



Atul Bioscience Ltd

Project: Change in product mix of organic chemicals

EC Compliance Report for EC F. No. J -11011/84/2009-IA II (I) dated April 9, 2009.

Report Period October 2021 – March 2022

No.	Condition	Compliance																																		
A. Specific Condition																																				
i	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)	<p>Complied.</p> <p>However, since we have another EC granted in 2021 for expansion & addition of new products. we request to consider latest figures given in same.</p> <p>According to specific condition No .17 of EC No. SEIAA/GUJ/EC/5(f)/965/2021 dated June 24, 2021, Industrial waste water generation shall not exceed 450.50 KLD.</p> <p>The average total industrial effluent generation for the report period is 23.5 m³/day only which is well within the limit. Details given in below table:</p> <table><tr><th>Wastewater generation m³</th><th>October 2021</th><th>November 2021</th><th>December 2021</th><th>January 2022</th><th>February 2022</th><th>March 2022</th></tr><tr><td>m³/ Month</td><td>605</td><td>611</td><td>667</td><td>708</td><td>884</td><td>787</td></tr><tr><td>m³/day</td><td>19.5</td><td>20.4</td><td>21.5</td><td>22.8</td><td>31.6</td><td>25.4</td></tr></table> <p>The maximum values during the compliance period confirms that at no time the wastewater generation went beyond the stipulated value. Summary is given below:</p> <table><tr><th rowspan="2">Wastewater generation</th><th rowspan="2">Stipulated value</th><th colspan="3">Values for the period October 2021 –March 2022</th></tr><tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr><tr><td>Wastewater generation m³/d</td><td>326.8</td><td>19.5</td><td>22.8</td><td>23.5</td></tr></table>	Wastewater generation m³	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	m³/ Month	605	611	667	708	884	787	m³/day	19.5	20.4	21.5	22.8	31.6	25.4	Wastewater generation	Stipulated value	Values for the period October 2021 –March 2022			Min.	Max.	Avg.	Wastewater generation m³/d	326.8	19.5	22.8	23.5
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Wastewater generation m³/d	326.8	19.5	22.8	23.5																																
	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)	<p>Complied.</p> <p>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.</p> <p>All the high COD streams are being diverted to recovery system rather 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.</p>																																		

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.	<p>Complied.</p> <p>Normal effluent stream is further treated in Effluent Treatment Plant of Atul Ltd. (Ref. Point 4 of EC).</p>																																																																																																															
The treated effluent after confirming to the prescribed standards shall be discharged into estuary of river Par through a 4km long pipe line.	<p>Complied.</p> <p>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.</p> <p>The maximum values during the compliance period confirms that at no time the emission went beyond the stipulated standards. Summary is given below:</p> <table><tr><th rowspan="2">SR No</th><th rowspan="2">Parameter</th><th rowspan="2">Limit Mg/l</th><th colspan="3">Values for the period October 2021 – March 2022</th></tr><tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr><tr><td>1</td><td>pH</td><td>5.5 to 9.0</td><td>6.67</td><td>7.51</td><td>7.11</td></tr><tr><td>2</td><td>Temperature</td><td>40 °C</td><td>28.9</td><td>30</td><td>29.57</td></tr><tr><td>3</td><td>Suspended solids</td><td>100</td><td>31</td><td>49</td><td>41.33</td></tr><tr><td>4</td><td>Oil and Grease</td><td>10</td><td>3.1</td><td>4.2</td><td>3.58</td></tr><tr><td></td><td>Phenolic Compounds</td><td>5</td><td>0.64</td><td>0.96</td><td>0.82</td></tr><tr><td></td><td>Cyanides</td><td>0.2</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>7</td><td>Fluorides</td><td>2</td><td>0.52</td><td>0.93</td><td>0.70</td></tr><tr><td>8</td><td>Sulphides</td><td>2</td><td>0.29</td><td>0.85</td><td>0.63</td></tr><tr><td>9</td><td>Ammonical Nitrogen</td><td>50</td><td>0.43</td><td>8.14</td><td>5.77</td></tr><tr><td>10</td><td>Arsenic</td><td>0.2</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>11</td><td>Total Chromium</td><td>2</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>12</td><td>Hexavalent Chromium</td><td>1</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>13</td><td>Copper</td><td>3</td><td>0.078</td><td>0.095</td><td>0.09</td></tr><tr><td>14</td><td>Lead</td><td>2</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>15</td><td>Mercury</td><td>0.01</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>16</td><td>Nickel</td><td>5</td><td>ND</td><td>ND</td><td>ND</td></tr><tr><td>17</td><td>Zinc</td><td>15</td><td>0.32</td><td>0.56</td><td>0.44</td></tr></table>	SR No	Parameter	Limit Mg/l	Values for the period October 2021 – March 2022			Min.	Max.	Avg.	1	pH	5.5 to 9.0	6.67	7.51	7.11	2	Temperature	40 °C	28.9	30	29.57	3	Suspended solids	100	31	49	41.33	4	Oil and Grease	10	3.1	4.2	3.58		Phenolic Compounds	5	0.64	0.96	0.82		Cyanides	0.2	ND	ND	ND	7	Fluorides	2	0.52	0.93	0.70	8	Sulphides	2	0.29	0.85	0.63	9	Ammonical Nitrogen	50	0.43	8.14	5.77	10	Arsenic	0.2	ND	ND	ND	11	Total Chromium	2	ND	ND	ND	12	Hexavalent Chromium	1	ND	ND	ND	13	Copper	3	0.078	0.095	0.09	14	Lead	2	ND	ND	ND	15	Mercury	0.01	ND	ND	ND	16	Nickel	5	ND	ND	ND	17	Zinc	15	0.32	0.56	0.44
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		18	Cadmium	2	ND	ND	ND
		19	Phosphate	5	1.37	2.14	1.71
		20	BOD (3 days at 27°C)	100	34	49	39.77
		21	COD	250	173	212	191.00
		22	Insecticide/Pesticide	Absent	Absent	Absent	Absent
		23	Sodium Absorption Ratio	26	2.86	6.86	5.43
		24	Manganese	2	0.052	0.077	0.06
		25	Tin	0.1	ND	ND	ND
		26	Bio Assay Test	90% survival of fish after 96 hrs. in 100% effluent %	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent
ii	Process emissions in the form of HCl shall be scrubbed with water and caustic scrubber and HCl 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 HCl 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 . 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): $H = h + 0.2 \times \sqrt{KVA}$ 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 set is being used only during emergency.					

	Acoustic enclosures shall be provided to the DG set to control the noise pollution.	Complied. DG Set is 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 www.atulbio.co.in																																																
	It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the State Pollution Control Board.	Complied. Compliance status report is regularly submitted to the Regional office of MOEF, the respective Zonal office of CPCB and the State Pollution Control Board.																																																
	The criteria pollutant levels namely: SPM. RSPM, SO ₂ . NO _x (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.	<p>Complied.</p> <p>The critical pollutants parameters are monitored regularly on monthly basis and displayed at board at the company entrance.</p> <p>Details of stack results, ambient air monitoring and VOC measured in fugitive emission is given in Table 2, 3 and 4 respectively.</p> <p>The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.</p> <p>Summary of stack results:</p> <table><tr><th rowspan="2">Sr 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 October 2021 – March 2022</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/Nm³</td><td>0.9</td><td>6.95</td><td>4.45</td></tr><tr><td>2</td><td>Cl₂</td><td>9</td><td>3.4</td><td>6.8</td><td>4.83</td></tr></table> <p>Summary of Ambient Air Quality results:</p> <table><tr><th rowspan="2">Station</th><th rowspan="2">Parameter</th><th rowspan="2">Limit micro gm/NM³</th><th colspan="3">Values for the period October 2021 – March 2022</th></tr><tr><th>Min.</th><th>Max.</th><th>Avg.</th></tr><tr><td rowspan="3">Near MPP 1 Plant</td><td>PM2.5</td><td>60</td><td>36.4</td><td>54.8</td><td>47.35</td></tr><tr><td>PM10</td><td>100</td><td>79.4</td><td>97.2</td><td>86.13</td></tr><tr><td>SO₂</td><td>80</td><td>13.1</td><td>17.8</td><td>15.60</td></tr></table>	Sr No.	Parameter	Standard values as per CCA	Unit	Values for the period October 2021 – March 2022			Min.	Max.	Avg.	1	HCl	20	mg/Nm ³	0.9	6.95	4.45	2	Cl ₂	9	3.4	6.8	4.83	Station	Parameter	Limit micro gm/NM ³	Values for the period October 2021 – March 2022			Min.	Max.	Avg.	Near MPP 1 Plant	PM2.5	60	36.4	54.8	47.35	PM10	100	79.4	97.2	86.13	SO ₂	80	13.1	17.8	15.60
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				NO ₂	80	3.4	30.4	21.12
			Near MPP 2 Plant	PM2.5	60	34.6	49.8	42.42
				PM10	100	69	91.2	81.83
				SO ₂	80	10.2	15.2	13.75
				NO ₂	80	22.4	28.4	24.85
			66 KV	PM2.5	60	18.0	28.0	24.83
				PM10	100	28.0	40.0	34.17
				SO ₂	80	12.5	15.5	14.13
				NO ₂	80	8.9	21.8	15.17
				Ammonia	400	ND	ND	ND
				HCl	200	6.4	8.8	7.57
			Opposite Shed D	PM2.5	60	25.2	31.5	28.72
				PM10	100	36.1	41.5	38.88
				SO ₂	80	11.8	16.2	13.37
				NO ₂	80	12.4	24.9	17.95
				Ammonia	400	ND	ND	ND
				HCl	200	ND	ND	ND
			Near West site ETP	PM2.5	60	21.0	32.0	27.33
				PM10	100	29.0	38.0	34.33
				SO ₂	80	10.1	13.0	11.82
				NO ₂	80	14.2	23.4	19.72
				Ammonia	400	ND	ND	ND
				HCl	200	ND	ND	ND
			Near North ETP	PM2.5	60	20.0	29.0	24.33
				PM10	100	35.0	44.0	38.50
				SO ₂	80	10.7	13.6	12.30
				NO ₂	80	10.3	21.5	15.88
				Ammonia	400	5.0	6.6	5.63
				HCl	200	ND	ND	ND
			TSDF	PM2.5	60	21.0	31.0	27.50
				PM10	100	32.0	43.0	37.33
				SO ₂	80	10.5	16.9	13.58
				NO ₂	80	14.5	20.7	18.18
				Ammonia	400	3.1	4.5	3.80
				HCl	200	ND	ND	ND
			Main Guest House	PM2.5	60	23.8	36.0	30.80
				PM10	100	35.9	50.0	41.17
				SO ₂	80	11.2	15.1	13.37
				NO ₂	80	12.2	24.6	18.40
				Ammonia	400	ND	ND	ND
				HCl	200	ND	ND	ND

		Wyeth Colony	PM2.5	60	19.0	29.0	24.67
			PM10	100	32.0	42.0	37.50
			SO ₂	80	10.9	17.5	13.72
			NO ₂	80	11.3	27.3	18.68
			Ammonia	400	ND	ND	ND
			HCl	200	ND	ND	ND
		Gram panchayat hall	PM2.5	60	27.8	35.1	30.92
			PM10	100	36.8	44.7	39.95
			SO ₂	80	10.6	17.4	14.57
			NO ₂	80	13.4	22.4	18.17
			Ammonia	400	ND	ND	ND
			HCl	200	ND	ND	ND
		Main office, North site	PM2.5	60	21.6	32.4	28.18
			PM10	100	40.0	52.0	45.83
			SO ₂	80	10.9	16.8	13.85
			NO ₂	80	14.2	24.2	18.88
			Ammonia	400	ND	ND	ND
			HCl	200	ND	ND	ND
		Haria water tank	PM2.5	60	28.1	41.5	32.62
			PM10	100	41.8	48.0	45.30
			SO ₂	80	9.8	16.6	13.07
			NO ₂	80	14.6	21.7	18.30
			Ammonia	400	ND	ND	ND
			HCl	200	ND	ND	ND
		Summary of VOC results:					
		Location	Parameter	Permissible limit microgram / Nm ³	Values for the period October 2021– March 2022		
					Min.	Max.	Avg.
		Ground Floor MPP2	Chlorine	3	0.6	0.8	0.714
		Ground Floor MPP1	Toluene	375	190	290	235.2
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.					

v	The Company shall obtain Authorization for collection, storage and disposal of hazardous waste 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.	<p>Complied.</p> <p>We have obtained authorization under Haz. Waste management rules 2008 and available in our valid current CCA No. AWH 59131 for handling, storage and disposal of hazardous waste.</p>
	The concerned company shall undertake measures for firefighting facilities in case of emergency.	<p>Compiled.</p> <p>We have well established fire hydrant network. We have mutual aid with parent company - Atul Ltd for emergency help, which is located just besides our company. Atul Ltd has three 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.</p> <p>We have detailed on-site emergency plan. Mock drills are also being carried out at regular interval.</p>
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.	<p>Complied.</p> <p>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.</p> <p>The company complies with all stipulated norms mentioned 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</p>
	All Transportation of Hazardous Chemicals shall be as per the MVA. 1989.	<p>Complied.</p> <p>Transportation of Hazardous chemicals are being done as per the MVA 1989.</p>
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 processes.	Complied. HCl and solvent recovered are being used as raw material in further steps.
	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. 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

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 .
x	Solvent management shall be as follows :	
	Reactor shall be connected to chilled brine condenser system	Complied. Reactors are connected to chilled brine condenser system.
	Reactor and solvent handling pump shall have mechanical seals to prevent leakages.	Complied. Reactor and solvent handling pump do have mechanical seals to prevent leakages.
	The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.	Complied. The condensers are provided with sufficient HTA and residence time.
	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. The solvent storage tanks shall be provided with	Complied. Plants are equipped with Jumpers, flame proof electrical fittings and proper earthing as per the Hazardous area classification of PESO.

	breather valve to prevent losses.	
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.
	An area of 33% green belt and selection of plant species shall be as per the guideline of CPCB.	Complied. Company is having green belt in 33% area of plant and doing plantation every year.
xii	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.	Complied. We have installed 120 KL underground tank and 2 nos 30 KI overhead tank to collect rain water from roof tops.
xiii	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.	Complied. Occupational health surveillance of the workers being carried out on regular basis.
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.
ii	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Complied. Any expansion will be carried out after prior approval of MoEF only.

	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.	
iii	At no time, the emissions shall exceed the prescribed limits.	<p>Complied.</p> <p>Monthly monitoring is being done by GPCB approved, NABL approved agencies.</p> <p>At no time, the emissions exceeded the prescribed limits during report period.</p> <p>Summary of stack emission is given in special condition iii.</p>
	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.	<p>Complied.</p> <p>No such case happened during the compliance period.</p>
iv	The Gaseous emission (NO _x , HCl, SO ₂ 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.	<p>Complied.</p> <p>The gaseous emissions (HCl) from process units confirms to the standards prescribed by GPCB through CCA Gaseous emission is regularly monitored.</p> <p>Results given in Table 2</p>
	At no time, the emission levels shall go beyond the stipulated standards.	<p>Complied.</p> <p>The maximum values during the compliance period confirms that at no time the emission level went beyond the stipulated standards.</p> <p>Summary of stack emission is given in special condition iii.</p>

	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.	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.						
v	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.	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><th>Sr No.</th><th>Location</th></tr><tr><td>1</td><td>MPP I Plant</td></tr><tr><td>2</td><td>MPP 2 Plant</td></tr></table> Apart from this, 10 ambient air stations of Atul Ltd also monitors the surrounding of ABL.	Sr No.	Location	1	MPP I Plant	2	MPP 2 Plant
Sr No.	Location							
1	MPP I Plant							
2	MPP 2 Plant							
vi	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.	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						
	The scrubber water shall be sent to ETP for further treatment or sell to actual end users.	Complied. The scrubber water is being sent to ETP for further treatment.						
vii	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	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 DG set, etc.						

silencers, enclosures etc. on all source of noise generation.						
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 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):					
	Sr No.	Location	Permissible Limits, dBA	Values for the period October 2021 – March 2022		
			75	Min.	Max.	Avg.
	1	66KVA substation	75	61.90	68.30	66.03
	2	Opposite shed D	75	60.50	67.60	63.15
	3	ETP West site	75	54.20	69.10	62.85
	4	ETP North site	75	62.10	71.30	68.38
	5	Near TSDF	75	55.90	65.50	59.33
	6	Near Main guest house	75	56.80	67.30	63.00
	7	At Wyeth Colony	75	16.40	63.80	51.35
	8	Gram Panchayat Hall	75	55.20	67.30	60.87
9	Near Main Office North site	75	56.80	67.30	63.00	
10	Haria Water tank	75	55.80	63.60	60.02	
Noise level monitoring data (Night Time):						
Sr No.	Location	Permissible Limits, dBA	Values for the period October 2021 – March 2022			
			Min.	Max.	Avg.	
1	66KVA substation	70	51.60	55.70	53.30	
2	Opposite shed D	70	50.60	54.80	52.18	
3	ETP West site	70	52.50	55.30	53.67	
4	ETP North site	70	50.70	58.10	52.85	
5	Near TSDF	70	51.30	57.60	55.77	
6	Near Main guest house	70	50.80	54.20	52.58	
7	At Wyeth Colony	70	50.20	52.60	51.63	
8	Gram Panchayat Hall	70	53.40	56.40	54.82	
9	Near Main Office North site	70	52.40	54.30	53.27	

		10	Haria Water tank	70	50.20	57.30	54.08
		Details are given in Table 5 and 6.					
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. 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. 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.					
ix	Usage of PPE's by employee/ workers shall be ensured.	Complied. Company have PPE policy in place and strictly follow for all level of employee.					
x	The project proponent shall also comply with all the environmental protection measures and safeguards proposed in project report submitted to the ministry.	Complied. Company has complied with all the environmental protection measures and safeguards proposed in the report apart from the recommendations made their in.					
	All the recommendation made in respect of environmental management and risk mitigation measures relating to the project shall be implemented.	Complied. 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.					
xi	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.	Complied. Company is doing CSR activities for up gradation of surrounding area and well fare of nearby localities.					

xii	The company shall undertake eco developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied as mentioned in xi above.								
xiii	A Separate environmental management cell equipped with full flagged laboratory facility shall be set up to carry out the environmental management and monitoring function.	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.								
xiv	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.	Complied. EMP measures are implemented by 2010. 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 border="1"> <thead> <tr> <th>Period</th><th>Particular</th><th>Expenses Rs. (in lacs)</th></tr> </thead> <tbody> <tr> <td rowspan="2">October 2021 – March 2022</td><td>Effluent treatment</td><td>71.17</td></tr> <tr> <td>EMS Monitoring</td><td>0.37</td></tr> </tbody> </table>	Period	Particular	Expenses Rs. (in lacs)	October 2021 – March 2022	Effluent treatment	71.17	EMS Monitoring	0.37
Period	Particular	Expenses Rs. (in lacs)								
October 2021 – March 2022	Effluent treatment	71.17								
	EMS Monitoring	0.37								
xv	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	Complied. Latest submission to the Panchayat, Zila parishad, District Industrial Centre was distributed on November 11, 2016. Copy of the same was submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated April 4, 2017								

	received while processing the proposal.	
	The clearance letter shall also be put on the web site of the company by the proponent.	Complied. Available at company's website www.atulbio.co.in
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 and copy of the same was submitted to Ministry vide our letter Atul/SHE/MoEF/Visit/3 dated April 4, 2017.

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.	<p>Complied.</p> <p>Start date : April 2009</p> <p>Completion date : March 2010</p> <p>Final approval: We have obtained NOC and CCA from GPCB.</p> <p>Company has funded the project internally and hence not submitted the financial closure details.</p>
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.
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 and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986,	Noted.

	<p>Hazardous Wastes (Management, Handling and Transboundary movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.</p>	
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Table 1: Quality of Treated Effluent:

Sr No.	Parameter	Results						GPCB Limits Mg/l
		October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	
1	pH	6.98	6.92	6.67	7.28	7.32	7.51	5.5 to 9.0
2	Temperature	30	29.8	29.7	28.9	29.3	29.7	40 °C
3	Suspended solids	35	41	47	31	49	45	100
4	Oil and Grease	4.2	ND	3.5	3.5	ND	3.1	10
5	Phenolic Compounds	0.86	0.72	0.64	0.89	0.96	0.83	5
6	Cyanides	ND	ND	ND	ND	ND	ND	0.2
7	Fluorides	0.93	0.58	0.73	0.68	0.52	0.78	2
8	Sulphides	0.85	0.75	0.62	0.64	ND	0.29	2
9	Ammonical Nitrogen	6.76	7.19	6.14	5.97	0.43	8.14	50
10	Arsenic	ND	ND	ND	ND	ND	ND	0.2
11	Total Chromium	ND	ND	ND	ND	ND	ND	2
12	Hexavalent Chromium	ND	ND	ND	ND	ND	ND	1
13	Copper	0.094	0.078	0.081	0.083	0.095	0.087	3
14	Lead	ND	ND	ND	ND	ND	ND	2
15	Mercury	ND	ND	ND	ND	ND	ND	0.01
16	Nickel	ND	ND	ND	ND	ND	ND	5
17	Zinc	0.32	0.47	0.56	0.38	0.56	0.37	15
18	Cadmium	ND	ND	ND	ND	ND	ND	2
19	Phosphate	1.76	1.59	1.37	1.79	2.14	1.63	5
20	BOD (3 days at 27°C)	38	49	42	37.6	34	38	100
21	COD	182	212	198	188	173	193	250
22	Insecticide/Pesticide	Absent	Absent	Absent	Absent	Absent	Absent	Absent
23	Sodium Absorption Ratio	3.97	2.86	6.37	6.86	6.51	6.01	26
24	Manganese	0.059	ND	0.052	0.076	0.056	0.077	2
25	Tin	ND	ND	ND	ND	ND	ND	0.1

26	Bio Assay Test	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent	100% survival of fish after 96 hrs. in 100% effluent	90% survival of fish after 96 hrs. in 100% effluent %
Note: ND is Not Detected.								

Table 2: Stack Results:

Stack attached to	Stack Height m	Parameter	Permissible limit	Results in Milligram per NM ³					
				October 2021	November 2021	December 2021	January 2022	February 2022	March 2022
MPP1	5.00	HCl	20	6.8	5.4	3.8	4.4	5.2	3.4
		Cl ₂	9	6.95	5.55	0.9	4.52	5.34	3.49

Table 3: Ambient Air Monitoring Details:

Station	Parameter	Limit microgram/NM ³	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022
Near MPP 1 Plant	PM2.5	60	49.6	44.7	49.6	36.4	54.8	49
	PM10	100	80.4	83.4	79.4	81.2	97.2	95.2
	SO ₂	80	13.6	15.2	17.8	13.1	16.3	17.6
	NO ₂	80	19.2	3.4	21.6	25.7	26.4	30.4
Near MPP 2 Plant	PM 2.5	60	41.2	34.6	38.4	44.9	49.8	45.6
	PM10	100	76.3	69	75.1	88.6	91.2	90.8
	SO ₂	80	10.2	12.6	14.8	14.8	14.9	15.2
	NO ₂	80	22.4	25.7	23	23.5	26.1	28.4
66 KV	PM 2.5	60	18	24	28	25	28	26
	PM10	100	40	35	31	28	38	33
	SO ₂	80	12.8	14.8	15.2	12.5	15.5	14
	NO ₂	80	11.8	8.9	12.3	15.6	20.6	21.8
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	6.4	7.5	8.1	8.8	7.6	7
Opposite Shed D	PM 2.5	60	26.5	30.6	30.4	25.2	31.5	28.1
	PM10	100	38.6	39.3	37	40.8	41.5	36.1

	SO ₂	80	16.2	12.2	12.4	14.2	13.4	11.8
	NO ₂	80	12.4	17.9	17.1	16.1	19.3	24.9
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Near West site ETP	PM 2.5	6	25	21	26	30	32	30
	PM10	100	38	33	29	33	38	35
	SO ₂	80	11.9	12.3	10.1	12.6	11	13
	NO ₂	80	14.2	17.4	19.8	21.1	23.4	22.4
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Near North ETP	PM 2.5	60	23	20	24	29	26	24
	PM10	100	44	40	35	38	36	38
	SO ₂	80	11.6	10.7	13.4	11.8	13.6	12.7
	NO ₂	80	12.6	14.8	10.3	16.5	21.5	19.6
	Ammonia	400	5.6	6.6	5.4	5.8	5	5.4
	HCl	200	ND	ND	ND	ND	ND	ND
TSDF	PM 2.5	60	21	27	31	27	31	28
	PM10	100	38	32	37	34	40	43
	SO ₂	80	13.2	15.3	16.9	13.6	12	10.5
	NO ₂	80	14.5	16.8	18.6	20.1	18.4	20.7
	Ammonia	400	4.2	3.1	4.5	4.1	3.6	3.3
	HCl	200	ND	ND	ND	ND	ND	ND
Main Guest House	PM 2.5	60	23.8	32.4	36	33	31.8	27.8
	PM10	100	35.9	37.8	47	50	37.2	39.1
	SO ₂	80	14.6	11.2	12.2	15.1	14.8	12.3
	NO ₂	80	15.1	12.2	15	22.1	24.6	21.4
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Wyeth Colony	PM 2.5	60	19	26	21	28	25	29
	PM10	100	41	37	32	36	42	37
	SO ₂	80	12.5	16.9	17.5	12.1	10.9	12.4
	NO ₂	80	13.7	11.3	14.6	19.7	25.5	27.3
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Gram panchayat hall	PM 2.5	60	27.8	30.2	29.8	35.1	30.2	32.4
	PM10	100	36.8	37.3	41.8	44.7	40.8	38.3
	SO ₂	80	10.6	17.4	15.8	13.6	15.2	14.8
	NO ₂	80	17.8	13.4	18.2	16.4	20.8	22.4
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
Main office, North site	PM 2.5	60	21.6	31.2	27.5	28.6	32.4	27.8
	PM10	100	43.8	50.2	47	52	42	40
	SO ₂	80	16.8	15.7	11.7	10.9	13.9	14.1
	NO ₂	80	16.9	14.2	16.4	21.1	24.2	20.5

Haria water tank	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND
	PM 2.5	60	33.4	30.3	41.5	31.5	30.9	28.1
	PM10	100	46.8	47.6	44	48	41.8	43.6
	SO ₂	80	9.8	16.6	11.2	10.7	15.2	14.9
	NO ₂	80	18.9	14.6	16.4	21.7	19.7	18.5
	Ammonia	400	ND	ND	ND	ND	ND	ND
	HCl	200	ND	ND	ND	ND	ND	ND

Table 4: VOC results

Location	Parameter	Permissible limit	Results of VOCs in Milligram per NM3					
			October 2021	November 2021	December 2021	January 2022	February 2022	March 2022
Ground Floor MPP2	Chlorine	3.0	0.62	0.75	0.8	0.6	0.8	ND
Ground Floor MPP1	Toluene	375	290	260	220	190	216	ND

Table 5: Noise level monitoring data (Day Time)

Sr No	Location	Noise Level, dBA						Permissible Limits, dBA
		October 2021	November 2021	December 2021	January 2021	February 2022	March 2022	
1	66KVA substation	67.7	61.9	63.1	68.3	67.2	68	75
2	Opposite shed D	67.6	64.8	60.5	62.9	60.8	62.3	75
3	West site ETP	61.3	54.2	59.3	65.7	67.5	69.1	75
4	North site ETP	68.9	62.1	68.7	70.4	71.3	68.9	75
5	Near TSDF	65.5	60.2	58.1	55.9	57.1	59.2	75
6	Near main guest house	61.3	56.8	62.5	64.1	66	67.3	75
7	At wyeth colony	63.8	57	16.4	58.4	56.6	55.9	75

8	Gram panchayat hall	61.3	55.2	56.9	60.2	64.3	67.3	75
9	Near main office North site	65.2	68.6	62.8	59.5	57.8	59	75
10	Haria water tank	61	56.4	55.8	61.1	63.6	62.2	75

Table 6: Noise level monitoring data (Night Time)

Sr No	Location	Noise Level, dBA						Permissible Limits, dBA
		October 2021	November 2021	December 2021	January 2021	February 2022	March 2022	
1	66KVA substation	51.9	56.4	49.6	59.1	55.3	53.9	70
2	Opposite shed D	59.4	62.2	55.2	50.6	53.2	51	70
3	West site ETP	58.8	51.7	46.1	56.9	58.4	54.5	70
4	North site ETP	53	59.9	50.9	65.2	68.4	61.3	70
5	Near TSDF	52.5	48.5	50.8	48.5	49.5	52	70
6	Near main guest house	57.5	52.3	56.2	54.4	53.8	51.9	70
7	At wyeth colony	52.7	49.4	52.9	50.8	52.1	50.3	70
8	Gram panchayat hall	54.3	50.5	48.5	52.1	54.2	52.2	70
9	Near main office North site	50.8	45.6	54.4	49.7	46.7	48.4	70
10	Haria water tank	53.4	50.1	52.9	54.2	57.5	54.8	70