noted.

	Handling and Transboundry movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	

Table 1 : Quality of treated effluent

Sr. No.	Parameter	Results						GPCB Limits
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	
1	pH	7.08	7.25	7.4	7.48	7.95	7.45	5.5 to 9.0
2	Temperature °C	30.2	30.8	30.1	30.7	32.6	31.9	40 °C
3	Colour (pt. co. scale)in units	50	50	40	50	70	130	---
4	Suspended solids, mg/l	38	54	36	23	75	86	100
5	Phenolic Compounds, mg/l	0.28	0.35	0.46	0.56	0.75	0.45	5
6	Cyanides, mg/l	ND	ND	ND	ND	ND	ND	0.2
7	Fluorides, mg/l	0.55	0.45	0.32	0.45	0.65	1.2	2
8	Sulphides, mg/l	0.4	1.2	1.8	1.2	1.8	1.6	2
9	Ammonical Nitrogen, mg/l	42	48	40	36	32	40	50
10	Total Chromium, mg/l	ND	ND	ND	ND	ND	ND	2
11	Hexavelent Chromium, mg/l	ND	ND	ND	ND	ND	ND	1
12	BOD (3 days at 27°C), mg/l	44	58	68	64	70	65	100
13	COD, mg/l	210	232	226	202	220	210	250
Note : ND is Not Detectable.								

Details of Process and Flue stack

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
Atul East Site															
1	Phosgene Plant (Old Plant)	Phosgene	0.1 ppm	-	Not in use	-	Not in use	-	Not in use	-	Not in use	-	Not in use	-	Not in use
Caustic Chlorine Plant															
2	Dechlorination Plant	Cl_2	9.0 mg/Nm3	1.11.18	2.7	27.12.18	2.5	19.1.19	2.6	21.2.19	2.8	28.3.19	2.7	5.4.19	3.2
		HCl	20.0 mg/Nm3		4.9		4.5		4.1		4.3		4.1		4.8
3	Common stack of HCl Sigri unit 1&2	Cl_2	9.0 mg/Nm3	1.11.18	5.4	27.12.18	5.7	19.1.19	5.8	21.2.19	6.2	28.3.19	5.5	5.4.19	6.5
		HCl	20.0 mg/Nm3		5.6		5.1		5.5		5.6		6.1		6.8
FCB Palnt															
4	Foul Gas Scubber	SO_2	40.0 mg/Nm3		Not in use		Not in use		Not in use		Not in use		Not in use		Not in use
		NOx	25.0 mg/Nm3												
Sulfuric Acid (East Site)															
5	Sulfuric Acid Plant	SO_2	2.0 kg/T	1.11.18	0.5	21.12.18	0.6	24.1.19	0.8	annual shutdown		Not Runnig During Visit		19.4.19	0.9
		Acid Mist	50.0 mg/Nm3		5.9		5.7		5.4						6.3
6	ChloroSulfonic Acid plant reactor	Cl_2	9.0 mg/Nm3	2.11.18	4.4	21.12.18	4.3	24.1.19	4.1	annual shutdown		Not Runnig During Visit			Not Runnig During Visit
		HCl	20.0 mg/Nm3		5.6		5.7		5.6						
Incinerator															
7	Incinerator	PM	150.0 mg/Nm3	17.11.18	56	15.12.18	48	24.1.19	45	7.2.19	53	9.3.19	60	4.4.19	80
		SO_2	40.0 mg/Nm3		17.4		14.6		14.1		15.2		16.4		17.8
		NOx	25.0 mg/Nm3		11.2		11.4		10.5		10.8		12.3		13.5
NI Plant															
8	Foul Gas Scubber	SO_2	40.0 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		NOx	25.0 mg/Nm3												
NBD Plant .															
9	Spray Dryer	PM	150.0 mg/Nm3		Not in use		Not in use		Not in use		Not in use		Not in use		Not in use
2-4-D Plant															
10	Common Scrubber; 2,4D Plant	Cl_2	9.0 mg/Nm3	4.11.18	4.8	15.12.18	5.1	18.1.19	5.3	21.2.19	6.2	8.3.19	6.7	18.4.19	7.3
		HCl	20.0 mg/Nm3		6.9		6.7		6.8		7.1		7.8		8.1
		Phenol	--		ND		ND		ND		ND		ND		ND
11	Dryer-1	PM with Pesticide compound	20.0 mg/Nm3	4.11.18	4.4	15.12.18	4.6	18.1.19	4.2	21.2.19	5.3	8.3.19	5.9	18.4.19	7.2
12	Dryer-2	PM with Pesticide compound	20.0 mg/Nm3		6.9		6.4		6.1		7.2		7.6		7.9
13	Dryer-3	PM with Pesticide compound	20.0 mg/Nm3		7.6		7.9		7.8		8.5		8.9		9.5
14	Dryer-4	PM with Pesticide compound	20.0 mg/Nm3		6.5		6.8		6.5		7.8		8.5		8.1

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
CP Plant															
15	MCPA	Cl_2	9 mg/NM^3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20 mg/NM^3												
		SO_2	40 mg/NM^3												
16	Fipronil	SO_2	40 mg/NM^3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20 mg/Nm3												
17	Imidacloprid	NH_3	175 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
18	Pyrathroids	SO_2	40 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20 mg/Nm3												
19	Stack at Amine Plant	NH_3	175 mg/Nm3	5.11.18	5.8	13.12.18	5.5	3.1.19	5.8	7.2.19	6.2	8.3.19	6.5	4.4.19	7.9
MPSL Plant															
20	Phosgene Scrubbr at MPSL	Phosgene	0.1 ppm	5.11.18	ND	28.12.18	ND	11.1.19	ND	8.2.19	ND	28.3.19	ND	12.4.19	ND
21	Central Scrubber at MPSL	Phosgene	0.1 ppm	5.11.18	ND	28.12.18	ND	11.1.19	ND	8.2.19	ND	28.3.19	ND	12.4.19	ND
NICO plant															
22	Central scrubber at Nico Plant	Acetonytryle, IPA	---	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit	-	Not Runnig During Visit
Ester Plant															
23	Scrubber at Ester plant for Glyphosate	Formaldehyde	10 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
24	Central Scrubber MCPA Plant	HCl	20 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
25	MPP plant scrubber	HCl	20 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		Phosgene	0.1 ppm												
Atul West Site															
26	Shed A05/03/44	Cl_2	9 mg/NM^3	23.11.18	3.2	6.12.18	3.1	4.1.19	3.2	1.2.19	3.5	1.3.19	3.8	3.4.19	4.2
		HCl	20 mg/NM^3		5.5		5.9		5.6		6.1		6.5		7.1
27	Shed B2/12/24 Reaction Vessel	Cl_2	9.0 mg/Nm3	16.11.18	5.4	6.12.18	5.2	3.1.19	5.4	2.2.19	5.8	2.3.19	6.1	4.4.19	6.8
		HCl	20.0 mg/Nm3		4.5		4.8		4.9		5.2		5.3		5.8
28	Shed B18/02/24 Fan	SO_2	40 mg/NM^3	16.11.18	3.9	6.12.18	3.8	3.1.19	3.9	2.2.19	4.3	2.3.19	4.6	4.4.19	5.2
		Cl_2	9 mg/NM^3		4.8		4.5		4.6		4.5		4.3		4.6
		HCl	20 mg/NM^3		5.6		5.5		5.3		5.1		5.3		5.1
29	Shed C5/20/15 Chlorinator	Cl_2	9.0 mg/Nm3	17.11.18	5.6	6.12.18	5.7	3.1.19	5.8	2.2.19	6.1	1.3.19	6.2	5.4.19	6.4
		HCl	20.0 mg/Nm3		7.4		7.5		7.2		6.8		7.1		7
30	Shed D Niro Spray dryer No. 45	PM	150.0 mg/Nm3	22.11.18	8.6	13.12.18	8.5	10.1.19	8.6	not running during visit	8.6	2.3.19	60	11.4.19	75
31	Shed D Niro Spray dryer No.50	PM	150.0 mg/Nm3		13.5		13.8		13.1		13.1		55		58
32	Shed E 7/12/49 Spray Dryer	PM	150.0 mg/Nm3		not running during visit		not running during visit		not running during visit	7.2.19	12.4	7.3.19	12.8	4.4.19	13.2
33	Shed F F6/1/15 Reaction Vessel	Cl_2	9.0 mg/Nm3	17.11.18	4.8	6.12.18	4.9	3.1.19	4.8	2.2.19	5.2	1.3.19	5.8	4.4.19	6.3
		HCl	20.0 mg/Nm3		5.4		5.6		5.8		5.9		6.2		6.7
34	Shed G 10/8/1 (receiver)	Cl_2	9.0 mg/Nm3		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit		Not Runnig During Visit
		HCl	20.0 mg/Nm3												
35	Shed H 11/6/17 chlorinator	Cl_2	9.0 mg/Nm3	22.11.18	4.2	14.12.18	4.5	11.1.19	5.1	7.2.19	5.7	7.3.19	6.1	11.4.19	6.5
		HCl	20.0 mg/Nm3		6.4		6.6		6.5		6.1		6.3		6.8
36	Shed K K-13/3/4 Final of Sulfuric acid plant	SO_2	2.0 kg/T	17.11.18	0.9	13.12.18	0.8		Not Runnig During Visit	7.2.19	1.2	7.3.19	1.4	11.4.19	1.7
		Acid Mist	50.0 mg/Nm3		11.8		11.4				10.5		10.8		13.5
37	Shed J15/09/25	HBr	--	17.11.18		13.12.18	ND	10.1.19	ND	6.2.19	ND	7.3.19	ND	11.4.19	ND
		SO_2	40 mg/NM^3		6.5		6.8		6.4		6.9		7.3		8.9

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
38	Shed J12/01/42	SO_2	40 mg/NM^3		Not Runnig During Visit	13.12.18	6.3	10.1.19	4.9	6.2.19	5.8	7.3.19	6.1	11.4.19	7.5
		Cl_2	9.0 mg/Nm3				4.5		4.6		5.6		6.2		7.2
		HCl	20.0 mg/Nm3				4.1		4.1		4.8		5.2		6.3
39	Shed J12/03/36	SO_2	40 mg/NM^3	17.11.18	9.5	13.12.18	9.8	10.1.19	9.1	6.2.19	8.2	7.3.19	8.7	11.4.19	9.1
		HCl	20.0 mg/Nm3		4.5		4.9		4.8		5.3		5.9		6.5
40	Shed N Scrubber Fan N20/08/24	Cl_2	9 mg/NM^3	17.11.18	5.5	13.12.18	5.8	10.1.19	5.7	7.2.19	5.4	9.3.19	5.9	11.4.19	6.3
		HCl	20 mg/NM^3		9.3		9.7		9.9		8.9		9.3		9.8
41	Shed N Scrubber Fan N20/02/41	SO_2	40 mg/NM^3	17.11.18	7.6	13.12.18	7.2	10.1.19	7.3	7.2.19	7.5	9.3.19	7.8	12.4.19	8.3
42	Sulfer Black Plant	H_2S	--	29.11.18	ND	14.12.18	ND	4.1.19	ND	22.2.19	ND	7.3.19	ND	19.4.19	ND
		NH_3	175 mg/NM^3		14.4		14.8		14.4		15.3		16.8		18.2
43	Sulfer Dyes plant	H_2S	--	29.11.18	ND	14.12.18	ND	4.1.19	ND	22.2.19	ND	7.3.19	ND	19.4.19	ND
		NH_3	175 mg/NM^3		15.8		15.9		15.7		16.8		15.9		16.5
Atul North Site															
44	N-FDH Plant Catalytic Incinerator	PM	150.0 mg/Nm3	21.11.18	45	19.121.18	48	9.1.19	49	15.2.19	52	14.3.19	55	12.4.19	60
		SO_2	40.0 mg/Nm3		11.2		11.7		11.2		11.8		12.5		13.5
		NOx	25.0 mg/Nm3		9.9		9.4		9.1		10.6		11.2		11.8
		Formaldehyde	10.0 mg/Nm3		N.D		N.D		N.D		N.D		N.D		ND
45	PHIN Plant vessel	Phosgene	0.1 ppm	22.11.18	ND	15.12.18	ND	9.1.19	ND	14.2.19	ND	14.3.19	ND	10.4.19	ND
46	DCDPS Plant	SO_3	---	22.11.18	ND	20.12.18	ND	17.1.19	ND	14.2.19	ND	14.3.19	ND	10.4.19	ND
47	DDS Plant	NH_3	175 Mg/Nm3	22.11.18	13.8	20.12.18	13.6	17.1.19	12.8	14.2.19	13.2	14.3.19	14.3	10.4.19	15.8
48	SPIC II Plant	SO_3	---	22.11.18	ND	19.12.18	ND	17.1.19	ND	14.2.19	ND	14.3.19	ND	13.4.19	ND
49	SPIC I Plant	NH_3	175 mg/Nm3	22.11.185	12.4	20.12.18	12.2	17.1.19	12.5	15.2.19	13.2	14.3.19	14.6	13.4.19	15.8
50	SPIC IV Plant	NH_3	175 mg/NM^3	23.11.18	14.9	20.12.18	15.2	17.1.19	14.9	15.2.19	14.3	14.3.19	15.3	10.4.19	16.5
		SO_3	---		5.3		5.4		5.8		6.2		7.5		8.5
51	Furnace (Phosgene plant-New)	PM	150 mg/NM^3	30.11.18	56	28.12.18	59	25.1.19	62	22.2.19	65	28.3.19	70	25.4.19	85
52	Reactor (Phosgene plant- New)	CO	--	30.11.18	ND	28.12.18	ND	25.1.19	ND	22.2.19	ND	28.3.19	ND	25.4.19	ND
		Phosgene	0.1 ppm		ND		ND		ND		ND		ND		ND

Sr. No.	Stack Details	Paramenter	Permissible Limits	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value	Date of Sampling	Obtained Value
East site															
1	FBC boiler EI	PM	100 mg/Nm3	28.11.18	50	14.12.18	52	19.1.19	55	6.2.19	58	13.3.19	62	18.4.19	75
		SO_2	600 mg/Nm3		98		95		96		99		95		98
		NOx	600 mg/Nm3		110		115		118		121		115		120
2	FBC boiler E2	PM	100 mg/Nm3	28.11.18	58	13.12.18	59	18.1.19	62	7.2.19	65	15.3.19	68		Not Runnig
		SO_2	600 mg/Nm3		97		92		95		97		90		During Visit
		NOx	600 mg/Nm3		105		108		110		116		112		
3	FBC boiler No.3	PM	100 mg/Nm3	28.11.18	62	14.12.18	65	18.1.19	66	6.2.19	68	13.3.19	70	18.4.19	80
		SO_2	600 mg/Nm3		107		109		115		118		125		128
		NOx	600 mg/Nm3		119		121		125		128		135		145
4	Hot Oil Unit	PM	150.0 mg/Nm3	23.11.18	ND	6.12.18	ND	3.1.19	ND	23.2.19	ND	27.3.19	ND	10.4.19	ND
	(Resorcinol Plant)	SO_2	100 ppm		ND		ND		ND		ND		ND		ND
		NOx	50 ppm		35		39		41		43		40		45
5	DG set 1010 KVA (Standby)	PM	150 mg/Nm^3		Stand by		Stand by		Stand by		Stand by		Stand by		Stand by
		SO_2	100 ppm												
		NOx	50 ppm												
West Site															
6	FBC boiler W1	PM	100 mg/Nm3	28.11.18	51	6.12.18	58	25.1.19	55	25.2.19	57	15.3.19	61	10.4.19	65
		SO_2	600 mg/Nm3		75		79		75		79		85		95
		NOx	600 mg/Nm3		115		123		115		123		128		135
7	Hot Oil Plant shed-B	PM	150.0 mg/Nm3	23.11.18	ND	6.12.18	ND	3.1.19	ND	1.2.19	ND	27.3.19	ND	25.4.19	ND
		SO_2	100 ppm		ND		ND		ND		ND		ND		ND
		NOx	50 ppm		36		38		39		41		43		55
8	Oil burner Shed B	PM	150.0 mg/Nm3		Stand by		Stand by		Stand by		Stand by		Stand by		Stand by
	(Stand By)	SO_2	100 ppm												
		NOx	50 ppm												
9	Boiler (50 TPH 2 Nos) (New boilers) W2,W3	PM	50 mg/Nm3	21.11.18	38	26.12.18	35	25.1.19	38	22.2.19	41	15.3.19	49	12.4.19	55
		SO_2	600 mg/Nm3		88		85		88		91		97		105
		NOx	300 mg/Nm3		73		71		75		79		85		95
		Mercury	0.03 mg/Nm3		ND		ND		ND		ND		ND		ND
10	DG set 1500 KVA	PM	150.0 mg/Nm3		Stand by		Stand by		Stand by		Stand by		Stand by		Stand by
	(Stand By)	SO_2	100 ppm												
		NOx	50 ppm												
North Site															
11	Thermic fluid heater of	PM	150.0 mg/Nm3	21.11.18	ND	27.12.18	ND	24.1.19	ND	23.2.19	ND	6.3.19	ND	12.4.19	ND
	DCO/DAP Plant	SO_2	100 ppm		ND		ND		ND		ND		ND		ND
		NOx	50 ppm		28		29		31		35		39		40

Table 3 : Ambient Air Monitoring details

Station	Parameter	Limit microgm/NM^3	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
66 KV	PM 2.5	60	29	27	29	31	35	40
	PM10	100	31.1	32.5	34.8	35.2	32.2	50
	SO2	80	7.6	7.3	7.9	8.5	8.5	9.2
	NOx	80	6.8	7.4	7.9	8.5	8.9	8.8
	Ammonia	850	9	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Opposite Shed D	PM 2.5	60	29	32	35	38	42	45
	PM10	100	35	38	39	42	48	50
	SO2	80	9.4	9.5	9.8	10.2	11.1	12.1
	NOx	80	8.8	8.9	8.7	9.2	9.6	10.1
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Near West site ETP	PM 2.5	60	28	29	31	30	32	35
	PM10	100	39	42	45	43	45	50
	SO2	80	8.5	8.7	9.1	8.8	9.2	10.1
	NOx	80	8.6	8.5	8.6	8.8	8.9	9.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Near North ETP	PM 2.5	60	26	28	29	31	35	38
	PM10	100	38	41	40	40	45	60
	SO2	80	10.4	10.3	10.2	9.5	9.9	10.3
	NOx	80	9.7	9.4	9.4	9.1	9.5	9.8
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
TSDF	PM 2.5	60	33	37	38	42	49	55
	PM10	100	33	38	38	45	48	55
	SO2	80	8.6	8.4	8.9	9.2	9.5	9.9
	NOx	80	7.9	8.3	8.1	8.5	8.8	9.1
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Main Guest House	PM 2.5	60	29	27	28	27	29	35
	PM10	100	39	42	41	43	44	50
	SO2	80	9.8	9.9	10.1	9.9	9.5	9.8
	NOx	80	13.4	13.5	14.1	14.8	15.1	16.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Wyeth Colony	PM 2.5	60	25	27	24	25	29	30
	PM10	100	39	42	43	45	46	45
	SO2	80	7.5	7.7	8.1	8.5	8.9	9.3
	NOx	80	11.8	11.9	12.1	12.6	12.8	13.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Gram panchayat hall	PM 2.5	60	32	35	32	35	37	40

	PM10	100	35	39	38	41	43	45
	SO2	80	8.3	8.5	8.9	9.1	9.3	9
	NOx	80	12.9	12.7	12.9	13.2	12.5	12.8
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Main office, North site	PM 2.5	60	26	28	25	27	25	30
	PM10	100	44	48	47	49	51	55
	SO2	80	8.9	8.7	8.9	9.2	8.8	9.1
	NOx	80	12.6	12.8	13.2	12.8	12.7	13.1
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Haria water tank	PM 2.5	60	29	27	29	32	36	35
	PM10	100	33.6	31.3	33.2	34.9	35.7	40.5
	SO2	80	7.9	7.9	7.4	7.5	7.8	8.5
	NOx	80	8.4	7.9	8.2	8.5	8.4	9.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND

Table 4 : Fugitive Emission Monitoring details

Plant	Area	Parameter	Prescribed Limit	Results of VOCs in Milligram per NM^3					
				Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
2,4 D	Reactor	Phenol	19	10.2	14.1	9.2	12.6	13.2	12.4
	Buffer tank	Chlorine	3.0	1.4	1.1	0.8	1	1.6	2.1
Resorcinol	Benzene storage tank area near vent	Benzene	15	9.6	11.1	14	9.2	7.1	5.4
	Near Extraction/scrubber unit	Butyl acetate	-	1.6	2.9	5.5	7.1	10.8	7.5
Pharma	At second floor work area	Ammonia	18	13.2	12.2	9.9	14.6	10.4	10.1
	Ammonia recovery area	Ammonia	18	3.1	7.2	12.2	6.4	8.1	7.5
Epoxy - I	At vacuum pump 2nd floor	ECH	10	2.6	3.6	5.4	3.1	2.9	3.8
	At vessel POS 1208 G.F	ECH	10	4.1	5	3.1	6.2	5.3	6.1
Shed H	At second floor work area	Nitrobenzene	5	1.3	2.5	1.8	2.8	3.7	4.4
Shed J	Buffer Tank	Chlorine	3	1.1	1.8	2.2	1.6	2.6	2.1

Table 5 : Noise level monitoring data (Day Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	75
1	Near Main guest house	63.6	63.8	64.2	65.2	65.9	68.9	75
2	Near TSDF	63.8	63.3	63.8	64.3	63.2	66.2	75
3	At Wyeth Colony	63.6	63.9	64.5	65.3	66.8	60.4	75
4	Gram Panchayat Hall	61.9	61.3	62.4	63.5	64.2	69.5	75
5	Near Main Office North site	65.5	65.8	66.9	67.8	67.9	66.5	75
6	ETP North site	66.5	66.7	67.3	68.3	69.1	70.2	75
7	Opposite shed D	64.7	64.9	65.4	66.5	67.2	68.9	75
8	ETP West site	65.9	65.4	66.8	67.9	68.5	68.7	75
9	Water tank Haria road	62.9	62.5	63.1	64.2	64.9	64.5	75
10	Near 66KVA substation	64.3	64.5	65.3	66.3	67.1	67.8	75

Table 6 : Noise level monitoring data (Night Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	70
1	Near Main guest house	53.1	53.5	55.6	56.1	55.7	56.1	70
2	Near TSDF	56.9	56.4	57.8	58.3	60.1	60.3	70
3	At Wyeth Colony	50.8	50.5	51.3	52.4	52.5	52.4	70
4	Gram Panchayat Hall	52.7	52.1	53.4	54.2	54.7	55.1	70
5	Near Main Office North site	55.7	55.9	56.8	57.8	58.5	58.9	70
6	ETP North site	52.5	52.2	53.7	54.1	54	55.1	70
7	Opposite shed D	53.8	53.8	54.9	55.2	55.3	55.9	70
8	ETP West site	54.8	54.7	55.8	55.9	56.2	56.3	70
9	Water tank Haria road	53.7	53.4	54.9	55.2	55.8	55.2	70
10	Near 66KVA substation	51.8	51.7	53.7	54.8	55.1	56.2	70

ENVIRONMENTAL AUDIT REPORT

OF

M/S. ATUL LIMITED.

Plot No. 5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91 &

Survey No. 274, 275, 276

AT & PO ATUL – 396020, Dist.: Valsad.

[Audit Period: April 2018 – March 2019]

Prepared By:

PACIFIC SCHOOL OF ENGINEERING

(Centre for Environmental Research & Technology)

GPCB RECOGNISED SCHEDULE – I ENVIRONMENTAL AUDITOR

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OBSERVATIONS

1. The unit has been granted consolidated consent vide no. AWH-67717 dated 04/11/2014 which is valid up to 03/11/2019.
2. Industry is an improvement driven, integrated chemical company serving about 4,000 customers belonging to 27 industries across the world. The salient features of their infrastructure are as follows:

Land Area	:	500 hectares.
Effluent Drainage system	:	4 Km.
Effluent Treatment Plants	:	30,000 m^3/day
Solid Waste Disposal	:	Incinerator, TSDF, Co processing
Captive Power Plants	:	56 MW
Water Storage	:	1.6 million m^3

3. Industry is ISO-14001:2004 certified company and has received more than 16 awards in the area of Environmental pollution control from prestigious organizations till 1998.
4. **Electricity consumption** is **decreased** by **0.14 %** in **April 2018 - March – 2019** as compared to previous audit period **April 2017 - March – 2018.**
5. **Water consumption and Wastewater generation** is **increased** by **7.81% and 9.39%** respectively in **April 2018 - March – 2019** as compared to previous audit period **April 2017 - March – 2018.**
6. Norms for production, final effluent discharge, ambient emission and stack emission are meeting the norms given by GPCB.
7. Final treated effluent is discharged in to an Arabian sea through Estuary Zone of Par River.
8. Industry owned TSDF site for disposal, recovery and incineration of hazardous waste.
9. Industry has employed full time medical officer. Also, satisfactory medical facilities have been provided.
10. Fatal accident at phosgene plant reported during the audit period. Industry has taken necessary safety corrective actions.
11. Industry strictly follows the safety rules for wearing personal protective devices.
12. Company has shifted to membrane cell system and completely phase out Hg cell system for chlor-alkali production.
13. Industry has implemented various steps in the area of environmental management system. They are mainly:

- First in Gujarat to have complete In-house Treatment facility for all types of waste.
- Liquid Waste: State-of-Art effluent treatment plant consisting of three operational Effluent Treatment Plants.
- Own 4 KM pipeline to discharge treated effluent in the estuary zone of river Par.
- Own incinerator and TSDF for hazardous waste treatment.
- Over 50,000 saplings planted every year in and around Atul Complex.
- Water harvesting (850 million litre) and bore well recharging.
- 100% utilization of fly-ash.

14. Industry has implemented various steps for smooth functioning of EMS. It mainly includes recovery from process, natural resources conservation and cleaner production. Details of the same are enclosed herewith.

RECOMMENDATIONS

1. Installation of effluent network system at above ground is underway. Recommendation for completion of job.
2. To control dustiness surrounding to ETP and Boiler, housekeeping is highly recommended.
3. It is recommended to install auto calibration system for OCEMS (Online Continuous Environmental Monitoring System) as per CPCB guidelines.
4. It is recommended to comply with conditions of Environmental Clearance received.
5. It is recommended to explore possibility of reusing condensate being generated from MEE.

ENVIRONMENTAL FRIENDLY REPLACEMENTS / IMPROVEMENTS IN, WITHIN AND AROUND THE INDUSTRY / ORGANIZATION /

Following are some examples of innovative approaches adopted to reduce the pollution load, saving renewable resources, adoption of cleaner technology in recent years:

❖ **RECOVERY FROM MANUFACTURING PROCESS:**

Recovery at source is proven to be the best solution for environmental treatment. The company has also focused on critical areas for various at source recovery for various purposes. This has not only reduced pollution load in EMS but also provided economic benefit. Details of some of at source treatment initiated in 18-19 and recent past are described below:

ANNEXURE – 23
COMPLIANCE REPORT

Detail		Has valid consent/authorization	Complying with standards & other conditions
(A)	Compliance Report of Water as per Water act, 1974. If No, Give comment	The consolidated consent vide no. AWH-67717 dated 04/11/2014 under the provision of water Act-1974, Air act-1981and Hazardous Rules-1989 is valid up to 03/11/2019.	Complied
(B)	Compliance Report for Air as per Air act, 1981. If No, Give comment		Complied
(C)	Compliance Report for the storage and handling of hazardous waste/chemicals under The hazardous Waste Management & Handling) Rule, 1989 & EPA-86. If No, Give comment		Complied

Atul Limited

Project: CRZ clearance for proposed 4.0 km long treated effluent discharge pipe line in Par estuary, Dist. Valsad.
CRZ Compliance for the period November 2018- April 2019 as per CRZ Clearance No. ENV-1097-2942-P, dated 17.01.1998.

<table>
<tr><th>No.</th><th>Condition</th><th>Compliance</th></tr>
<tr><td>1</td><td>The Company shall strictly adhere to all the provisions of CRZ notification of 1991 and subsequent amendments.</td><td>Complied.

Details are given below in the table:

<table>
<tr><th>No.</th><th>Clause under CRZ notification</th><th>Compliance</th></tr>
<tr><td>1</td><td>Imposes the given restrictions in setting up and expansion of industries, operations or processes in CRZ.</td><td>Noted</td></tr>
<tr><td>2</td><td>List of prohibited activities within CRZ.</td><td>Noted</td></tr>
<tr><td>3</td><td>Guideline for regulation of permissible activities.</td><td>Noted</td></tr>
<tr><td>4</td><td>Procedure for monitoring and enforcement.</td><td>Applicable to Ministry</td></tr>
<tr><td>Ann 1</td><td>Classification of costal regular zone.</td><td>Noted</td></tr>
<tr><td>Ann 2</td><td>Guidelines for development of beach/ resort/ hotels.</td><td>NA</td></tr>
<tr><td>Ann 3</td><td>List pf petroleum products permitted in storage in CRZ except CRZ-1.</td><td>NA</td></tr>
</table>
</td></tr>
<tr><td>2</td><td>The company shall strictly adhere to the conditions stipulated by the Gujarat Pollution Control Board in their Consent order.</td><td>Complied.

The company complies with all stipulated norms under various acts. Stipulation made in CCA by GPCB are being complied and the same is certified by the external agency, i.e. our Environmental auditors appointed by GPCB. Latest audit report for year 18-19 is being submitted herewith as Annexure 1.</td></tr>
<tr><td>3</td><td>The company shall discharge the treated effluent meeting the norms prescribed by G.P.C.B.</td><td>Complied.

The discharged effluent is meeting all pollution board limits and values of various parameters of treated effluent is given in Table 1. (Pl. see pg. no. 3)

The maximum values during the compliance period confirms that at no time the emission went beyond the stipulated standards.

Summary is given below:
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Parameter</th><th rowspan="2">Norms</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>pH</td><td>5.5-9.0</td><td>7.08</td><td>7.95</td><td>7.44</td></tr>
<tr><td>2</td><td>Temperature</td><td>40 deg C</td><td>30.1</td><td>32.6</td><td>31.05</td></tr>
<tr><td>3</td><td>Colour (pt. co. scale)in units</td><td>---</td><td>40</td><td>130</td><td>65.00</td></tr>
<tr><td>4</td><td>Suspended solids</td><td>100 mg/l</td><td>23</td><td>86</td><td>52.00</td></tr>
<tr><td>5</td><td>Phenolic Compounds</td><td>5 mg/l</td><td>0.28</td><td>0.75</td><td>0.48</td></tr>
<tr><td>6</td><td>Cyanides</td><td>0.2 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
<tr><td>7</td><td>Fluorides</td><td>2 mg/l</td><td>0.32</td><td>1.2</td><td>0.60</td></tr>
<tr><td>8</td><td>Sulphides</td><td>2 mg/l</td><td>0.4</td><td>1.8</td><td>1.33</td></tr>
<tr><td>9</td><td>Ammonical Nitrogen</td><td>50 mg/l</td><td>32</td><td>48</td><td>39.67</td></tr>
<tr><td>10</td><td>Total Chromium</td><td>2 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr>
</table>
</td></tr>
</table>

		<table><tr><td>11</td><td>Hexavalent Chromium</td><td>1 mg/l</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>12</td><td>BOD (3 days at 27°C)</td><td>100 mg/l</td><td>44</td><td>70</td><td>61.50</td></tr><tr><td>13</td><td>COD</td><td>250 mg/l</td><td>202</td><td>232</td><td>216.67</td></tr></table> The effluent quality at the ETP discharge point is regularly being monitored by the Environmental auditors appointed by GPCB. Latest audit report for the year 16-17 was submitted vide our letter Atul/SHE/CRZ Compliance/01 dated 17/7/17. The same has been already submitted to GPCB vide our latter Atul/GPCB/En. Audit/16-17 dated 28/6/17. The same was submitted to CPCB also as directed. GPCB also monitor the treated effluent quality at intervals. Recent result by GPCB is attached as **Annexure 2**. The river water quality at the discharge point is regularly being monitored by GPCB. Agencies like NIO, Pollucon Laboratories Pvt. Ltd- MoEF approved agency, Envision Enviro Technologies Pvt. Ltd –NABET accredited have also done the monitoring during the years. Relevant extracts from latest reports were submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4/4/17.
	The company shall keep records of the quality of effluents being discharge during the tides as per the recommendations of N.I.O.	**Complied**. We are keeping the records of quality effluents being discharged during the tides in soft copy as per the recommendations of N.I.O.
4	**The company shall submit the quarterly progress report of compliance of conditions.**	**Complied**. We have submitted progress reports to the Forest and Environment Department of Gujarat during the pipe line installation work. Couple of reports were already submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4/4/17.
5	**The company shall bear all the cost of the agency to be appointed by the Government for overseeing/monitoring the project activities during construction/operational phases.**	Noted and will be complied as and when it will come.
6	**The company shall comply with all the recommendations, additional conditions and environmental safeguards prescribed in the report of NIO dated March, 1997.**	**Complied**. Compliance to NIO recommendations are being followed. Copy of compliance report submitted to Forest and Environment Department of Gujarat was already submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4/4/17.
6	**The company shall submit an Environmental Audit Report every year.**	**Complied**. Latest environmental audit report for year 18-19 is being submitted herewith as **Annexure 1.**
7	**The company shall obtain the necessary permissions from different Government department/agencies under different laws/Acts.**	**Complied**. We have received GPCB approval for operating 4Km line vide its consent letter no. 16399 dated 22.12.98. Copy already submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4/4/17.
8	**Any additional conditions which may imposed from time to time.**	Noted and will be complied.

Table 1: Quality of treated effluent

Sr. No.	Parameter	Results						GPCB Limits
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	
1	pH	7.08	7.25	7.4	7.48	7.95	7.45	5.5 to 9.0
2	Temperature °C	30.2	30.8	30.1	30.7	32.6	31.9	40 °C
3	Colour (pt. co. scale)in units	50	50	40	50	70	130	---
4	Suspended solids, mg/l	38	54	36	23	75	86	100
5	Phenolic Compounds, mg/l	0.28	0.35	0.46	0.56	0.75	0.45	5
6	Cyanides, mg/l	ND	ND	ND	ND	ND	ND	0.2
7	Fluorides, mg/l	0.55	0.45	0.32	0.45	0.65	1.2	2
8	Sulphides, mg/l	0.4	1.2	1.8	1.2	1.8	1.6	2
9	Ammonical Nitrogen, mg/l	42	48	40	36	32	40	50
10	Total Chromium, mg/l	ND	ND	ND	ND	ND	ND	2
11	Hexavelent Chromium, mg/l	ND	ND	ND	ND	ND	ND	1
12	BOD (3 days at 27°C), mg/l	44	58	68	64	70	65	100
13	COD, mg/l	210	232	226	202	220	210	250
Note : ND is Not Detectable.								

ENVIRONMENTAL AUDIT REPORT

OF

M/S. ATUL LIMITED.

Plot No. 5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91 &

Survey No. 274, 275, 276

AT & PO ATUL – 396020, Dist.: Valsad.

[Audit Period: April 2018 – March 2019]

Prepared By:

PACIFIC SCHOOL OF ENGINEERING

(Centre for Environmental Research & Technology)

GPCB RECOGNISED SCHEDULE – I ENVIRONMENTAL AUDITOR

Address:
Kadodara Palsana Highway (NH-8),
At. Sanki, Tal. Palsana, Dist. Surat - 394305.
Ph: +91 9904408978
Email: cert.pse@gmail.com

OBSERVATIONS

1. The unit has been granted consolidated consent vide no. AWH-67717 dated 04/11/2014 which is valid up to 03/11/2019.
2. Industry is an improvement driven, integrated chemical company serving about 4,000 customers belonging to 27 industries across the world. The salient features of their infrastructure are as follows:

Land Area	:	500 hectares.
Effluent Drainage system	:	4 Km.
Effluent Treatment Plants	:	30,000 m^3/day
Solid Waste Disposal	:	Incinerator, TSDF, Co processing
Captive Power Plants	:	56 MW
Water Storage	:	1.6 million m^3

3. Industry is ISO-14001:2004 certified company and has received more than 16 awards in the area of Environmental pollution control from prestigious organizations till 1998.
4. **Electricity consumption** is **decreased** by **0.14 %** in **April 2018 - March – 2019** as compared to previous audit period **April 2017 - March – 2018.**
5. **Water consumption and Wastewater generation** is **increased** by **7.81% and 9.39%** respectively in **April 2018 - March – 2019** as compared to previous audit period **April 2017 - March – 2018.**
6. Norms for production, final effluent discharge, ambient emission and stack emission are meeting the norms given by GPCB.
7. Final treated effluent is discharged in to an Arabian sea through Estuary Zone of Par River.
8. Industry owned TSDF site for disposal, recovery and incineration of hazardous waste.
9. Industry has employed full time medical officer. Also, satisfactory medical facilities have been provided.
10. Fatal accident at phosgene plant reported during the audit period. Industry has taken necessary safety corrective actions.
11. Industry strictly follows the safety rules for wearing personal protective devices.
12. Company has shifted to membrane cell system and completely phase out Hg cell system for chlor-alkali production.
13. Industry has implemented various steps in the area of environmental management system. They are mainly:

- First in Gujarat to have complete In-house Treatment facility for all types of waste.
- Liquid Waste: State-of-Art effluent treatment plant consisting of three operational Effluent Treatment Plants.
- Own 4 KM pipeline to discharge treated effluent in the estuary zone of river Par.
- Own incinerator and TSDF for hazardous waste treatment.
- Over 50,000 saplings planted every year in and around Atul Complex.
- Water harvesting (850 million litre) and bore well recharging.
- 100% utilization of fly-ash.

14. Industry has implemented various steps for smooth functioning of EMS. It mainly includes recovery from process, natural resources conservation and cleaner production. Details of the same are enclosed herewith.

RECOMMENDATIONS

1. Installation of effluent network system at above ground is underway. Recommendation for completion of job.
2. To control dustiness surrounding to ETP and Boiler, housekeeping is highly recommended.
3. It is recommended to install auto calibration system for OCEMS (Online Continuous Environmental Monitoring System) as per CPCB guidelines.
4. It is recommended to comply with conditions of Environmental Clearance received.
5. It is recommended to explore possibility of reusing condensate being generated from MEE.

ENVIRONMENTAL FRIENDLY REPLACEMENTS / IMPROVEMENTS IN, WITHIN AND AROUND THE INDUSTRY / ORGANIZATION /

Following are some examples of innovative approaches adopted to reduce the pollution load, saving renewable resources, adoption of cleaner technology in recent years:

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Recovery at source is proven to be the best solution for environmental treatment. The company has also focused on critical areas for various at source recovery for various purposes. This has not only reduced pollution load in EMS but also provided economic benefit. Details of some of at source treatment initiated in 18-19 and recent past are described below:

ANNEXURE – 23
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(A)	Compliance Report of Water as per Water act, 1974. If No, Give comment	The consolidated consent vide no. AWH-67717 dated 04/11/2014 under the provision of water Act-1974, Air act-1981and Hazardous Rules-1989 is valid up to 03/11/2019.	Complied
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Annexure 2

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:254051 - Analysis Completion:11/03/2019

Dyes and Dye- Intermediates / LAB Inward : 48708

Gujarat Pollution Control Board, Vapi
C5/124, GIDC Vapi,
Near Hotel Pritam,
Vapi - 396 195
Tele:(0260) 2432089

TEST REPORT

Test Report No. : 48708 **Date: 12/03/2019**

1. Name of the Customer : **Atul Limited - 23158**
2. Address : **5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91, etc.,AT & P.O.ATUL, Dist. Valsad, Pin: ATUL-396020, Taluka : Valsad, District : Valsad, GIDC : Not In Gidc**
3. Nature of Sample : **REP-Representative/Grab, (Insp Type : ROU-Routine Visit)**
4. Sample Collected By : **Rachana M. Kantharia, SO**
5. Quantity of Sample Received : **5 lit**
6. Code No. of the Sample : **254051**
7. Date & Time of Collection & Inwarding : **27/02/2019 , (1800 to 1800) & 01/03/2019**
8. Date of Start & Completion of Analysis : **01/03/2019 & 11/03/2019**
9. Sampling Point : **From final outlet of ETP (Central ETP) ~ -**
10. Flow Details (Remarks) : **yes**
11. Mode of Disposal : **Estuary zone of River Par**
12. Ultimate Receiving Body : **Estuary zone of river par**
13. Temperature on Collection : **29 & pH Range on pH Strip :@ 7 to 8 On pH strip**
14. Carboys Nos for : **barcode & Color & Appearance :Brownish**
15. Water Consumption & W.W.G (KLPD) : **Ind :23726.000 , Dom :938.000 & Ind :21727.000 , Dom :939.000**

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 22nd edi.2012	1 – 14 pH value As or	6.98
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	125
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Methoc	10 – 200000 mg/L	3560
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Methoc	2 – 10000 mg/L	54
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.64
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	1163
8	Sulphate	mg/l	APHA(22nd edi)4500 SO4 E	2-40mg/l	600
9	Chemical Oxygen Demand	mg/l	APHA (22nd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	242
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	2.8
11	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	1.292
12	Sulphide	mg/l	APHA (22nd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	BDL
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	55

Laboratory Remarks : Freeze By:445-lab_445 Dt.: 12/03/2019

J.D.OZA, Lab Head

Field Observation :

Note :

1. * - These parameters are NOT covered under the scope of NABL.
2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 22nd Edition by APHA.
9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

Atul Limited

Project: Setting up an addition captive power plant of 22 MW at post Atul, Dist. Valsad

EC Compliance Report for the period November 2018-April 2019 as per EC No. SEIAA/GUJ/EC/1(d)/340/2016

<table>
<tr><th>No.</th><th>Condition</th><th>Compliance</th></tr>
<tr><td colspan="3">Specific Conditions :</td></tr>
<tr><td>1.</td><td>Unit shall comply the emission standards mentioned in the Notification by MOEF&CC vide S.O. 3305(E) dated 07/12/2015.</td><td>Complied. Monthly monitoring is being done by GPCB approved M/s. Royal Environment Auditing & Consultancy Service, Rajkot, an NABL approved agency. The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards. Parameter wise summary is given below:
Summary of Stack results:
<table>
<tr><th rowspan="2">No.</th><th rowspan="2">Parameter</th><th rowspan="2">Standard values as per CCA</th><th rowspan="2">Unit</th><th colspan="3">Values for the period Nov 18-Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>SPM</td><td>50.0</td><td>mg/Nm^3</td><td>35</td><td>49</td><td>41.5</td></tr>
<tr><td>2</td><td>SO_2</td><td>600</td><td>mg/Nm^3</td><td>85</td><td>105</td><td>92.33</td></tr>
<tr><td>3</td><td>NOx</td><td>300</td><td>mg/Nm^3</td><td>71</td><td>95</td><td>79.66</td></tr>
<tr><td>4</td><td>Mercury</td><td>0.03</td><td>mg/Nm^3</td><td>ND</td><td>ND</td><td>ND</td></tr>
</table>
Details of stack results is given in Table 1. (Pl. see pg. no. 13)</td></tr>
<tr><td>2.</td><td>All measures shall be taken to prevent soil and ground water contamination.</td><td>Complied. No contamination found.</td></tr>
<tr><td>3.</td><td>The project proponent shall submit the detailed study report to Gujarat Pollution Control Board (GPCB) at least once in a year, through the reputed institute or university to assess the impacts on soil and ground water quality, if any due to application of waste water generation from the CPP and shall adopt the additional mitigation measures as may be suggested through such studies.</td><td>Complied. Detailed study report on Groundwater and soil quality in and around Atul was done during the year 18-19 by reputed and NABL approved agency Pollucon Laboratories Pvt. Ltd, Surat and attached herewith as Annexure 1.</td></tr>
<tr><td></td><td>A.2:WATER:</td><td></td></tr>
<tr><td>4.</td><td>The fresh water requirement for the proposed expansion shall not exceed 2095 KL/day and it shall be met through the existing water supply system from River par.</td><td>Complied. The average water consumption for the referred expansion for the report period is 1136 KL/day only which is well within the limit. Detail break up is given in below table:
<table>
<tr><th>Water Consumption</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>42220</td><td>26707</td><td>33013</td><td>33860</td><td>29790</td><td>41549</td><td>207139</td></tr>
<tr><td>Per day</td><td>1362</td><td>890</td><td>1065</td><td>1092</td><td>1064</td><td>1340</td><td>1136 (avg.)</td></tr>
</table>
The maximum values during the compliance period confirms that at no time the wastewater generation went beyond the stipulated value. Summary is given below:
<table>
<tr><th rowspan="2">Water Consumption</th><th rowspan="2">Stipulated value</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Water Consumption KL/day</td><td>2095</td><td>890</td><td>1362</td><td>1136</td></tr>
</table></td></tr>
<tr><td></td><td>Permission from the Concern authority for additional water requirement shall be obtained.</td><td>Complied. We already have permission from Government of Gujarat for this additional requirement.</td></tr>
<tr><td>5</td><td>Metering of water shall be done and its records shall be maintained. No ground</td><td>Complied. Metering of water is done and its records are maintained. No ground water is tapped for meeting the project requirements.</td></tr>
</table>

<table>
<tr><td></td><td>water shall be tapped in any case for meeting the project requirements.</td><td></td></tr>
<tr><td>6.</td><td>The industrial effluent generation from the proposed expansion shall not exceed 270 KL/day and entire quantity of effluent shall be utilized for ash quenching, dust suppression, fire hydrant make up, Gardening plants floor cleaning.</td><td>Complied. The average wastewater generation for the report period is 71.85 KL/day only which is well within the limit and entire quantity is utilized in house and no discharge to ETP. Detail break up is given in below table:

<table>
<tr><th>Wastewater generation</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th></tr>
<tr><td>Month wise</td><td>2171</td><td>1963</td><td>2032</td><td>2493</td><td>2070</td><td>2204</td><td>12933</td></tr>
<tr><td>Per day</td><td>72.37</td><td>65.43</td><td>67.73</td><td>83.10</td><td>69.00</td><td>73.47</td><td>71.85 (avg.)</td></tr>
</table>

The maximum values during the compliance period confirms that at no time the wastewater generation went beyond the stipulated value. Summery is given below:

<table>
<tr><th rowspan="2">Wastewater generation</th><th rowspan="2">Stipulated value</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Wastewater generation m^3/d</td><td>270</td><td>65.43</td><td>83.10</td><td>71.85</td></tr>
</table>

Entire quantity of waste water is being utilized in ash quenching and coal storage yard to attend coal smoldering.</td></tr>
<tr><td>7.</td><td>There shall be no discharge of industrial effluent from the proposed project in any case.</td><td>Complied. Neutralization pit has been put in service for waste water generated from D M Plant. RO Plant is commissioned to recycle the cooling tower water.</td></tr>
<tr><td>8.</td><td>Domestic waste water generation shall not exceed 1 KL/day Which shall be disposed of into soak system.</td><td>Complied. Domestic waste water disposed through soak pit system.</td></tr>
<tr><td>9.</td><td>The unit shall provide metering facility at the inlets and outlets of the collection cum reuse system of waste water and maintain records of the same.</td><td>Complied. Meter is provided at the inlet of the collection cum reuse system of waste water and records are being maintained.</td></tr>
<tr><td>10.</td><td>Proper logbooks of waste water reuse system showing quantity and quality of effluent reused shall be maintained and furnished the GPCB from time to time.</td><td>Complied. Logbooks maintained.</td></tr>
<tr><td>11.</td><td>Rain water harvesting of rooftop rain water shall be undertaken as proposed in the EIA report of the project and the same water shall be used for the various activities of the project to conserve fresh water as well as to recharge ground water through percolation wells. Before recharging the rain water, pre-treatment must be done to remove suspended matter.</td><td>Complied. Rooftop rain water from Coal sheds and New TG building is collected and used as make up water for cooling tower. Rain water also collected from surrounding area and pumping it to the Clarifloculator units.</td></tr>
<tr><td></td><td>A.3 AIR:</td><td></td></tr>
<tr><td>12.</td><td>Existing two coal fired steam boilers shall be replaced with two AFBC Boilers having capacity 50 TPH each.</td><td>Complied. Two old stoker fired boilers have already been dismantled for the new AFBC boiler.</td></tr>
<tr><td>13.</td><td>Fuel (Indian coal/and or Imported coal and or Lignite) to the tune of 16725 MT/M shall be used for proposed boilers.</td><td>Complied. The average fuel consumption for the report period is 13774 MT/M only which is well within the limit. Detail break up is given in below table:</td></tr>
</table>

		<table><tr><th>Fuel consumption</th><th>Nov-18</th><th>Dec-18</th><th>Jan-19</th><th>Feb-19</th><th>Mar-19</th><th>Apr-19</th><th>Total</th><th>Avg.</th></tr><tr><td>Month wise</td><td>13963</td><td>10705</td><td>13497</td><td>14111</td><td>15235</td><td>15130</td><td>82641</td><td>13774</td></tr></table> The maximum values during the compliance period confirms that at no time the wastewater generation went beyond the stipulated value. Summary is given below: <table><tr><th rowspan="2">Fuel consumption</th><th rowspan="2">Stipulated value</th><th colspan="3">Values for the period Nov-18 –Apr 19</th></tr><tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr><tr><td>Fuel consumption MT/M</td><td>16725</td><td>10705</td><td>15235</td><td>13774</td></tr></table>
14.	Sulfur and ash content of the fuel to be used shall be analyzed and its record shall be maintained.	**Complied**. Sulfur and ash content of the fuel used is analyzed and its records are maintained. Ash Content: 30-35 % (Indian Coal), 10-12% (Imported coal) Sulphur Content: <0.1% (Indian Coal), <0.2% (Imported coal)
15	A Long term study of radio activity and heavy metal contents in coal/ lignite to be used shall be carried out through a reputed institute and results thereof analyzed regularly and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal/lignite and Flyash (Including bottom ash) shall be put in place.	**Complied**. The radio activity and heavy metal contents in coal/ lignite used has been carried out and Report had been submitted vide our letter Atul/SHE/EC Compliance/03 dated 30.6.18.
16.	Height of flue gas stacks attached to boilers shall be minimum 74.58 meters.	**Complied**. The emission is dispersed through adequate height of stacks as per CPCB standard as given below: For Boilers : Stack Height $H=14(Q)^{0.3}$ Height of the stack is 106 meters, which is actually higher than norms.
17.	A flue gas stack of 74.58 m height shall be provided with online monitoring system to proposed steam Boiler. Mercury gas emission from stacks shall also be monitored on periodic basis.	**Complied**. Height of the stack is 106 meters. Online monitoring system for SPM, SOx and NOx is already been made and connected to CPCB server. Mercury emission is also monitored on monthly basis by GPCB approved M/s. Royal Environment Auditing & Consultancy Service, Rajkot, an NABL approved agency. Please refer point 1.
18.	High efficiency Electro static precipitators (ESP) with efficiency not less than 99.9% shall be installed for control of flue gas emission from the proposed Boilers.	**Complied**. Total 4 field ESP has been installed and commissioned to meet further stringent requirement also.
	The ESP shall be operated efficiently to ensure that particulate matter emission does not exceed the GPCB norms.	**Complied**. Particulate matter emission did not exceed the GPCB norms during report period. Please refer point 1.
	The control system shall be designed and integrated in plant DCS in such a way that amended from ESP exceeds the specified standard prescribed in the Environment (protection) Rules 1986 as amended from time to time, utilization of boiler capacity shall so that flue gas emission from the stack meets with the	**Complied**. Flue gas emission from the stack meets with the specified standards for the report period. Please refer point 1.

	specified standards or boiler shall shut down totally.	
19.	Third party monitoring of the functioning of ESP along with efficiency shall be carried out once in a year through a reputed institute / organization.	**Complied**. The monitoring has been carried out and found satisfactory.
20.	Lime stone injection technology shall be adopted to control SO2 and it shall be ensured that SO2 levels in the ambient air do not exceed the prescribed standards.	**Complied**. A system to inject lime stone powder and meeting with the prescribed norms of SO_2 is already been installed and interconnected with the online emission monitoring system. SO_2 levels in the ambient air did not exceed the prescribed standards for the report period. Please refer point 30.
21.	The company shall prepare schedule and carry out regular preventive maintenance of mechanical and electrical parts of ESPS and assign responsibility of preventive maintenance to the senior officer of the company.	**Complied**. Our company is ISO 14001 certified company and regular preventive maintenance of all the critical equipment is a part of our system.
22.	Diesel to the tune of 300 Lit/hr shall be used as a fuel in stand –by D. G. Set (1500 KVA)	**Complied**. The diesel consumption for the report period is zero.
23.	The flue gas emission from DG set shall be dispersed through adequate stack height as per CPCB standards. At no time the emissions levels shall go beyond the stipulated standards.	**Complied**. DG set run for emergency start up only.
	Acoustic enclosure be provided to DG seta to mitigate the noise pollution.	**Complied**. Acoustic enclosure provided to DG set.
24.	Online monitoring system shall be installed to monitor the SOx, NOx and SPM in the flue gas stack.	**Complied**. Online monitoring system for SPM, SOx and NOx is already been made and connected to CPCB server.
	An arrangement shall also be done for reflecting the online monitoring result on the company's server, which can be assessable by the constructed.	**Complied**.
25.	Adequate storage facility for the fly ash in terms of closed silos shall be provided at site. No pond shall be constructed.	**Complied**. Two silos of 330 m^3 capacity for fly ash and one silo of 45 m^3 for bottom ash are provided.
26.	Handling of the fly ash shall be through a closed pneumatic system.	**Complied**. It is already provided.
27.	Ash shall be handled only in dry state.	**Complied**.
28.	The unit shall strictly comply with the fly ash Notification under the EPA and it shall ensure that there is 100% utilization of fly ash to be generated from the unit.	**Complied**. Fly ash generated is utilized 100%. Data given in **Table 2**. (Pl. see pg. no. 14)
29	The fugitive emission in the work zone environment shall be monitored. The emission shall confirm to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health) Following Indicative guidelines shall be also be followed to reduce the fugitive emission.	**Complied**.

	All handing & transport of coal & Lignite shall be exercised through covered coal conveyors only.	**Complied**. All handing & transport of coal & Lignite is done through covered coal conveyors only.
	Enclosure shall be provided at coal / Lignite loading and uploading operations.	**Complied**. Enclosure provided.
	Water shall be sprinkled on coal / Lignite stock piles periodically to retain some moisture in top layer and also while compacting to reduce the fugitive emission.	**Complied**. Water regularly sprinkled on coal / Lignite stock piles to retain some moisture in top layer and also while compacting to reduce the fugitive emission.
	All transfer points shall be fully enclosed.	**Complied**. All transfer points are fully enclosed.
	Adequate dust suppression / extraction system at crusher house as well as for the coal/ Lignite stock yard and other vulnerable areas shall be provided to abate dust nuisance.	**Complied**. Adequate dust extraction system at crusher house is provided While dust suppression system the coal/ Lignite unloading areas to abate dust nuisance.
	Accumulated coal dust / fly ash on the ground and surfaces shall be removed / swept regularly and water the area after sweeping.	**Complied**. Coal dust / Fly ash is being cleaned regularly. Coal dust and fine particles are being loaded to coal handling plant after spraying water on it.
	Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	**Complied**. Paver blocks have been provided in the ESP and some internal area of power plant. Concrete Road have been built in the surrounding area of Power Plant to reduce fugitive emissions during vehicle movement.
	Air borne dust shall be controlled with water sprinkles at suitable locations in the plant. Coal / Lignite shall be transported through covered trucks only whereas fly ash shall be transported through closed trucks only.	**Complied**. Waste water of neutralization pit is being used for dust suppression in Coal plant and Fly ash handling units. Covered trucks / closed bulkers are being utilized for handling coal and fly ash.
	A green belt shall be developed all around the plant boundary and also the roads to mitigate fugitive & transport dust emission.	**Complied**. Proper plantation is done all around the plant boundary and also the roads to mitigate fugitive & transport dust emission.
30.	Regular Monitoring of ground level concentration of PM2.5, PM10, NOx, SO2 and Hg shall in the impact zone and its records shall be maintained.	**Complied**. We are regularly monitoring PM2.5, PM10, NOx, SO2 in ambient air and will be continued monitoring. Ambient Air data given in **Table 3**. (Pl. see pg. no. 14)
	Ambient air quality levels shall not exceed the standards stipulated by GPCB.	**Complied**. The Location of ambient air quality monitoring stations had been decided in consultation with GPCB so that at least one station is installed in the up wind and downwind direction as well as where maximum ground level concentration are anticipated. This also covers the impact, if any, of the project plant. The same had been shown to authority like SPCB, CPCB & MoEF during their visit to our factory. The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards. Parameter wise summary is given below:

Summary of Ambient Air Quality results:

Station	Parameter	Limit microgm/NM^3	Values for the period Nov 18- Apr 19		
			Min.	Max.	Avg.
66 KV	RSPM (PM2.5)	60	27	40	31.83
	PM10	100	31.1	50	35.97
	SO2	80	7.3	9.2	8.17
	NOx	80	6.8	8.9	8.05
	Ammonia	850	ND	9	1.5
	HCl	200	ND	ND	ND
Opposite Shed D	RSPM (PM2.5)	60	29	45	36.83
	PM10	100	35	50	42.00
	SO2	80	9.4	12.1	10.35
	NOx	80	8.7	10.1	9.22
	Ammonia	850	ND	ND	ND
	HCl	200	ND	ND	ND
Near West site ETP	RSPM (PM2.5)	60	28	35	30.83
	PM10	100	39	50	44.00
	SO2	80	8.5	10.1	9.07
	NOx	80	8.5	9.5	8.82
	Ammonia	850	ND	ND	ND
	HCl	200	ND	ND	ND
Near North ETP	RSPM (PM2.5)	60	26	38	31.17
	PM10	100	38	60	44.00
	SO2	80	9.5	10.4	10.10
	NOx	80	9.1	9.8	9.48
	Ammonia	850	ND	ND	ND
	HCl	200	ND	ND	ND
TSDF	RSPM (PM2.5)	60	33	55	42.33
	PM10	100	33	55	42.83
	SO2	80	8.4	9.9	9.08
	NOx	80	7.9	9.1	8.45
	Ammonia	850	ND	ND	ND
	HCl	200	ND	ND	ND
Main Guest House	RSPM (PM2.5)	60	27	35	29.17
	PM10	100	39	50	43.17
	SO2	80	9.5	10.1	9.83
	NOx	80	13.4	16.5	14.57
	Ammonia	850	ND	ND	ND
	HCl	200	ND	ND	ND
Wyeth Colony	RSPM (PM2.5)	60	24	30	26.67
	PM10	100	39	46	43.33

			SO2	80	7.5	9.3	8.33
			NOx	80	11.8	13.5	12.45
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Gram panchayat hall	RSPM (PM2.5)	60	32	40	35.17
			PM10	100	35	45	40.17
			SO2	80	8.3	9.3	8.85
			NOx	80	12.5	13.2	12.83
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Main office, North site	RSPM (PM2.5)	60	25	30	26.83
			PM10	100	44	55	49.00
			SO2	80	8.7	9.2	8.93
			NOx	80	12.6	13.2	12.87
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND
		Haria water tank	RSPM (PM2.5)	60	27	36	31.33
			PM10	100	31.3	40.5	34.87
			SO2	80	7.4	8.5	7.83
			NOx	80	7.9	9.5	8.48
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND

	If at any stage these levels are found to exceed the prescribed limits necessary additional control measures shall be taken be decided in consultation with the GPCB.	**Complied**. No such case found.
	A.4 SOLID/ HAZARDOUS WASTE:	
31.	The company shall strictly comply with the rules and regulations with regards to handling and disposal of Hazardous waste in accordance from time to time.	**Complied**.
	Authorization from the GPCB shall be obtained for collection / treatment/storage disposal of hazardous waste.	**Complied**. We have CCA valid up to 3.11.19
32.	Hazardous waste sludge shall be packed stored in separate designated hazardous waste storage facility with impervious bottom and leachate collection facility, before its disposal.	**Complied**. There is no Haz. waste generation in this project.
33.	The used oil shall be sold to only to the registered recyclers / refiners.	**Complied**. Used oil is being sold to GPCB authorized vendor namely ABC Organics & Chemicals.
34.	The discarded containers / barrels /bags/ liners shall be sold only to the registered recycler.	**Complied**. No bags / liners are being utilized for Power Plant.
35.	For storage of fly ash closed silos of adequate capacity shall be provided.	**Complied**. Fly ash Silos 2 No's of storage capacity 300 Cu.M each have been installed. A separate bed ash silo of 100 Cu.M has been installed.

	No ash pond shall be construed in the project.	**Complied**. No ash pond is construed in the project.
36.	The fly ash shall be supplied to the manufacturers of fly ash based products such as cement, concrete blocks, bricks, panels, etc.	**Complied**. Fly ash is being given to Cement and Bricks manufacturers and also being used for our own Bricks Manufacturing unit.
	The unit shall strictly comply with the Fly Ash Notification under EPA and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.	**Complied**. We are complying with the Fly Ash Notification under EPA and there is 100% utilization of fly ash being generated from the unit. Please refer point 28.
37.	All possible efforts shall be made for co-processing of the Hazardous waste prior to disposal into TSDF/CHWIF.	**Complied**.
	A.5 SAFETY:	
38.	The project management shall strictly comply with the provisions made in the Factories Act, 1948 as well as manufacturer, storage and Impact of Hazardous chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals.	**Complied**.
39.	Necessary precautions like continuous monitoring of hot spot (ignite lignite) using temperature detection systems water sprinklers, avoiding stacking of lignite near stream pipeline etc shall be made for storing lignite to prevent fire hazard.	**Complied**. Lignite is usually used on the same day of its receiving at site as far as possible. Lignite is not being stored for not more than 3-4 Days. However, Water spray and fire hydrant system is available for the fuel storage sheds.
40.	All the risk mitigation measures, general & specific recommendations mentioned in risk Assessments Report shall be implemented.	**Complied**. All recommendations implemented.
41.	A well designed fire hydrants system shall be installed as per the prevailing standards.	**Complied.** Fire hydrant system is adequate and as per standards.
42.	Personal protective Equipment shall be provided to worker and its usage shall be ensured and supervised.	**Complied**. PPEs like nose masks, safety goggles, chemical resistive aprons, fire proof apron, Hand gloves, safety helmet, welding goggles, ear mugs, safety shoes etc are provided to the workers and utilization of the PPEs is followed strictly in Power Plant.
43.	First Aid Box and required antidotes for the chemical used in the unit shall be readily available in adequate quantity at all the times.	**Complied.** First aid box are kept in each plant and at strategic locations whereas antidotes are kept in the medical Centre.
44.	Occupational health surveillance of the workers shall be done its records shall be maintained. Pre - employment and periodical medical examination for all the worker shall be undertaken as per the Factories Act & rules.	**Complied**. Being done on regular basis as per the Factories Act & rules.
45.	Flameproof fittings shall be provided at the proposed power plant.	**Complied**. Flame proof fittings are provided.
46.	Adequate firefighting facilities shall be provided at the proposed power plant.	**Complied.** Firefighting facilities are adequate.
47.	Proper ventilation shall be provide in the work area.	**Complied.** Proper ventilation provided.

48.	All transporting routes within the factory premise shall have paved roads to minimize splashes and spillages.	**Complied**. The roads inside factory are either of cement concrete or Bitumen concrete.
49.	The project management shall prepare a details Disaster management plan (DMP) for the project as the guidelines from Directors of Industrial safety and Health.	**Complied.** Detailed disaster management plan is already prepared.
	A.6 NOISE:	
50.	To minimize the noise pollution the following noise control measures shall be implemented.	**Complied.**
	Selection of any new plant equipment shall be made with specifications of low levels.	**Complied.** All steam vents have attached with Silencers. Low noise level is considered as one of the prime specifications while selecting new machines in Power plant. For Example, Replacement of reciprocating type noisy air compressors by low noise emitting screw air compressors.
	Manufacturer / supplier of major noise generating machines / equipment like air compressor. Feeder pumps, turbine generators, etc shall be instructed to make required design modifications wherever possible regulatory norms with respect to noise generation for individual units.	**Complied.**
	Regular maintenance of machinery and vehicles shall be undertaken to reduce the noise impact.	**Complied.**
	Noise suppression measures such as enclosures, buffers and / or protective measures shall be provided.	**Complied**. Acoustic enclosures are provided on DG sets. Silencers have been provided on main steam vent valves of Boilers.
	Employees shall be provided with ear protection measures like earplugs or earmuffs.	**Complied.**
	Proper oiling lubrication and preventive maintenance shall be carried out of the machineries and equipment to reduce noise generation.	**Complied.**
	Construction equipment generating minimum noise vibration shall be chosen.	**Complied.**
	Ear plugs and / muffs shall be made compulsory for the construction workers working near the noise generating activities / machines / equipment.	**Complied.**
	Vehicles and construction equipment with internal combustion engines without proper silencer shall not be allowed to operate.	**Complied.**
	Construction equipment meeting the norms specified by EP Act, 1986 shall only be used.	**Complied.**
	Noise control equipment and baffling shall be employed on generators especially when they are operated near the residential and sensitive areas.	**Complied.**

<table>
<tr><td></td><td>Noise levels shall be reduced by the use of adequate mufflers on all motorized equipment</td><td>Complied.</td></tr>
<tr><td>51.</td><td>The overall noise level in and around the plant area shall be kept well within the prescribed standard by providing noise control measures including acoustic insulation, hoods, silencers, enclosures, vibration, dampers etc.on all sources of noise generation.</td><td>Complied. Silencers, acoustic hood are provided.</td></tr>
<tr><td></td><td>The ambient noise levels shall confirm to the standards prescribed under the Environment (protection) Act and Rules. Workplace noise levels for workers shall be as per the factories Act and Rules.</td><td>Complied. The ambient and workplace noise level confirms to the standard prescribed under EPA. The same is being regularly monitored and its details are given in Table 4 and 5. (Pl. see pg. no. 15, 16)

The maximum values during the compliance period confirms that at no time the noise emission level went beyond the stipulated standards. Summary is given below:
Noise level monitoring data (Day Time)
<table>
<tr><th>Sr. No.</th><th>Location</th><th>Permissible Limits, dBA</th><th colspan="3">Values for the period Nov 18- Apr 19</th></tr>
<tr><td></td><td></td><td>75</td><td>Min.</td><td>Max.</td><td>Avg.</td></tr>
<tr><td>1</td><td>Near Main guest house</td><td>75</td><td>63.6</td><td>68.9</td><td>65.3</td></tr>
<tr><td>2</td><td>Near TSDF</td><td>75</td><td>63.2</td><td>66.2</td><td>64.1</td></tr>
<tr><td>3</td><td>At Wyeth Colony</td><td>75</td><td>60.4</td><td>66.8</td><td>64.1</td></tr>
<tr><td>4</td><td>Gram Panchayat Hall</td><td>75</td><td>61.3</td><td>69.5</td><td>63.8</td></tr>
<tr><td>5</td><td>Near Main Office North site</td><td>75</td><td>65.5</td><td>67.9</td><td>66.7</td></tr>
<tr><td>6</td><td>ETP North site</td><td>75</td><td>66.5</td><td>70.2</td><td>68.0</td></tr>
<tr><td>7</td><td>Opposite shed D</td><td>75</td><td>64.7</td><td>68.9</td><td>66.3</td></tr>
<tr><td>8</td><td>ETP West site</td><td>75</td><td>65.4</td><td>68.7</td><td>67.2</td></tr>
<tr><td>9</td><td>Water tank Haria road</td><td>75</td><td>62.5</td><td>64.9</td><td>63.7</td></tr>
<tr><td>10</td><td>Near 66KVA substation</td><td>75</td><td>64.3</td><td>67.8</td><td>65.9</td></tr>
</table>
Noise level monitoring data (Night Time)
<table>
<tr><th>Sr. No.</th><th>Location</th><th>Permissible Limits, dBA</th><th colspan="3">Values for the period Nov 18- Apr 19</th></tr>
<tr><td></td><td></td><td>70</td><td>Min.</td><td>Max.</td><td>Avg.</td></tr>
<tr><td>1</td><td>Near Main guest house</td><td>70</td><td>53.1</td><td>56.1</td><td>55.0</td></tr>
<tr><td>2</td><td>Near TSDF</td><td>70</td><td>56.4</td><td>60.3</td><td>58.3</td></tr>
<tr><td>3</td><td>At Wyeth Colony</td><td>70</td><td>50.5</td><td>52.5</td><td>51.7</td></tr>
<tr><td>4</td><td>Gram Panchayat Hall</td><td>70</td><td>52.1</td><td>55.1</td><td>53.7</td></tr>
<tr><td>5</td><td>Near Main Office North site</td><td>70</td><td>55.7</td><td>58.9</td><td>57.3</td></tr>
<tr><td>6</td><td>ETP North site</td><td>70</td><td>52.2</td><td>55.1</td><td>53.6</td></tr>
<tr><td>7</td><td>Opposite shed D</td><td>70</td><td>53.8</td><td>55.9</td><td>54.8</td></tr>
<tr><td>8</td><td>ETP West site</td><td>70</td><td>54.7</td><td>56.3</td><td>55.6</td></tr>
<tr><td>9</td><td>Water tank Haria road</td><td>70</td><td>53.4</td><td>55.8</td><td>54.7</td></tr>
<tr><td>10</td><td>Near 66KVA substation</td><td>70</td><td>51.7</td><td>56.2</td><td>53.9</td></tr>
</table></td></tr>
<tr><td></td><td>A.7 GREEN BELT AND OTHER PLANTATION.</td><td></td></tr>
</table>

52.	The unit shall develop green belt in at least 68000 sq.m area within the premises. Green belt shall comprises of rows of varying height tall native trees with thick foliage in the periphery of the factory premises.	**Complied.** Green belt is developed and we planted more than 50000 plants every year.
53.	The unit shall also take up adequate plantation at suitable open Land on road sides and other open areas in nearby villages or schools in consultation with the Gram panchayat / GPCB and submit an action plan for the same for next three years to the GPCB.	**Complied**. We plant more than 50000 plants every year on road sides and other open areas in nearby villages or schools in consultation with the Gram panchayat.
	B.OTHER CONDITIONS:	
54.	In the event of failure of any pollution control system adopted by the unit, the unit shall be safely closed down and shall not be restarted until the desired efficiency of the control equipment has been achieved.	**Complied**. No such case during the repot period. However, if such case happens we ensure to close down the unit.
55.	All the recommendation , mitigation measures ,environments protection measures and safeguard proposed in the EIA report of the project prepared by M/s ; Eco chem Sales &Service ,surat & submitted vide letter no NIL dated 03/11/2015 and commitments made during presentation before SEAC, proposed in the EIA report shall be strictly adhered to in letter and spirit.	**Complied**.
56.	All the recommendation of CREP guidelines as may be applicable from time to time shall be following vigorously.	**Complied**. CREP guidelines is being followed.
57.	A separate environment management cell with qualified staff shall be set up for implementation of stipulated environmental safeguards.	**Complied**. Implementation of stipulated environmental safeguards were ensured by the Company's SHE department.
58.	The project authorities must strictly adhere to stipulations made by the Gujarat Pollution Control Board (GPCB), state government and statutory authority.	**Complied**.
59.	No further expansion or modification in the plant likely to cause environmental impacts shall be carried out without obtaining prior Environment Clearance from the concerned authority.	**Complied**. No further expansion took place.
60.	The above conditions will be enforced, inter-alla under the provisions of water (prevention &Control or pollution) Act, 1974, Air (prevention & Control of pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous & other wastes (Management and Trans boundary Movements) Rules 2016 and	Noted.

<table>
<tr><td></td><td>the public liability insurance Act, 1991 along with their amendments and rules.</td><td></td></tr>
<tr><td>61.</td><td>The project proponent shall comply all the conditions mentioned in ' The Companies (Corporate Social Responsibility Policy) Rules, 2014 and its amendments from time to time in a letter and spirit.</td><td>Complied.</td></tr>
<tr><td>62.</td><td>The project proponent shall ensure that unit complies with all the environment protection measures, risk mitigation measures and safeguards recommended in the EMP report and Risk .Assessments study repot as well as proposed by project proponent.</td><td>Complied. All the recommendations suggested in the EMP report and Risk assessments study repot as well as proposed by us have been implemented.</td></tr>
<tr><td>3.</td><td>The project authorities shall earmark adequate funds to implement the conditions stipulated by SEIAA as GPCB along with the implementation scheduled for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.</td><td>Complied.

EMP measures are implemented.
A separate budget is being allocated every year to comply with all the legal requirement stipulated by SPCB, CPCB & MoEF apart from upkeep of pollution control systems and facilities. Total expenditure is given in below table including EMS implementation:
<table>
<tr><th>Details</th><th>Expense in Lac Rs.</th></tr>
<tr><td>Site development</td><td>25</td></tr>
<tr><td>Civil work</td><td>2000</td></tr>
<tr><td>Plant and machinery</td><td>6049</td></tr>
<tr><td>Environment management system</td><td>984</td></tr>
<tr><td>Greenbelt development</td><td>10</td></tr>
<tr><td>Other assets | Contingency</td><td>200</td></tr>
<tr><td>Establishment charges</td><td>15</td></tr>
<tr><td>Project management and consultancy</td><td>50</td></tr>
<tr><td>Idc and financial charges</td><td>350</td></tr>
<tr><td>Total</td><td>9683</td></tr>
</table></td></tr>
<tr><td rowspan="3">64.</td><td>The applicant shall inform the public that the project has been accorded environmental clearance by the SEIAA and that the copies of the clearance letter are available with the GPCB and May also be seen at website of SEIAA / SEAC/ GPCB.</td><td>Complied. The advertisement given in newspapers as well as copies distributed to the Panchayat, Zila parishad, District Industrial Centre on 11.11.2016.</td></tr>
<tr><td>This shall be advertised within seven days from the date of the clearance letter, in at least two local newspapers that are widely circulated in the region, one of which shall be in the Gujarat language and the other in English.</td><td>Complied. The advertisement copy already submitted vide our letter dated 27.1.17.</td></tr>
<tr><td>A copy each of the same shall be forwarded to the concerned Regional office of the Ministry.</td><td>Complied. The advertisement copy already submitted vide our letter dated 27.1.17.</td></tr>
<tr><td>65.</td><td>The project proponent shall also comply with additional conditions that may be imposed by the SEAC or the SEIAA or any other competent authority for the purpose of the environmental protection and management.</td><td>Complied. No additional conditions so far imposed by the SEAC or the SEIAA or any other competent authority for the purpose of the environmental protection and management.</td></tr>
</table>

66.	It shall be mandatory for the project management to submit half-yearly compliance report in respect of the stipulated prior environmental clearance terms and condition in hard and soft copies to the regulatory authority concerned on 1st June and 1st December of each calendar year.	**Complied.** We regularly submit the half-yearly compliance report.
67.	Concealing factual data or submission of false / fabricated data and failure to comply with any of conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
68.	The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.	**Complied.**
69.	The SEIAA may revoke or suspend the clearance. If implementation of any of the above conditions is not found satisfactory.	Noted.
70.	The company in a time bound manner shall implement these conditions. The SEIAA reserves the stipulate additional conditions, if the same is found necessary.	Noted.
71.	The project authorities shall inform the GPCB, Regional Office of MoEF and SEIAA about the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	**Complied.**
72.	This environmental clearance is valid for seven years from the date of issue.	Noted.
73.	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 day as prescribed under section 16 of the National Green Tribunal Act, 2010.	Noted.

Table 1 : Stack Result

No.	Parameter	Standard values as per CCA	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
1	SPM	50 mg/Nm3	38	35	38	41	49	48
2	SO2	600 mg/Nm3	88	85	88	91	97	105
3	NOx	300 mg/Nm3	73	71	75	79	85	95
4	Mercury	0.03 mg/Nm3	ND	ND	ND	ND	ND	ND

Table 2 : Fly ash generation and disposal details:

Fly Ash	Unit	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
Generation	MT	2456.235	940.178	3421.56	4445.89	4488.135	3922.589
Disposal	MT	2456.235	940.178	3421.56	4445.89	4488.135	3922.589

Table 3 : Ambient air monitoring:

Station	Parameter	Limit microgm/NM^3	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
66 KV	PM 2.5	60	29	27	29	31	35	40
	PM10	100	31.1	32.5	34.8	35.2	32.2	50
	SO2	80	7.6	7.3	7.9	8.5	8.5	9.2
	NOx	80	6.8	7.4	7.9	8.5	8.9	8.8
	Ammonia	850	9	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Opposite Shed D	PM 2.5	60	29	32	35	38	42	45
	PM10	100	35	38	39	42	48	50
	SO2	80	9.4	9.5	9.8	10.2	11.1	12.1
	NOx	80	8.8	8.9	8.7	9.2	9.6	10.1
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Near West site ETP	PM 2.5	60	28	29	31	30	32	35
	PM10	100	39	42	45	43	45	50
	SO2	80	8.5	8.7	9.1	8.8	9.2	10.1
	NOx	80	8.6	8.5	8.6	8.8	8.9	9.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Near North ETP	PM 2.5	60	26	28	29	31	35	38
	PM10	100	38	41	40	40	45	60
	SO2	80	10.4	10.3	10.2	9.5	9.9	10.3
	NOx	80	9.7	9.4	9.4	9.1	9.5	9.8
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
TSDF	PM 2.5	60	33	37	38	42	49	55
	PM10	100	33	38	38	45	48	55
	SO2	80	8.6	8.4	8.9	9.2	9.5	9.9
	NOx	80	7.9	8.3	8.1	8.5	8.8	9.1
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Main Guest House	PM 2.5	60	29	27	28	27	29	35

	PM10	100	39	42	41	43	44	50
	SO2	80	9.8	9.9	10.1	9.9	9.5	9.8
	NOx	80	13.4	13.5	14.1	14.8	15.1	16.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Wyeth Colony	PM 2.5	60	25	27	24	25	29	30
	PM10	100	39	42	43	45	46	45
	SO2	80	7.5	7.7	8.1	8.5	8.9	9.3
	NOx	80	11.8	11.9	12.1	12.6	12.8	13.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Gram panchayat hall	PM 2.5	60	32	35	32	35	37	40
	PM10	100	35	39	38	41	43	45
	SO2	80	8.3	8.5	8.9	9.1	9.3	9
	NOx	80	12.9	12.7	12.9	13.2	12.5	12.8
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Main office, North site	PM 2.5	60	26	28	25	27	25	30
	PM10	100	44	48	47	49	51	55
	SO2	80	8.9	8.7	8.9	9.2	8.8	9.1
	NOx	80	12.6	12.8	13.2	12.8	12.7	13.1
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Haria water tank	PM 2.5	60	29	27	29	32	36	35
	PM10	100	33.6	31.3	33.2	34.9	35.7	40.5
	SO2	80	7.9	7.9	7.4	7.5	7.8	8.5
	NOx	80	8.4	7.9	8.2	8.5	8.4	9.5
	Ammonia	850	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND

Table 4 : Noise level monitoring data (Day Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	75
1	Near Main guest house	63.6	63.8	64.2	65.2	65.9	68.9	75
2	Near TSDF	63.8	63.3	63.8	64.3	63.2	66.2	75
3	At Wyeth Colony	63.6	63.9	64.5	65.3	66.8	60.4	75
4	Gram Panchayat Hall	61.9	61.3	62.4	63.5	64.2	69.5	75
5	Near Main Office North site	65.5	65.8	66.9	67.8	67.9	66.5	75
6	ETP North site	66.5	66.7	67.3	68.3	69.1	70.2	75
7	Opposite shed D	64.7	64.9	65.4	66.5	67.2	68.9	75
8	ETP West site	65.9	65.4	66.8	67.9	68.5	68.7	75
9	Water tank Haria road	62.9	62.5	63.1	64.2	64.9	64.5	75
10	Near 66KVA substation	64.3	64.5	65.3	66.3	67.1	67.8	75

Table 5 : Noise level monitoring data (Night Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	70
1	Near Main guest house	53.1	53.5	55.6	56.1	55.7	56.1	70
2	Near TSDF	56.9	56.4	57.8	58.3	60.1	60.3	70
3	At Wyeth Colony	50.8	50.5	51.3	52.4	52.5	52.4	70
4	Gram Panchayat Hall	52.7	52.1	53.4	54.2	54.7	55.1	70
5	Near Main Office North site	55.7	55.9	56.8	57.8	58.5	58.9	70
6	ETP North site	52.5	52.2	53.7	54.1	54	55.1	70
7	Opposite shed D	53.8	53.8	54.9	55.2	55.3	55.9	70
8	ETP West site	54.8	54.7	55.8	55.9	56.2	56.3	70
9	Water tank Haria road	53.7	53.4	54.9	55.2	55.8	55.2	70
10	Near 66KVA substation	51.8	51.7	53.7	54.8	55.1	56.2	70

Annexure 1

"PRELIMINARY STUDY FOR GROUND WATER QUALITY & SOIL"

For

ATUL LIMITED
P.O ATUL-396 020,
DIST: - VALSAD.

DECEMBER-2018

Prepared By:

Pollucon Laboratories Pvt. Ltd.

Plot No.5/6, "Pollucon House",
Opp. Balaji Industrial Society, Old Shantinath Silk mill Lane,
Near Gayatri farsan Mart, Navjivan circle,
Udhana Magdalla Road, Surat 3905007.
PHONE/FAX: [0261] 2455751, 2601224, 2601106
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"PRELIMINARY STUDY FOR GROUND WATER QUALITY & SOIL"

For

ATUL LIMITED
P.O. ATUL-396 020,
DIST: - VALSAD.

DECEMBER-2018

For and on behalf of Pollucon Laboratories Pvt. Ltd., Surat

Approved by	:	**Dr. Arun Kumar Bajpai**
Signed	:	
Designation	:	**Lab Manager (Q)**
Year	:	**December 2018**

POLLUCON LABORATORIES PVT. LTD. SURAT-7.

This report is prepared by Pollucon Laboratories Pvt. Ltd. with all reasonable skills, care and diligence, incorporating our General Terms and Conditions of Business and taking account of the resources devoted.

CONTENT

LIST OF ANNEXURE

1. INTRODUCTION

OF

POLLUCON LABORATORIES PVT. LTD.

1. Introduction

Pollucon Laboratories Pvt. Ltd., Plot No.5/6 "Pollucon House", Opp. Balaji Industrial Society, Old Shantinath Silk Mill Lane, Near Gaytri Farsan Mart,Navjivan Circle, Udhana Magdalla Road, Surat-395007, Gujarat, India have been in the analytical field since long time and have adequate expertise, trained man power and required infrastructure to render the uninterrupted service; Backed by a dedicated team we intend to give you a comprehensive analytical service with statutory interpretation and timely information vital for addressing the regulatory compliance.

We have so far a proven track record for successfully giving such services to various power plants , chemical factories and large scale set up and always met their demand for timely and effectively attendance to address the compliance solutions.

Apart from such set up as stated above following are our credential:

Laboratories are recognized by Ministry of Environment & Forest, Government of India, New Delhi under the EPA- article 12 A. along with the recognition as Environmental Auditors under the Honorable High Court; Gujarat Orders.

Laboratory set up is having international recognition from NABL (National accreditation board for Laboratories) under the ministry of Science & Technology as per ISO 17025:2005 for the relevant scope.

Entire administration and operations of the unit is as per ISO 9001:2008 quality systems and is certified by TUV consultants. (OHSAS 18000 & ISO 14001).

1.1 Sampling and Analytical Methods For Groundwater

Sampling and analytical methods are the important criteria for any tests and analysis as the accuracy of test results are dependent on the test methods selected for sampling and analysis besides the experience of the personnel. We have adopted IS (Indian Standards Methods), USDA (United States Department of Agriculture) & other standard methods for sampling and analysis.

Test Method:

SR. NO.	PARAMETERS	TEST METHOD
1	Colour	IS3025(P-4)83Re.02
2	pH	IS3025(P-11)83Re.02
3	Suspended Solids	IS3025(P-17)84Re.02
4	Total Dissolved Solids	IS3025(P-16)84Re.02
5	Chloride as Cl	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	IS 3025 (P-24)1986
10	Cyanide as CN	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	IS 3025 (P-44)1993
13	Sulphide as S	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	IS3025(P-23)86Re.03
17	Mercury as Hg	AAS APHA(22ndEdi)3112 B
18	Calcium as Ca	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	
20	Fluoride as F	APHA(22nd Edi) 4500 F D SPANDS Method

1.2 Sampling and Analytical Methods For Soil

Sampling and analytical methods are the important criteria for any tests and analysis as the accuracy of test results are dependent on the test methods selected for sampling and analysis besides the experience of the personnel. We have adopted IS (Indian Standards Methods), USDA (United States Department of Agriculture) & other standard methods for sampling and analysis.

Test Method:

SR. NO.	PARAMETERS	TEST METHOD
1	pH	IS:2720(P-26)1987
2	COD	SOP PLPL
3	Chloride	Soil Manual of India
4	Sulphate	IS:2720(P-27)
5	Organic Matter	IS:2720(P-22)1972
6	Colour	Soil Manual of India
7	Soil Texture	Soil Manual of India
8	Nature Moisture Content	IS:2720(P-2)
9	Bulk Density	Soil Manual of India
10	Mercury	USEPA 3050 B
11	Total Nitrogen	FCO 2018

2. Introduction

Of

ATUL LIMITED

P.O ATUL-396 020,

Introduction

The industrial activities of Atul Ltd. are situated at north bank of River Par in Valsad district.Atul Ltd was founded on September 15, 1947 – exactly a month after Indian independence – by Kasturbhai Lalbhai, an institution builder par excellence and a legendary Indian of his times. The Company was a manifestation of his dream to generate large-scale employment, create wealth in rural India and make the country self-sufficient in its requirements of chemicals. The first Prime Minister of the country, Mr. Jawaharlal Nehru inaugurated Atul Ltd.

Presently Atul Ltd is one of the largest integrated chemical companies of India and amongst the first five manufacturers of its chosen chemicals in the world. Atul is an improvement driven, integrated chemical company serving about 6,000 customers belonging to 31 industries across the world. The Company has established subsidiary companies in the USA (1994), the UK (1996), China (2004), Brazil (2012) and the UAE (2015) to serve its customers and thus enhance breadth and depth of its business.

The company manufactures different products like Dyes and Intermediates, Chloro – alkali products, variety of Pesticides, Bulk Drugs and Pharmaceuticals, Bulk chemicals and intermediates, Different types of Resins etc. products and serves to customers belonging to the Adhesives, Agriculture, Animal Feed, Automobile, Chemical, Composites, Construction, Cosmetic, Defence, Dyestuff, Electrical and Electronics, Flavour, Food, Footwear, Fragrance, Glass, Home Care, Horticulture, Hospitality, Paint and Coatings, Paper, Personal Care, Pharmaceutical, Plastic, Polymer, Rubber, Soap and Detergent, Sports and Leisure, Textile, Tyre and Wind Energy industries.Thecompanyuse variety of raw materials and consumption of fresh water is drawn from Par River.

As a part of Sp. Condition 3 of Environmental Clearance No. SEIAA/GUJ/EC/1(d)/340/2016, Atul Ltd has to submit the detailed study report to Gujarat Pollution Control Board (GPCB) at least once in a year, through the reputed institute or university to assess the impacts on soil and ground water quality. Hence the purpose of the present study is to evaluate soil and groundwater quality in and around Atul.

3. Importance of Ground Water

IMPORTANCE OF GROUND WATER

As ground water is an immensely important resource, However We Affect ground water Quantity Overuse of ground water for urban, rural and industrial uses can cause temporary or permanent declines in the quantity of available ground water.In coastal area fresh water supplies become contaminated with saltwater.

So, the chemistry of water is influenced as it flows downward through soil and the unsaturated zone.

Man-made depression in the ground that collects runoff water and stores it, permitting it to slowly percolate into the soil.

In nature, even the cleanest water contains some impurities that come from the erosion of natural rock formations. Water dissolves and absorbs substances that it touches, including calcium, magnesium, silica, and fluoride from dozens of naturally occurring minerals.

Another related problem concerns changes we make in the recharge rate. When recharge areas are paved with roads and parking lots or are covered with impervious surfaces such as rooftops, water cannot soak into the ground and replenish the ground water supplies. Adding to the problem, paved surfaces collect oils, salts, animal waste, antifreeze, and other pollutants. When it rains, these pollutants become part of the storm water runoff. So it is an important lesson – if we want clean GROUND WATER and surface water, we need to prevent all possible pollutants from being poured on the ground or spilled onto our parking lots and roads.

At low levels, most of these dissolved minerals do not cause health problems, and can even give water an appealing taste. Some of these minerals determine how “soft’ or "hard" our water is, and some may produce an unpleasant odor or taste. At higher levels, minerals can be considered contaminants, and like man-made chemicals, can make water unpalatable or unsafe to drink. In some areas, iron, manganese, and sulfate occur locally in objectionable concentrations.

Most GROUND WATER contamination is the result of human activity. Just as our surface freshwater resources (i.e., rivers, wetlands) are influenced by geologic processes and the activities of humans, so too is ground water

4. QA/QC PROCEDURE

4. QA/QC Procedure

4.1 Scope

The scope of QA plan for the above mentioned study includes a minimum of following elements.

- **preservation**
- **Chain of custody**
- **Laboratory**

4.2 Checklist for analysis and chain of custody

Sample Forwarding

After the registration of sample for analysis, the Draft Test report is prepared and handed over to concerned laboratory in-charge and analytical jobs were allotted to specific scientific staff. The concerned analysts have started the analysis after verifying the integrity of the samples.

Chain of Custody

Chain of custody records is maintained for each sample to accompany the sample or set of samples from the point final analysis.

4.3 Laboratory Analysis

Calibration

The Lab Manager has ensured that all the laboratory instruments are calibrated as per calibration plan.

Documentation

All the raw data have been recorded in the raw data register along with the details relating to the sample identification No., date etc.

Lab has also recorded the details relating various quality check procedures or deviation if any.

4.4 Check List for Sample integrity

Item	Yes or No	If No, reasons and Justification for Acceptance
Is the chain of custody recorded?	**Yes**	**Yes**
Is the chain of custody record filled in properly?	**Yes**	**Yes**
Is the seal on the sample containers intact?	**Yes**	**Yes**
Is the sample received in proper storage condition?	**Yes**	**Yes**
Is the sample quantity adequate for required analysis?	**Yes**	**Yes**
Checked By: Inspected By: Lab Manager		

Note: It is not necessary that this form be filled in for each sample/ sampling point.
It is sufficient if the deviations if any are recorded.

4.5 Check List for Analysis

Item	Yes or No	If No, reasons and Justification for Acceptance
Was the correct method used for the analysis?	**Yes**	**Yes**
Were the correct instruments, equipment and apparatus used for the analysis?	**Yes**	**Yes**
Was the competence of the analyst deployed for the analysis verified?	**Yes**	**Yes**
Were the instruments, equipment and apparatus used precalibrated as required?	**Yes**	**Yes**
Was the sample correctly and adequately identified?	**Yes**	**Yes**
Were all the raw data properly recorded in the Raw data register?	**Yes**	**Yes**
Were the correct equations and units used?	**Yes**	**Yes**
Checked By: Inspected By: Lab Manager		

Note: It is not necessary that this form be filled in for each sample/ sampling point.
It is sufficient if the deviations if any are recorded.

QC CHECK - I

Check List for Quality Check

Sr. No.	Parameters	Comment (Yes or No)	Remark
1.	Sample container labeled properly?	**Yes**	**Yes**
2.	Is Sample Container clean & dry?	**Yes**	**Yes**
3.	Are proper storage conditions are maintained?	**Yes**	**Yes**
4.	The sample quantity is adequate?	**Yes**	**Yes**
5.	Is sample properly identified?	**Yes**	**Yes**
6.	Is proper type of container used?	**Yes**	**Yes**
Inspected By: Lab Manager			

Note: It is not necessary that this form be filled in for each sample/ sampling point.

QC CHECK - II

Check List for Quality Check in the lab

Sr. No.	Parameters	Comment (Yes or No)	Remark
1.	Is the sample details entered into Sample Inventory code?	**Yes**	**Yes**
2.	Sample quantity measured	**Yes**	**Yes**
3.	Glassware is calibrated	**Yes**	**Yes**
4.	Balance / equipments are calibrated	**Yes**	**Yes**
5.	Data entered in the raw data register or not?	**Yes**	**Yes**
Inspected By: Lab Manager			

Note: It is not necessary that this form be filled in for each sample/ sampling point.
It is sufficient if the deviations if any are recorded.

5. SCOPE OF WORK

SAMPLING, ANALYSIS & RESULT

5. 1 Sampling Locations For Ground Water

Sr. No.	Sampling Location
1	Borewell near Spic 4 plant, North site, Atul Ltd
2	Borewell near R & D Lab, North Site, Atul Ltd
3	Borewell near R & D Lab, west Site, Atul Ltd
4	Borewell opp. East of New Boiler, West Site, Atul Ltd
5	Borewell at west of Old fire pond, West Site, Atul Ltd
6	Borewell at east of Shed A Plant, West Site, Atul Ltd
7	Borewell near Sulfa viofom Plant, East Site, Atul Ltd
8	Borewell near T acid Plant, East Site, Atul Ltd
9	Borewell at north of Caustic soda Plant, East Site, Atul Ltd
10	Borewell near Easter Plant, East Site, Atul Ltd
11	Borewell at Madan Mohan Goushala, Haria village
12	Borewell at down stream of TSDF (Borewell No. 3), Atul Ltd
13	Borewell at Up stream of TSDF (Borewell No. 5), Atul Ltd
14	Borewell near Main gate of GJK colony, Atul Village
15	Borewell near gate of Atik colony, Atul Village
16	Borewell near cross road of Down colony, Atul Village
17	Borewell near Hardner Plant, North Site, Atul Ltd
18	Well at Ishvarbhai's wadi, Haria Village
19	Hand Pump at Mahesh Park, Haria Village
20	Panchayat Hand Pump Near Railway Crossing, Haria Village
21	Hand Pump at First gate, poultry farm road, Parnera village
22	Hand Pump near Derasar, Second gate, Atul Village

: Detail given by customer

5.2 Sampling Locations For Soil

SR. NO.	SAMPLING LOCATION
1	NEAR BOILER PLANT WEST SITE
2	NEAR ETP PLANT NORTH SIDE
3	NEAR TE UNIT SOUTH SITE
4	NEAR MPP2 PLANT ABL
5	NEAR SULPHURIC PLANT EAST SIDE

: Detail given by customer

6 WATER SAMPLING TEST REPORT

TEST REPORT

QR/5.10/01

Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220036** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220036**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near Spic 4 Plant, North Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	2	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.12	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	11	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	478	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	45.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	29.15	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.70	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	110	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	90	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	34.4	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	5.76	Max 30	Max 100	
20	Fluoride as F	mg/L	0.59	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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TEST REPORT

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Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220037** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220037**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near R & D Lab, North Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.31	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	14	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	496	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	52.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	66.56	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.66	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	196	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	106	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	48.8	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	17.76	Max 30	Max 100	
20	Fluoride as F	mg/L	0.48	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220038** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220038**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near R & D Lab, West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	2	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.15	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	10	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	438	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	42.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	32.10	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	4.97	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	164	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	106	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	52.8	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	7.68	Max 30	Max 100	
20	Fluoride as F	mg/L	0.35	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220039** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220039**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell opp. East Of New Boiler,West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.47	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	3	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1012	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	112	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	97.15	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.51	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	336	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	276	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	76.0	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	35.04	Max 30	Max 100	
20	Fluoride as F	mg/L	0.82	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

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TEST REPORT

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220040** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220040**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at West of Old fire pond,West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.49	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	17	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	568	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	38.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	25.78	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.59	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	236	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	156	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	77.6	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	10.08	Max 30	Max 100	
20	Fluoride as F	mg/L	0.13	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220041** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220041**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Eest of Shed A Plant,West Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.56	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	13	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	592	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	31.99	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	27.65	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.68	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	262	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	258	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	67.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	22.56	Max 30	Max 100	
20	Fluoride as F	mg/L	1.25	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220042** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220042**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near sulfa Viofom Plant,East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	8.19	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	9	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	312	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	17.99	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	24.25	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.59	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	100	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	94	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	29.6	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	6.24	Max 30	Max 100	
20	Fluoride as F	mg/L	0.28	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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Customer's Name and Address : Page: 1 of 1

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220043** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220043**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near T acid Plant, East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.51	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	23	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	386	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	63.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	11.87	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.64	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	144	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	64	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	44.8	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	7.68	Max 30	Max 100	
20	Fluoride as F	mg/L	0.11	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220044** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220044**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell At north of Caustic soda plant,East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.32	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	22	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1376	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	135	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	28.68	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.66	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	526	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	524	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	127	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	49.92	Max 30	Max 100	
20	Fluoride as F	mg/L	0.44	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220045** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220045**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near Easter plant,East Site, Atul Ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.7	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	24	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1894	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	920	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	384	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.55	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	183	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	540	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	56	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	10.32	Max 30	Max 100	
20	Fluoride as F	mg/L	1.05	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220046** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220046**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Madan Mohan Goushala, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.42	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	11	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1264	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	87.97	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	95.28	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.59	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	556	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	306	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	126	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	57.60	Max 30	Max 100	
20	Fluoride as F	mg/L	0.58	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220047** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220047**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Down stream of TSDF (Borewell No.3),Atul ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.14	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	15	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1116	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	139	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	65.12	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	6.52	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	512	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	284	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	153	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	30.72	Max 30	Max 100	
20	Fluoride as F	mg/L	0.25	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220048** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220048**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell at Up stream of TSDF (Borewell No.5),Atul ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.96	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	7	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	892	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	107	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	66.44	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	4.72	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	544	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	210	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	152	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	39.36	Max 30	Max 100	
20	Fluoride as F	mg/L	0.57	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.

$: Not Detected, # : Detail given by customer.

Authorized Signatory

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220049** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220049**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell Near Main Gate of GJK colony, Atul village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.8	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	28	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	658	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	73.9	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	23.83	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.35	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	290	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	248	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	71.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	26.88	Max 30	Max 100	
20	Fluoride as F	mg/L	< 0.05	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220050** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220050**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near Gate of Atik colony, Atul Village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.48	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	ND$	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	672	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	50.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	28.76	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.16	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	302	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	266	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	23.52	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	81.60	Max 30	Max 100	
20	Fluoride as F	mg/L	0.18	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220051** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220051**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near cross road of Down colony, Atul Village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.93	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	ND$	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	688	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	51.98	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	23.65	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	2.86	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	338	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	288	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	91.20	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	26.40	Max 30	Max 100	
20	Fluoride as F	mg/L	0.57	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220052** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220052**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Borewell near Hardner Plant, North Site, Atul ltd #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	6.85	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	16	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1910	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	920	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	140	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	10.40	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	190	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	280	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	55.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	12.48	Max 30	Max 100	
20	Fluoride as F	mg/L	0.99	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220053** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220053**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Well at Ishvarbhai's wadi, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.01	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	11	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1502	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	319	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	62.07	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.86	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	184	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	304	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	52	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	12.96	Max 30	Max 100	
20	Fluoride as F	mg/L	0.35	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220054** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220054**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Hand pump at Mahesh Park, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.20	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	17	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1444	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	283	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	83.57	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.21	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	528	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	428	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	129	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	48.96	Max 30	Max 100	
20	Fluoride as F	mg/L	0.87	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220055** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220055**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Panchayat hand pump near Railway Crossing, Haria Village#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	1	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.93	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	< 2	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	418	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	17.99	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	ND$	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	31.87	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.36	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	186	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	174	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	39.2	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	21.12	Max 30	Max 100	
20	Fluoride as F	mg/L	0.41	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220056** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220056**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Hand pump at First gate, poultry farm road, parnera village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	3	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.38	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	10	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1214	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	127	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	< 0.05	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	25.78	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.55	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	516	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	344	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	131	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	45.12	Max 30	Max 100	
20	Fluoride as F	mg/L	0.65	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

TEST REPORT

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ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181220057** Issue Date : **21/01/2019** Customer's Ref. : **As Per Quotation**

Description of Sample	:	**Water Sample**	Quantity/No. of Samples	:	**02 Ltr/01**
Sampling Date	:	**20/12/2018**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**20/12/2018**	Lab ID	:	**PLPL/181220057**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**20/12/2018**	Date of Completion	:	**21/01/2019**
Identification of Sample	:	**Hand pump near derasar, second gate, Atul village #**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	ACCEPTABLE LIMIT AS PER IS 10500:2012	PERMISSIBLE LIMIT AS PER IS 10500:2012	TEST METHOD
1	Colour	Hazen	4	Max 5	Max 15	IS3025(P-4)83Re.02
2	pH	--	7.19	6.5 – 8.5	--	IS3025(P-11)83Re.02
3	Suspended Solids	mg/L	8	--	--	IS3025(P-17)84Re.02
4	Total Dissolved Solids	mg/L	1084	Max 500	Max 2000	IS3025(P-16)84Re.02
5	Chloride as Cl	mg/L	119	Max 250	Max 1000	IS3025(P-32)88Re.99 Argentometric method
6	Oil & Grease	mg/L	ND$	Max 0.5	--	APHA(22nd Edi)5520 B
7	Phenolic Compound as C_6H_5OH	mg/L	ND$	Max 0.001	Max 0.002	IS3025(P-43)92Re.03 4-Aminoantipyrine method
8	Hexavelant Chromium as Cr^{+6}	mg/L	< 0.05	--	--	APHA(22nd Edi)3500Cr B Colorimetric method
9	Sulphate as SO_4	mg/L	39.63	Max 200	Max 400	IS 3025 (P-24)1986
10	Cyanide as CN	mg/L	ND$	Max 0.05	--	APHA(22nd Edi)4500CN E Colorimetric & Tritemetric
11	COD	mg/L	ND$	--	--	APHA(22nd Edi) 5220-B OPEN REFLUX
12	BOD (3 Days @ 27°C)	mg/L	ND$	--	--	IS 3025 (P-44)1993
13	Sulphide as S	mg/L	ND$	Max 0.05	--	APHA(22nd Edi) 4500-S
14	Ammonical Nitrogen as NH_3	mg/L	5.10	Max 0.5	--	IS:3025 (P-34) 1988 (Re.2003)
15	Total Hardness as $CaCO_3$	mg/L	512	Max 200	Max 600	IS3025(P-21)84EDTARe.02
16	Total Alkalinity	mg/L	388	Max 200	Max 600	IS3025(P-23)86Re.03
17	Mercury as Hg	mg/L	ND$	Max 0.001	--	AAS APHA(22nd Edi)3112 B
18	Calcium as Ca	mg/L	118	Max 75	Max 200	IS3025(P-21)84EDTARe.02
19	Magnesium as Mg	mg/L	51.84	Max 30	Max 100	
20	Fluoride as F	mg/L	0.58	Max 1.0	Max 1.5	APHA(22nd Edi) 4500 F D SPANDS Method

Detection Limit : Oil & Grease : < 2 , Phenolic Compound : < 0.005, Hexavelent Chromium as Cr+6 : < 0.05, Cyanide as CN: < 0.0001, Sulphide as S: < 0.025, Mercury as Hg: < 0.001.
$: Not Detected, # : Detail given by customer.

Authorized Signatory

7. SOIL SAMPLING TEST REPORT

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225011** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225011**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR BOILER PLANT WEST SITE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	7.87	IS:2720(P-26)1987
2	Chloride	mg/kg	34.31	Soil Manual of India
3	Sulphate	mg/kg	161	IS:2720(P-27)
4	Organic Matter	%	0.60	IS:2720(P-22)1972
5	Colour	--	Brownish	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	9.35	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.18	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	2.14	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225012** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225012**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR ETP PLANT NORTH SIDE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	7.93	IS:2720(P-26)1987
2	Chloride	mg/kg	43.06	Soil Manual of India
3	Sulphate	mg/kg	121	IS:2720(P-27)
4	Organic Matter	%	1.98	IS:2720(P-22)1972
5	Colour	--	Dark Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	15.40	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.17	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	1.14	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225013** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225013**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR TE UNIT SOUTH SITE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	8.27	IS:2720(P-26)1987
2	Chloride	mg/kg	14.99	Soil Manual of India
3	Sulphate	mg/kg	123	IS:2720(P-27)
4	Organic Matter	%	2.55	IS:2720(P-22)1972
5	Colour	--	Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	23.08	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.19	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	1.24	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225014** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225014**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR MPP2 PLANT ABL#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	8.38	IS:2720(P-26)1987
2	Chloride	mg/kg	24.85	Soil Manual of India
3	Sulphate	mg/kg	170	IS:2720(P-27)
4	Organic Matter	%	0.88	IS:2720(P-22)1972
5	Colour	--	Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	19.55	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.22	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	1.84	FCO 2018

: Detail given by customer.

Authorized Signatory

TEST REPORT

QR/5.10/01

Page: 1 of 1

Customer's Name and Address :

ATUL LIMITED **P.O ATUL-396 020,** **DIST:VALSAD.**	Test Report No. : **PLPL/181225015** Issue Date : **04/01/2019** Customer's Ref. : **Verbal**

Description of Sample	:	**Solid Sample**	Quantity/No. of Samples	:	**03 Kg/01**
Sampling By	:	**Pollucon Lab.pvt.ltd.**	Protocol (Purpose)	:	**QC**
Sample Receipt Date	:	**25/12/2018**	Lab ID	:	**PLPL/181225015**
Packing/Seal	:	**Sealed**	Test of Parameters	:	**As Per Table**
Date of Starting of Test	:	**25/12/2018**	Date of Completion	:	**04/01/2019**
Identification of Sample	:	**NEAR SULPHURIC PLANT EAST SIDE#**			

RESULT TABLE

SR. NO.	PARAMETERS	UNIT	RESULT	TEST METHOD
1	pH	--	8.18	IS:2720(P-26)1987
2	Chloride	mg/kg	184	Soil Manual of India
3	Sulphate	mg/kg	185	IS:2720(P-27)
4	Organic Matter	%	0.097	IS:2720(P-22)1972
5	Colour	--	Ligh Brown	Soil Manual of India
6	Soil Texture	--	Sandy Loam	Soil Manual of India
7	Moisture Content	%	12.80	IS:2720(P-2)
8	Bulk Density	gm/cm^3	1.09	Soil Manual of India
9	Mercury	mg/kg	Not Detected	USEPA 3050 B
10	Total Nitrogen	%	0.90	FCO 2018

: Detail given by customer.

Authorized Signatory

8. CONCLUSION

- All Analyzed Parameters are within the norms of PERMISSIBLE LIMIT IN THE ABSENCE OF ALTERNATE SOURCE as per of IS 10500:2012 for drinking water (for parameters which limits are specified).
- Soil samples are taken from different location of site and no acidic soil is found at any location.
- Texture of soil is sandy loam at each sites.
- Toxic metal Mercury is not detected at all locations.

ANNEXURE I

CREDENTIALS OF POLLUCON LABORATORIES PVT. LTD.

A. NATIONAL ACCREDITATION BOARD FOR TESTING AND CALIBRATION LABORATORIES

National Accreditation Board for Testing and Calibration Laboratories
(A Constituent Board of Quality Council of India)

QCI

NABL

CERTIFICATE OF ACCREDITATION

POLLUCON LABORATORIES PVT. LTD.

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

5/6 "Pollucon House", Old Shantinath Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat, Gujarat

in the field of

TESTING

Certificate Number TC-5945 (In lieu of T-0821 & T-0820)

Issue Date 28/05/2017

Valid Until 27/05/2019

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

N. Venkateswaran
Program Director

Anil Relia
Chief Executive Officer

B. ISO 9001:2008

TÜV SÜD ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD South Asia

CERTIFICATE

The Certification Body
of TÜV SÜD South Asia Private Limited
certifies that

Pollucon Laboratories Pvt. Ltd.
"Pollucon House "Plot No. 80, Shed no. B/5 & B/6,
Opp Balaji Industrial Society, Nr. Navjivan Circle,
Udhana Magdalla Road,
Surat – 395007, Gujarat, INDIA

has implemented a Quality Management System
in accordance with ISO 9001:2008
For Scope of

Providing Environmental Audit, Consultancy, Monitoring & Testing Services for Water, Air, Hazardous waste & Food Products

The certificate is valid From 2017-03-21 until 2018-01-07
Subject to successful completion of annual periodic audits
The present status of the Certificate can be obtained on www.tuv-sud.in
Further clarifications regarding the scope of this certificate may be obtained by consulting the certification body

Certificate Registration No. 99 100 14114
Date of Initial certification : 2013-01-08

Certification Body
of TÜV SÜD South Asia Private Limited, Mumbai
Member of TÜV SÜD Group

NABCB QM011

C. ISO 14001:2004

CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group

certifies that

Pollucon Laboratories Pvt. Ltd.
444, 544- Belgium Tower, Opp. Linear Bus Stand,
Ring Road, Surat - 395 003, Gujarat, INDIA

has established and applies
an Environmental Management System for

Providing Environmental Audit,
Consultancy, Monitoring & Testing Services for Water, Air,
Hazardous waste & Food Products

An audit was performed. Report No. **20042248**
Proof has been furnished that the requirements
according to

ISO 14001:2004

are fulfilled. The certificate is valid until **2018-03-11**
Certificate Registration No. **TUV104 07 2153**

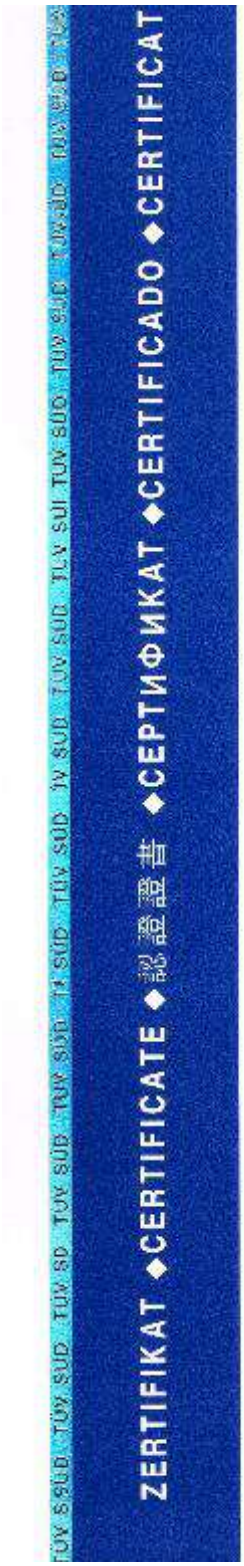
2015-01-26

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group

JAS-ANZ

TÜV

D. OHSAS 18001:2007



CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group

certifies that

Pollucon Laboratories Pvt. Ltd.
444, 544- Belgium Tower, Opp. Linear Bus Stand,
Ring Road, Surat - 395 003, Gujarat, INDIA

has established and applies
a Occupational Health and Safety Management System for

Providing Environmental Audit,
Consultancy, Monitoring & Testing Services for Water, Air,
Hazardous waste & Food Products

An audit was performed, Report No. **20042248**
Proof has been furnished that the requirements
according to

OHSAS 18001:2007

are fulfilled. The certificate is valid until **2018-03-11**
Certificate Registration No. **TUV116 07 2153**

2015-01-26

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group

JAS-ANZ

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E. GUJARAT POLLUTION CONTROL BOARD ENVIRONMENTAL AUDIT RECOGNITION

GUJARAT POLLUTION CONTROL BOARD
Paryavaran Bhavan
Sector - 10 A, Gandhinagar - 382 010.
Environment Audit Cell

No. GPCB/EA-126(6)/ 43334 / **1 FEB 2019** **RPAD**

To,
Pollucon Laboratories Pvt. Ltd.
Plot No. 5/6, Pollucon House,
Opp. Balaji Industrial Soc.,
Old Shantinath Silk Mill Lane,
Navjivan Circle,Udhana Magdalla Road,
Surat – 395 007

Sub:- Recognition as Schedule- II Environmental Auditor.

Sir,

This refers to your application for the recognition as Environmental Auditor, subsequent interview by Environment Audit Committee members. It is recommended by the Environment Audit Committee members, to recognize your firm as Schedule-II Environmental Auditor for carrying out the Environmental Audit under Environment Audit Scheme with following conditions.

1) Recognition is valid upto **31/12/2020.**
2) You shall have maximum **Three** teams for the Environment Audit.
3) You shall carry out maximum **45** nos. of Environment Audit.
4) Team members shall be as under :

Sr. No.	Name	Designation
Team-1		
1	Mr. Mehul Chevli	Environment Engineer
2	Mr. Nimesh Prajapati	Chemical Engineer
3	Mr. Devang Gandhi	Chemist
4	Mr. Harshal Gandhi	Microbiologist
Team-2		
1	Ms. Dhruti Desai	Environment Engineer
2	Mr. Hitesh Rathod	Chemical Engineer
3	Mr. H.T.Shah	Chemist
4	Mr. Mukesh Patel	Microbiologist
Team-3		
1	Mr. Vishmay Rana	Environment Engineer
2	Mr. Nandlal Suthar	Chemical Engineer
3	Mr. Macky Suraliwala	Chemist
4	Mrs. Nikita Patel	Microbiologist

Clean Gujarat Green Gujarat
An ISO 9001: 2008 & ISO 14001: 2004 Certified Organization

[illegible] REGD. NO. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

असाधारण
EXTRAORDINARY
भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)
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PUBLISHED BY AUTHORITY

सं. 1357]	नई दिल्ली, शुक्रवार, जून 3, 2016/ज्येष्ठ 13, 1938
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पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 2 जून, 2016

का.आ. 1953(अ).—केंद्रीय सरकार के साथ पठित पर्यावरण (संरक्षण) नियम, 1986 के नियम 10 पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 12 की उपधारा (1) के खंड (ख) और धारा 13 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए [illegible] अधिसूचना सं. का.आ. 1174(अ), तारीख 18 जुलाई, 2007 में निम्नलिखित संशोधन और करती है, अर्थात् :—

उक्त अधिसूचना [illegible]

(क) क्रम संख्यांक 5, 9,13 से 16, 20, 79, 80 और 83 से 85 तथा उनसे संबंधित प्रविष्टियों के स्थान पर निम्नलिखित [illegible] प्रविष्टियां रखी जाएंगी, अर्थात् :—

20	मेसर्स [illegible] प्रा. लि., 644, [illegible] [illegible], सूरत, गुजरात-395006	(1) [illegible] कुमार [illegible] (2) श्री [illegible] (3) श्री [illegible]	02.06.2016 से 01.06.2021

[illegible] (1)