Atul Bioscience Ltd

South Site, Atul 396 020, Gujarat, India
E-mail: pharma@atul.co.in | Website: www.atulbio.co.in
Telephone: (+91 2632) 230000 | 230183

Ref : ABL/SHE/EC Compliance/05
Date : 30th November, 2017

Through Reg. AD Post

To,
Mr. B. B. Barman
Scientist 'G', Regional Office, Western Region,
Kendriya Paryavaran Bhavan,
Link Road No. 3, E-5, Ravi Shankar Nagar,
Bhopal 462016, Madhya Pradesh.

Subject : Six Monthly Compliance on EC Condition

Reference : EC F. No. J -11011/84/2009- IA II (I) dated 09.04.2009

Respected Sir,

Please find attached herewith six monthly compliance report with respect to the above referred Environment Clearance granted to of M/s Atul Bioscience Ltd. Valsad, Gujarat; for the period of May 2017- October 2017.

We hereby request you to kindly validate the same.

Kindly do the needful and oblige.

Thanking you.

Yours truly,

For Atul Bioscience Ltd

(Ravishankar Sharma)

Encl. : As stated above.

CC:

1. Mr. B. R. Naidu (Scientist 'E' & In charge), Central Pollution Control Board, Zonal Office, Vadodara
2. The Member Secretary, Gujarat Pollution Control Board, Gandhinagar

Atul Bioscience Limited

Project: Change in product mix of organic chemicals

EC Compliance Report for the period May 2017-October 2017 as per EC F. No. J -11011/84/2009-IA II (I) dated 09.04.2009.

<table>
<tr><th>No.</th><th>Condition</th><th>Compliance</th></tr>
<tr><td colspan="3">A. Specific Condition</td></tr>
<tr><td>i</td><td>The industrial effluent generation shall not exceed 326.8 m³/d. (Total process effluent generation after expansion will be 588.6 m³/d- ref. point 4 of EC)</td><td>Complied. The average total industrial effluent generation for the report period is 22.6 m³/day only which is well within the limit. Details given in below table:

<table>
<tr><th>Wastewater generation</th><th>May-17</th><th>Jun-17</th><th>Juy-17</th><th>Aug-17</th><th>Sep-17</th><th>Oct-17</th><th>Total</th></tr>
<tr><td>m³/Month</td><td>537</td><td>697</td><td>735</td><td>660</td><td>744</td><td>774</td><td>4147</td></tr>
<tr><td>m³/day</td><td>17.3</td><td>23.2</td><td>23.7</td><td>21.3</td><td>24.8</td><td>25.0</td><td>22.6 (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 May 17 – Oct 17</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>Wastewater generation m³/d</td><td>588.6</td><td>17.3</td><td>25</td><td>22.6</td></tr>
</table>
</td></tr>
<tr><td></td><td>Out of 326.8 m³/d, 24 m³/d of high COD effluent shall be incinerated in the incinerator (of Atul Ltd as stated in point 4 of EC)</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</td></tr>
</table>

<table>
<tr><td></td><td></td><td>than incineration. Streams containing Solvents, oils, 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>Remaining 302.8 m³/d of normal effluent stream after mixing with other effluent like cooling tower (111.8 m³/d) shall be treated in ETP for primary and secondary treatment.</td><td>Complied. Normal effluent stream is further treated in Effluent Treatment Plant of Atul Ltd. (Ref. Point 4 of EC)</td></tr>
<tr><td></td><td>The treated effluent after confirming to the prescribed standards shall be discharged into estuary of river Par through a 4km long pipe line.</td><td>Complied. The treated effluent after confirming to the prescribed standards is being discharged into estuary of river Par through a 4km long pipe line of Atul Ltd. (Ref. Point 4 of EC). 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.20)

The maximum values during the compliance period confirms that at no time the emission went beyond the stipulated standards. Summery 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 May 17 – Oct 17</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</td><td>7.5</td><td>7.3</td></tr>
<tr><td>2</td><td>Temperature</td><td>40 deg C</td><td>28</td><td>30</td><td>28.8</td></tr>
<tr><td>3</td><td>Colour (pt. co. scale)in units</td><td>---</td><td>35</td><td>62</td><td>46.7</td></tr>
<tr><td>4</td><td>Suspended solids</td><td>100 mg/l</td><td>39</td><td>68</td><td>48.5</td></tr>
<tr><td>5</td><td>Phenolic Compounds</td><td>5 mg/l</td><td>0.2</td><td>0.7</td><td>0.5</td></tr>
<tr><td>6</td><td>Cyanides</td><td>0.2 mg/l</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>7</td><td>Fluorides</td><td>2 mg/l</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>8</td><td>Sulphides</td><td>2 mg/l</td><td>0.1</td><td>0.2</td><td>0.2</td></tr>
<tr><td>9</td><td>Ammonical Nitrogen</td><td>50 mg/l</td><td>16</td><td>38</td><td>29.3</td></tr>
</table></td></tr>
</table>

		10 | Total Chromium | 2 mg/l | 0.01 | 0.2 | 0.1 11 | Hexavalent Chromium | 1 mg/l | 0 | 0 | 0 12 | BOD (3 days at 27°C) | 100 mg/l | 32 | 48 | 39.3 13 | COD | 250 mg/l | 198 | 232 | 215.7
ii	**Process emissions in the form of HCI shall be scrubbed with water and caustic scrubber and HCI recovered as by product.**	**Complied**. Process emissions in the form of HCl is being recovered up to the possible extent and reused partially in process. Remaining HCI is scrubbed with water and caustic scrubber.
	The emissions shall be dispersed through stack of adequate height as per CPCB standards.	**Complied**. The emissions is being dispersed through stack of adequate height as per CPCB standards. Gaseous emissions from process units are monitored regularly every month and same are given in **Table 2** (Pl. see pg. no. 20). The same is being monitored online and connected with CPCB and GPCB.
	The gaseous emissions from the DG sets shall be dispersed through stack of adequate height as per CPCB standards.	**Complied**. The gaseous emission from the DG sets is dispersed through stack of adequate height as per CPCB standards. The minimum height of stack is provided using the following formula (ref. CPCB): H = h+0.2x√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.
	Acoustic enclosures shall be provided to the DG set to control the noise pollution.	**Complied**. DG Sets are having inbuilt acoustic enclosure to control noise pollution.
iii	**The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically.**	**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.atulbio.co.in/pdf/ABL-EC-Compliance-Report.pdf
	It shall simultaneously be sent to the Regional	**Complied**. Compliance status report is regularly submitted to the

<table>
<tr><td></td><td>office of MOEF, the respective Zonal office of CPCB and the State Pollution Control Board.</td><td>Regional office of MOEF, the respective Zonal office of CPCB and the State Pollution Control Board.</td></tr>
<tr><td></td><td>The criteria pollutant levels namely: SPM. RSPM, S02. 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 the company in the public domain.</td><td>Complied. The critical pollutants parameters namely SPM, RSPM, $S0_2$, 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.21, 25)
The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.

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 May 17 – Oct 17</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>HCl</td><td>20</td><td rowspan="2">mg/Nm^3</td><td>5.98</td><td>14.26</td><td>9.96</td></tr>
<tr><td>2</td><td>Cl_2</td><td>9</td><td>0.68</td><td>3.45</td><td>2.39</td></tr>
</table>

Summary of Ambient Air Quality results:

<table>
<tr><th rowspan="2">Station</th><th rowspan="2">Parameter</th><th rowspan="2">Limit microgm /NM^3</th><th colspan="3">Values for the period May 17 – Oct 17</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td rowspan="4">Behind MPP I Plant</td><td>RSPM (PM2.5)</td><td>60</td><td>20</td><td>28</td><td>24</td></tr>
<tr><td>PM10</td><td>100</td><td>46</td><td>58</td><td>52</td></tr>
<tr><td>SO_2</td><td>80</td><td>10.7</td><td>14.6</td><td>12.54</td></tr>
<tr><td>NOx</td><td>80</td><td>11.1</td><td>13.4</td><td>12.36</td></tr>
<tr><td rowspan="3">Opposite R & D lab</td><td>RSPM (PM2.5)</td><td>60</td><td>24</td><td>28</td><td>25.8</td></tr>
<tr><td>PM10</td><td>100</td><td>46</td><td>58</td><td>53.2</td></tr>
<tr><td>SO_2</td><td>80</td><td>11.4</td><td>14.2</td><td>12.76</td></tr>
</table>
</td></tr>
</table>

				NOx	80	10.2	12.4	11.52	
			66 KV	RSPM (PM2.5)	60	22.0	29.0	26.3	
				PM10	100	48.0	59.0	55.0	
				SO2	80	8.2	56.0	17.0	
				NOx	80	9.5	11.8	10.4	
				Ammonia	850	ND	10.2	1.7	
				HCl	200	ND	5.6	1.7	
			Opposite Shed D	RSPM (PM2.5)	60	27.0	35.0	30.7	
				PM10	100	49.0	59.0	53.5	
				SO2	80	10.4	11.2	10.6	
				NOx	80	11.2	13.6	11.9	
				Ammonia	850	13.4	18.2	15.6	
				HCl	200	ND	ND	ND	
			Near West site ETP	RSPM (PM2.5)	60	31.0	38.0	33.8	
				PM10	100	51.0	58.0	55.0	
				SO2	80	10.2	11.2	10.7	
				NOx	80	12.2	13.2	12.6	
				Ammonia	850	ND	ND	ND	
				HCl	200	ND	ND	ND	
			Near North ETP	RSPM (PM2.5)	60	30.0	37.0	33.2	
				PM10	100	49.0	56.0	53.5	
				SO2	80	9.6	10.8	10.1	
				NOx	80	1.4	13.6	9.9	
				Ammonia	850	11.2	14.6	13.1	
				HCl	200	ND	ND	ND	
			TSDF	RSPM (PM2.5)	60	30.0	38.0	35.5	
				PM10	100	52.0	59.0	56.5	
				SO2	80	9.6	12.2	11.2	

				NOx	80	11.4	14.6	13.1	
				Ammonia	850	ND	ND	ND	
				HCl	200	ND	ND	ND	
			Main Guest House	RSPM (PM2.5)	60	20.0	28.0	22.3	
				PM10	100	45.0	52.0	49.0	
				SO2	80	10.2	11.2	10.5	
				NOx	80	10.8	12.6	11.5	
				Ammonia	850	ND	ND	ND	
				HCl	200	ND	ND	ND	
			Wyeth Colony	RSPM (PM2.5)	60	20.0	27.0	23.5	
				PM10	100	46.0	54.0	50.7	
				SO2	80	8.6	11.4	9.7	
				NOx	80	9.2	12.8	10.8	
				Ammonia	850	ND	ND	ND	
				HCl	200	ND	ND	ND	
			Gram panchayat hall	RSPM (PM2.5)	60	21.0	26.0	23.8	
				PM10	100	46.0	54.0	49.7	
				SO2	80	9.2	10.2	9.6	
				NOx	80	9.6	11.4	10.7	
				Ammonia	850	ND	ND	ND	
				HCl	200	ND	ND	ND	
			Main office, North site	RSPM (PM2.5)	60	23.0	35.0	27.3	
				PM10	100	47.0	59.0	54.3	
				SO2	80	9.6	12.8	11.5	
				NOx	80	10.2	13.4	12.3	
				Ammonia	850	ND	ND	ND	
				HCl	200	ND	ND	ND	

		Haria water tank	RSPM (PM2.5)	60	20.0	28.0	24.0
			PM10	100	38.2	52.0	45.5
			SO2	80	6.2	9.3	7.4
			NOx	80	7.6	10.8	9.3
			Ammonia	850	ND	ND	ND
			HCl	200	ND	ND	ND

Summary of VOC results:

Location	**Parameter**	**Permissible limit mg/Nm³**	**Values for the period May 17 – Oct 17**		
			Min.	**Max.**	**Avg.**
Ground Floor MPP2	Phosgene	0.4	0.041	0.065	0.054
	Chlorine	3	0.086	0.246	0.176
Ground Floor MPP1	Toluene	375	72.6	122.4	96.840

iv	**The company shall adopt cleaner production technology to minimize the quantity of fresh water requirement and process effluent generation.**	**Complied**. Steam condensate is being collected and used in place of raw water. Various wash water streams are being utilized in the further steps of the process. Details of water consumption break up is given below:

Water Consumption Break up m³				
Period	**Water consumption in**			**Total**
	Process	**Cooling**	**Domestic**	
May 17	537	272	1650	2459
Jun 17	697	268	1459	2424
Jul 17	735	221	1337	2293
Aug 17	660	318	2319	3297
Sep 17	744	285	1901	2930
Oct 17	774	271	1749	2794

v	**The Company shall obtain Authorization for collection, storage and disposal of hazardous waste**	**Complied**. We have obtained authorization under Haz. Waste management rules 2008 and available in our valid current CCA No.

	under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules. 2008 for management of hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF.	AWH 59131 for handling, storage and disposal of hazardous waste.
	The concerned company shall undertake measures for firefighting facilities in case of emergency.	**Compiled**. We have 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 being carried out at regular interval.
vi	**The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules. 1989 as amended in October, 1994 and January, 2000**	**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 made in CCA by GPCB in this regard. This has been certified by our Environmental auditors, an authorized agency and nominated by GPCB; through Environmental audit every year. Latest compliance report by Chemical Engineering Department, Bardoli for year 16-17 is attached as **Annexure I.**
	All Transportation of Hazardous Chemicals shall be as per the MVA. 1989.	**Complied**. Transportation of Hazardous chemicals are being done as per the MVA rule 1989.
vii	**The company shall undertake following Waste Minimization measures :-**	
	Metering and control of quantities of active ingredients to minimize waste.	**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.
	Reuse of by-products from the process as raw materials or as raw material substitutes in other	**Complied**. HCl and Solvent recovered are being used as raw material in further steps.

	processes.	
	Use of automated filling to minimize spillage.	**Complied**. Filling is done on weighing balance manually but in controlled manner to minimize spillage.
	Use of "Close Feed' system into batch reactors.	**Complied**. All reactors are in close loop and connected with condensers having cooling tower water, Chilled water or Brine water supply for control of fugitive emission.
	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.
	Use of high pressure hoses for equipment clearing 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.**	**Complied**. Fugitive emissions in the work zone environment and raw material storage area is being regularly monitored by GPCB approved third party (schedule 2 auditors). The emission is always being confirmed to the limits.
	The emissions shall conform to the limits imposed by SPCB.	**Complied**. The emissions confirms the limits. 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. iii.** The detailed results are given in **Table 2**. (Pl. see pg. no. 21)
ix	**The project authorities shall provide the chilled brine solution in secondary condenser for condensation of the VOCs.**	**Complied**. Chilled brine solution is provided in secondary condenser for condensation of the VOCs.
	The project authority shall ensure that the solvent recovery shall not be less than 95%.	**Complied**. Solvent recovery is >95%.
	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 For No. 37.VOC monitoring done on regular bases and the results are given in **Table 4** (Pl. see pg. no. 24).
x	**Solvent management shall be as follows :**	

<table>
<tr><td></td><td>Reactor shall be connected to chilled brine condenser system</td><td>Complied. Reactors are connected to chilled brine condenser system</td></tr>
<tr><td></td><td>Reactor and solvent handling pump shall have mechanical seals to prevent leakages.</td><td>Complied. Reactor and solvent handling pump do have mechanical seals to prevent leakages.</td></tr>
<tr><td></td><td>The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.</td><td>Complied. The condensers are provided with sufficient HTA and residence time.</td></tr>
<tr><td></td><td>Solvents shall be stored in a separate space specified with all safety measures.</td><td>Complied. Solvents are stored in tank farms in separate tanks with proper earthing, flame arresters, lightening arresters, fencing, Fire hydrant system, Fir e extinguishers, flame proof equipment, etc. safety measures.</td></tr>
<tr><td></td><td>Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.</td><td>Complied. Double earthing is provided and regular checking and testing of the same is being done and recorded.</td></tr>
<tr><td></td><td>Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.</td><td>Complied. Plants are equipped with Jumpers, flame proof electrical fittings and proper earthing as per the Hazardous area classification of PESO.</td></tr>
<tr><td>xi</td><td>Hazardous chemicals shall be stored in tanks in tank farms, drums, carboys, etc.</td><td>Complied. Hazardous chemicals are being stored in tanks, drums and carboys considering the storage quantity and chemical stored.</td></tr>
<tr><td></td><td>An area of 33% green belt and selection of plant species shall be as per the guideline of CPCB.</td><td>Complied. Company is having green belt in 33% area of plant and doing plantation every year.</td></tr>
<tr><td>xii</td><td>The Company shall harvest surface as well as rainwater from the rooftops of the buildings and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.</td><td>Complied. We have installed 120 KL underground tank and 2 nos 30 Kl overhead tank to collect rain water from roof tops. Last year we have collected approx. 360 KL rain water which was consumed for scrubber & cooling tower.</td></tr>
<tr><td>xiii</td><td>Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.</td><td>Complied. Details given 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>May 17 to Oct 17</td><td>34</td></tr></table></td></tr>
</table>

B. General Conditions		
i	**The project authorities shall strictly adhere to the stipulations made by the 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 Chemical Engineering Department, Bardoli for year 16-17 is attached as **Annexure I.**
ii	**No further expansion or 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.**	Last change in product mix of organic chemicals was done in 2009 for which referred EC has been sought. Further expansion will be carried out after prior approval of MoEF only. There is no deviation or alteration made in the project than the proposal submitted to MoEF.
iii	**At no time, the emissions shall exceed the prescribed limits.**	**Complied**. Monthly monitoring is being done by GPCB approved M/s. Clean Enviro Projects Consultancy Pvt. Ltd, Valsad. At no time, the emissions exceeded the prescribed limits during report period. **Summary of stack emission is given in special condition iii.**
	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.	**Complied**. No such case happened during the compliance period.
iv	**The Gaseous emission (NOx, HCl, SO2 and SPM) and Particulate matter along with RSPM levels from various process units shall confirm to the standards prescribed by the concerned authorities from time to time.**	**Complied**. The gaseous emissions (HCl) from process units confirms to the standards prescribed by GPCB through CCA Gaseous emission is regularly monitored. Results given in **Table 2** (Pl. see pg. no. 21).

<table>
<tr><td></td><td>At no time, the emission levels shall go beyond the stipulated standards.</td><td>Complied.
The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.
Summary of stack emission is given in special condition iii.</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 SO2, Nox and SPM shall be carried.</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>v</td><td>The Location of ambient air quality monitoring stations shall be decided in consultation with sated 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. There are two locations have 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 for ambient air monitoring. 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><td>No.</td><td>Location</td></tr><tr><td>1</td><td>Behind MPP I Plant</td></tr><tr><td>2</td><td>Opposite R & D lab</td></tr></table>Apart from this, 10 ambient air stations of Atul Ltd also monitors the surrounding of ABL.</td></tr>
<tr><td>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 and 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. 21).</td></tr>
<tr><td></td><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</td><td>Complied. In built Acoustic enclosure, silencer and insulation are</td></tr>
</table>

<table>
<tr><td></td><td>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>provided on all source of noise generation to keep over all noise level within the stipulated standards like DG set, etc.</td></tr>
<tr><td></td><td>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)</td><td>Complied. The ambient noise level confirm to the standard prescribed under EPA.
The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.

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 May 17 – Oct 17</th></tr>
<tr><th></th><th></th><th>75</th><th>Min.</th><th>Max.</th><th>Avg.</th></tr>
<tr><td>1</td><td>Near Main guest house</td><td>75</td><td>58</td><td>65</td><td>62</td></tr>
<tr><td>2</td><td>Near TSDF</td><td>75</td><td>61</td><td>67</td><td>63</td></tr>
<tr><td>3</td><td>At Wyeth Colony</td><td>75</td><td>58</td><td>62</td><td>60</td></tr>
<tr><td>4</td><td>Gram Panchayat Hall</td><td>75</td><td>58</td><td>63</td><td>60</td></tr>
<tr><td>5</td><td>Near Main Office North site</td><td>75</td><td>57</td><td>63</td><td>59</td></tr>
<tr><td>6</td><td>ETP North site</td><td>75</td><td>62</td><td>67</td><td>65</td></tr>
<tr><td>7</td><td>Opposite shed D</td><td>75</td><td>62</td><td>68</td><td>65</td></tr>
<tr><td>8</td><td>ETP West site</td><td>75</td><td>61</td><td>68</td><td>64</td></tr>
<tr><td>9</td><td>Water tank Haria road</td><td>75</td><td>64</td><td>68</td><td>66</td></tr>
<tr><td>10</td><td>Near 66KVA substation</td><td>75</td><td>59</td><td>67</td><td>63</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td></td><td>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 May 17 – Oct 17</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>52</td><td>58</td><td>56</td></tr>
<tr><td>2</td><td>Near TSDF</td><td>70</td><td>54</td><td>59</td><td>57</td></tr>
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<tr><td>9</td><td>Water tank Haria road</td><td>70</td><td>56</td><td>62</td><td>58</td></tr>
<tr><td>10</td><td>Near 66KVA substation</td><td>70</td><td>55</td><td>62</td><td>58</td></tr>
</table>

Details are given in Table 5 and 6 (Pl. see pg. no. 25, 26).</td></tr>
<tr><td>viii</td><td>Training shall be imparted to all employees on safety and health aspects of chemicals handling.</td><td>Complied. Company is imparting training to all new employees as well as regular employees at regular intervals. Safety precautions and hazards are also being communicated through display boards at appropriate places in the plants.</td></tr>
<tr><td></td><td>Pre-employment and routine periodical medical examination for all employees shall be undertaken on regular basis.</td><td>Complied. Company is doing all the new employment with pre medical checkup and routine medical checkup for on roll employee has been done on regular frequency.</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 strictly follow for all level of employee.</td></tr>
</table>

<table>
<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 the project did not require EIA or public hearing, no such recommendations mentioned. However, we are committed for healthy work environment and safe work practices.</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 in nearby villages and schools is given below table:
<table>
<tr><th>No.</th><th>CSR activities during 17-18</th></tr>
<tr><td>1</td><td>16 blood camps organized in nearby villages, total 1263 bottles collected.</td></tr>
<tr><td>2</td><td>1 eye camp organized in nearby village, total 381 patients covered.</td></tr>
<tr><td>3</td><td>Distributed 12331 note books 2960 pencils, erasers, and ball pen etc. to students of 27 primary school students.</td></tr>
<tr><td>4</td><td>Food Material supply to 80 students for Chhataralaya Mama Bhacha , every month including cooking facility.</td></tr>
<tr><td>5</td><td>Seva day was organized at Moti Koravad Ashramshala, Dharampur . Cloths and food material distributed to approx. 2200 tribal people and provided lunch thereafter.</td></tr>
<tr><td>6</td><td>Sanitation programme held at Umarsadi, Parnera , Survada, Atul and Sukesh ,Chanvai village 241 units completed in the year 2017-18.</td></tr>
<tr><td>7</td><td>Paver Block work at Haria, Navi Ori and Desaiwad street total exp. Rs. 5.96 lacs.</td></tr>
<tr><td>8</td><td>Road development work at Parnera Hillock, Atul Village total exp. Rs. 10.40 lacs.</td></tr>
<tr><td>9</td><td>Construction of compound wall at flood effected in 2015-16 at Muktidham Atul</td></tr>
</table></td></tr>
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<table>
<tr><td></td><td></td><td>
<table>
<tr><td>10</td><td>Promotions of Sports activity through Ulhas Gymkhana (Inter Village Volley Ball tournament) exp. Rs. 2.29 Lacs.</td></tr>
<tr><td>11</td><td>14 programmes on vocational training arranged, 375 students attended.</td></tr>
</table>

The summery of expense occurred in CSR activities for last three years is listed below:
<table>
<tr><th>Financial year</th><th>Amount (Rs. in lakhs)</th></tr>
<tr><td>2016-17 (actual)</td><td>660</td></tr>
<tr><td>2017-18 (budgeted)</td><td>750</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 has tie up with its parent company Atul Limited where separate Environmental Management Cell equipped with full-fledged laboratory facilities to carry out the environment management and monitoring functions.</td></tr>
</table>

<table>
<tr>
<td>xiv</td>
<td>The project authorities shall provide adequate funds both 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: Rs. 70.0 Lacs
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. (in lacs)</th></tr>
<tr><td rowspan="6">May 2017 to Oct 2017 Including, recurring maintenance, modifications and monitoring.</td><td>Fuel</td><td>32.11</td></tr>
<tr><td>Electricity</td><td>134.75</td></tr>
<tr><td>Waste disposal</td><td>14.21</td></tr>
<tr><td>Salary</td><td>87.07</td></tr>
<tr><td>Chemicals (Raw Material), Maintenance, modifications & Monitoring</td><td>59.31</td></tr>
<tr><td>Total</td><td>327.45</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>
<tr>
<td></td>
<td>The clearance letter shall also be put on the web site of the company by the proponent.</td>
<td>Complied. Available at company’s website at http://www.atulbio.co.in/pdf/ABL-EC-Compliance-Report.pdf</td>
</tr>
<tr>
<td>xvi</td>
<td>The implementation of the project vis-à-vis environmental action plan shall be monitored by Ministry’s Regional office at Bhopal / SPCB / CPCB.</td>
<td>Complied. SPCB and MoEF is monitoring through their regular visits.</td>
</tr>
</table>

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.	Advertisement was published and copy of the same was submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated 4.4.17.
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 : April 2009 Completion date : March 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.
9	**The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.**	Noted.
10	**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.
11	**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.
12	**The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air ((Prevention**	Noted.

	and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986, Hazardous Wastes (Management, 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
		May-17	Jun-17	Juy-17	Aug-17	Sep-17	Oct-17	
1	pH	7.1	7.2	7.5	7	7.2	7.5	5.5 to 9.0
2	Temperature, ^{o}C	30	29	28	28	29	29	40 ^{o}C
3	Colour (pt. co. scale)in units	58	62	35	42	35	48	---
4	Suspended solids, mg/l	68	54	43	46	39	41	100
5	Phenolic Compounds, mg/l	0.5	0.7	0.2	0.7	0.2	0.5	5
6	Cyanides, mg/l	ND	ND	ND	ND	ND	ND	0.2
7	Fluorides, mg/l	ND	ND	ND	ND	ND	ND	2
8	Sulphides, mg/l	0.2	0.1	0.1	0.2	0.1	0.2	2
9	Ammonical Nitrogen, mg/l	36	38	28	16	22	36	50
10	Total Chromium, mg/l	0.2	0.1	0.02	0.01	0.02	0.01	2
11	Hexavelent Chromium, mg/l	ND	ND	ND	ND	ND	ND	1
12	BOD (3 days at 27^{o}C), mg/l	40	38	32	36	42	48	100
13	COD, mg/l	226	212	198	202	224	232	250
Note : ND is not detectable. Unit of measurement is mg/l else specified.								

Table 2 : Stack Results

Stack attached to	Stack Height	Parameter	Permissible limit	Results in Milligram per NM^3					
				May-17	Jun-17	Juy-17	Aug-17	Sep-17	Oct-17
MPP1	5.00	HCl	20	10.86	8.6	5.98	12.65	14.26	7.42
		Cl_2	9	2.84	3.45	0.68	3.42	2.12	1.84

Table 3 : Ambient Air Monitoring details

Station	Parameter	Limit microgm/NM^3	May-17	Jun-17	Juy-17	Aug-17	Sep-17	Oct-17
Behind MPP I Plant	RSPM (PM2.5)	60	20	22	24	20	28	26
	PM10	100	50	52	46	48	56	58
	SO_2	80	12.2	14.6	12.4	11.2	13.8	10.7
	NOx	80	12.6	13.1	11.8	12.4	13.4	11.1
Opposite R & D lab	RSPM (PM2.5)	60	22	24	26	28	24	27
	PM10	100	48	52	46	56	58	54
	SO_2	80	12.6	13.8	14.2	12.6	11.4	11.8
	NOx	80	11.8	10.2	11.2	12.2	12.4	11.6
66 KV	RSPM (PM2.5)	60	28	26	22	27	26	29
	PM10	100	57	52	48	56	59	58
	SO_2	80	10.8	9.2	8.2	56	8.6	9.2

	NOx	80	11.8	10.6	11.2	9.5	9.8	9.6
	Ammonia	850	0	0	0	10.2	0	0
	HCl	200	0	0	0	0	4.8	5.6
Opposite Shed D	RSPM (PM2.5)	60	35	33	29	27	29	31
	PM10	100	59	56	54	52	49	51
	SO_2	80	10.4	11.2	10.6	10.4	10.8	10.4
	NOx	80	12.2	13.6	11.2	11.4	11.8	11.2
	Ammonia	850	16.4	15.4	13.4		14.4	18.2
	HCl	200	0	0	0	0	0	0
Near West site ETP	RSPM (PM2.5)	60	32	36	31	32	34	38
	PM10	100	54	58	51	56	53	58
	SO_2	80	11.2	10.8	10.2	10.8	10.2	11.2
	NOx	80	13.2	12.6	12.4	12.2	12.6	12.8
	Ammonia	850	0	0	0	0	0	0
	HCl	200	0	0	0	0	0	0
Near North ETP	RSPM (PM2.5)	60	37	35	33	30	31	33
	PM10	100	56	53	49	54	56	53
	SO_2	80	10.6	10.8	9.6	10.4	9.6	9.8
	NOx	80	12.4	13.6	10.6	1.4	10.8	10.6

	Ammonia	850	13.4	14.6	12.5		11.2	13.8
	HCl	200	0	0	0	0	0	0
TSDF	RSPM (PM2.5)	60	35	38	30	35	38	37
	PM10	100	52	56	55	58	59	59
	SO_2	80	11.6	12.2	9.6	11.2	11.8	10.6
	NOx	80	13.4	14.6	13.2	12.4	13.4	11.4
	Ammonia	850	0	0	0	0	0	0
	HCl	200	0	0	0	0	0	0
Main Guest House	RSPM (PM2.5)	60	20	23	21	20	22	28
	PM10	100	49	51	48	45	49	52
	SO_2	80	10.2	10.8	10.4	10.2	10.4	11.2
	NOx	80	11.6	11.2	11.6	11.2	10.8	12.6
	Ammonia	850	0	0	0	0	0	0
	HCl	200	0	0	0	0	0	0
Wyeth Colony	RSPM (PM2.5)	60	22	20	24	22	27	26
	PM10	100	51	46	52	49	52	54
	SO_2	80	10.4	9.2	11.4	8.6	9.4	9.3
	NOx	80	10.8	10.4	12.8	9.2	10.6	11.2
	Ammonia	850	0	0	0	0	0	0

	HCl	200	0	0	0	0	0	0
Gram panchayat hall	RSPM (PM2.5)	60	21	22	26	23	25	26
	PM10	100	46	50	51	48	49	54
	SO_2	80	9.2	9.6	10.2	9.3	9.8	9.3
	NOx	80	9.6	10.8	11.4	10.6	10.4	11.2
	Ammonia	850	0	0	0	0	0	0
	HCl	200	0	0	0	0	0	0
Main office, North site	RSPM (PM2.5)	60	27	25	23	26	28	35
	PM10	100	58	56	47	50	56	59
	SO_2	80	12.3	12.8	9.6	10.8	11.2	12.4
	NOx	80	13.4	13.1	10.2	11.4	12.2	13.2
	Ammonia	850	0	0	0	0	0	0
	HCl	200	0	0	0	0	0	0
Haria water tank	RSPM (PM2.5)	60	22	20	26	24	24	28
	PM10	100	42	46	38.2	49	46	52
	SO_2	80	7.2	6.4	7.9	9.3	6.2	7.2
	NOx	80	10.8	9.8	8.8	10.2	7.6	8.4
	Ammonia	850	0	0	0	0	0	0
	HCl	200	0	0	0	0	0	0

Table 4 : VOC results

Location	Parameter	Permissible limit	Results of VOCs in Milligram per NM3					
			May-17	Jun-17	Juy-17	Aug-17	Sep-17	Oct-17
Ground Floor MPP2	Phosgene	0.4	0.054	0.041	0.056	0.048	0.065	0.058
	Chlorine	3.0	0.256	0.154	0.204	0.192	0.086	0.246
Ground Floor MPP1	Toluene	375	120.4	72.6	96.4	88.2	104.6	122.4

Table 5 : Noise level monitoring data (Day Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		May-17	Jun-17	Juy-17	Aug-17	Sep-17	Oct-17	75
1	Near Main guest house	58	60	62	61	63	65	75
2	Near TSDF	62	63	61	63	62	67	75
3	At Wyeth Colony	61	58	59	60	60.4	62	75
4	Gram Panchayat Hall	59	62	63	58	59	61	75
5	Near Main Office North site	63	57	58	59	57	59	75
6	ETP North site	67	65	66	65	64	62	75
7	Opposite shed D	66	68	64	63	62	64	75
8	ETP West site	68	66	63	61	63	62	
9	Water tank Haria road	64	64	67	68	66	65	75
10	Near 66KVA substation	59	61	64	67	64	61	75

Table 6 : Noise level monitoring data (Night Time)

Sr. No.	Location	Noise Level, dBA						Permissible Limits, dBA
		May-17	Jun-17	Juy-17	Aug-17	Sep-17	Oct-17	70
1	Near Main guest house	52	55	56	58	56	58	70
2	Near TSDF	56	57	57	59	57	54	70
3	At Wyeth Colony	54	53	54	55	52	51	70
4	Gram Panchayat Hall	52	57	58	56	54	53	70
5	Near Main Office North site	57	52	53	51	53	56	70
6	ETP North site	61	60	59	58	61	58	70
7	Opposite shed D	60	62	60	56	59	54	70
8	ETP West site	62	61	57	55	58	52	70
9	Water tank Haria road	57	58	62	57	56	59	70
10	Near 66KVA substation	56	55	58	62	61	57	70

ENVIRONMENTAL AUDIT REPORT
(PERIOD: APRIL 2016 TO MARCH 2017)

M/s. Atul Bioscience Ltd.

At & Post-AtulS.No.33-P,35-P, 37-P
Dist: Valsad.

ENVIROCHEM AUDIT CELL
CHEMICAL ENGINEERING DEPARTMENT
SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY MANAGED
N. G. PATEL POLYTECHNIC
At. ISROLI - AFWA, P.O. AFWA, TAL.: BARDOLI,
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PH. (02622) 223841, 225591. FAX : (02622) 227613

ANNEXURE – 25

COMPLIANCE REPORT

[A] Consent Status

Sr. No.	Details of Conditions	Compliance Status
1.	Status of valid Consolidated consent & Authorization	Complied Valid up to 10/10/2018

[B] Water (Prevention and Control of Pollution) act 1974

	Condition No. in consent	Details of Conditions	Compliance Status
(A)	Compliance Report* of **water** as per Water Act, 1974: If No, comment:	CC&A AWH- 59131has been received and valid till 10/10/18 Amendment of consolidated consents & authorization (CC&A) received in context to consent to establish (NOC) granted for product mix changed without increasing pollution load vide latter no. GPCB (CCA-VSD-199(3).	Yes

[C] AIR (Prevention and Control of Pollution) ACT 1981

	Condition No. in consent	Details of Conditions	Compliance Status
(B)	Compliance Report* for **Air** as per Air Act, 1981: If No, comment:	CC&A AWH- 59131has been received and valid till 10/10/18 Amendment of consolidated consents & authorization (CC&A) received in context to consent to establish (NOC) granted for product mix changed without increasing pollution load vide latter no. GPCB (CCA-VSD-199(3).	Yes

N.G. PATEL POLYTECHNIC
AT. ISROLI,
PO. AFWA,
TA. BARDOLI,
DI.SURAT.
PIN - 394 620

[D] MANAGEMENT & HANDLING OF HAZARDOUS WASTE

	Condition No. in consent	Details of Conditions	Compliance Status
(C)	Compliance Report* for the storage and handling of hazardous waste/ chemicals **under the Hazardous Waste** (Management and Handling) Rule, 1989 & EPA-86. If No, comment:	CC&A AWH- 59131has been received and valid till 10/10/18 Amendment of consolidated consents & authorization (CC&A) received in context to consent to establish (NOC) granted for product mix changed without increasing pollution load vide latter no. GPCB (CCA-VSD-199(3).	Yes