

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI  
ORIGINAL APPLICATION No. 189 OF 2019**

IN THE MATTER OF:

Pravan Kumar, Advocate ..... Applicant(s)

Versus

State of Telangana ..... Respondent(s)

**RUNNING INDEX**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Page Nos.</b>
1.	Report of the Joint Committee	1 - 57
2.	Hon'ble NGT Order dated 20.09.2019	58 - 59

**Place: Hyderabad**

**Date: 20-01-2020.**



①

**BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH,  
NEW DELHI**

**Original Application No. 189 of 2019**

**INSPECTION REPORT FILED ON BEHALF OF JOINT COMMITTEE AS PER  
ORDER DATED SEPTEMBER 20, 2019.**

**1. PREAMBLE:**

In the matter of Original Application No.189 of 2019, the Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi directed the Central Pollution Control Board (CPCB) and Telangana State Pollution Control Board (TSPCB) to file a joint report after three months in view of the fact that the industrial area in question i.e., TSIIC SEZ, located at Polepally Village in Jadcherla Mandal of Mahabubnagar District in Telangana is a polluted area and the industries in question are red category industries, strict vigilance is required to be maintained for upholding the environmental norms vide order dated 20.09.2019. TSPCB will be the nodal agency for compliance. The Hon'ble NGT also felt that the TSPCB may enforce the principle of 'Polluter Pays' in respect of units which have been found to be violating the environmental norms or which may be here after be found to be doing so and compliance in this regard may also be included in the next report.

**2. MEMBERS OF JOINT COMMITTEE:**

Subsequently members were nominated to the Joint Committee by CPCB and TSPCB as per the Hon'ble NGT's directions and the details of the members nominated are furnished below:

1. Mr.S.Jeyapaul, Senior Scientist, CPCB, Regional Directorate (South), Bengaluru and
2. Mr.G.Hanumantha Reddy, Joint Chief Environmental Engineer (FAC), TSPCB, Zonal Office, Hyderabad.

**3. PRELIMINARY MEETING:**

The Joint Committee held its **preliminary meeting** at TSPCB, Zonal Office, Hyderabad on **29.10.2019** at **11.00 A.M.** The Joint Committee discussed in length about the Hon'ble National Green Tribunal, Principal Bench, New Delhi order dated 20.09.2019 and various actions taken by TSPCB earlier on this matter.

**4. JOINT COMMITTEE INSPECTION – FIRST PHASE:**

In the first phase, the Joint Committee along with Regional Office officials of Hyderabad of Telangana State Pollution Control Board (TSPCB) visited the TSIIC SEZ Polepally area on **30<sup>th</sup> & 31<sup>st</sup> October 2019**. The Joint Committee first met the petitioner in this case Shri Kosgi Venkataiah, Mudireddipally Village, Jadcherla Mandal, Mahabubnagar District and enquired about the pollution issues faced by the people there. The petitioner explained the issues faced by them and requested the Committee to take action against the polluting industries and requested for compensation for loss of fertile lands, ground water, agriculture yield etc. to the affected persons of surrounding villages. The petitioner also joined with the Joint Committee during monitoring of Ground Water and Surface Water in that area on 30.10.2019. The Joint Committee inspected few

industries at SEZ Polepally on 31.10.2019 and collected liquid effluent and ground water samples. The samples collected as above were handed over to the Central Laboratory of TSPCB, Hyderabad for further analysis. The details of industries inspected and monitored on 31.10.2019 are given below:

1. M/s Hetero Labs Ltd., Unit – I, Sy. Nos. 440-441, TSIIC, SEZ, Polepally (V), Jadcherla (M).
2. M/s Hetero Labs Ltd., Unit – I, Sy. Nos. 410-411, TSIIC, SEZ, Polepally (V), Jadcherla (M).
3. M/s Hetero Biopharma Ltd., Unit – I, Sy. Nos. 440-441, TSIIC, SEZ, Polepally (V), Jadcherla (M).
4. M/s Shilpa Medicare Ltd., (Formerly Raichem Life Sciences Pvt. Ltd.), Plot No. S-20 to 23 & 24-A, Polepally (V), Jadcherla (M).

#### 5. JOINT COMMITTEE INSPECTION – SECOND PHASE:

The Joint Committee along with Regional Office officials of TSPCB, Hyderabad inspected TSIIC SEZ Polepally, Jadcherla (M) and Rangareddyguda Village in Balanagar (M) of Mahabubnagar District in the **Second Phase during December 10-12, 2019**. In this phase, the Joint Committee carried out the inspection of industries in SEZ Polepally and in Rangareddyguda Village which were left out during first phase of inspection and collected waste water and ground water samples. The Joint Committee also collected the soil samples in the agricultural fields outside these areas where allegedly reported soils are affected due to pollution and also ground and surface water samples in few areas. All these samples were handed over to the Central Laboratory of TSPCB, Hyderabad for further analysis. The industries inspected during this phase are listed below:

1. M/s. Suvarna Apparel & Fashion Exports Limited., Sy.Nos.103 to 109 & 148 to 152, Rangareddyguda (V), Balanagar (M), Mahabubnagar District.
2. M/s. Mylan Laboratory, (Formerly M/s.Glochem Industries Ltd.,) Sy.no.408, 410, Plot No.S-16 & S-17/A, TSIIC-SEZ, Polepally (V), Jadcharla (M), Mahabubnagar District.
3. M/s. Amneal Oncology Pvt. Ltd. (Formerly M/s. Epsilon Pharmaceuticals Private Limited), Plot No.A-3, S-4 & A-5A, Sy.No.411, 425 etc. Polepally (V), Jadcherla (M),Mahabubnagar District.
4. M/s. APL Health Care Ltd., Sy.No.410/P,411/P & 458/P, Plot No.S-1/B, TSIIC, SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District.
5. M/s. Evertrogen Life Sciences (Formerly M/s. Optimus Generics Ltd.), Plot No.S-8, S-13/P & S-14/P, TSIIC, SEZ, Green Industrial Park, Polepally (V), Jadcherla (M), Mahabubnagar District
6. M/s. Shri Kartikeya Pharma (SEZ Unit), Sy.No.408-412, 418-435, 437-445, Polepally (V), Jadcherla (M), Mahaboobnagar District
7. M/s. AurobindoPharma Ltd. Unit – VII, Sy.No.408 to 412, 418 to 435 etc. TSIIC SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District.
8. M/s. AurobindoPharma Ltd. Unit – XVI, Sy.No.408 to 412, 418 to 435 etc. SEZ-IP, Polepally (V), Jadcherla (M), Mahabubnagar District.

6. **DETAILS OF INDUSTRYWISE INSPECTION:**The industry wise inspection details are presented below:

A. **M/s Hetero Labs Ltd., Unit – I, Sy. Nos. 440-441, TSIIC, SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- The industry has obtained CFO of the Board vide order dated 14.05.2013 for Tablets - 8100 Millions/annum, Capsules - 7800 Millions/annum, Liquid Vials - 30 Millions/annum, Inhalers - 3 Millions/annum, Ointments - 30 Millions/annum and Exhibit batch line - 120 Millions/annum with validity period upto 30.09.2016.
- Subsequently, the industry has obtained Auto-renewal of CFO vide order dated 18.08.2016 which is valid upto 30.09.2021.
- The industry has manufactured Tablets, Capsules and Exhibit batch line within the consented capacity for the period from **Dec, 2018 to Nov, 2019** i.e., Tablets – 3716.95 million Nos./annum against 8100 million Nos./annum, Capsules – 7.59 million Nos./annum against 7800 million Nos./annum and Exhibit batch line – 0.32 million Nos./annum against 120 million Nos./annum.
- The industry consumes water of about 313 KLD, for Process & Washings – 94 KLD, Cooling tower make up / boiler make up / utilities – 170 KLD and Domestic – 49 KLD. The industry has consumed an average of **258.513 KLD** against the permitted capacity **313 KLD** during the period from **Dec. 18 to Nov. 2019**.
- The industry generates about 139 KLD of wastewater from Process & Washings – 91 KLD, Cooling – 12.5 KLD and Domestic – 35.5 KLD. The industry has generated wastewater an average of 133.40 KLD against the permitted capacity 139 KLD during the period from Dec.2018 to Nov. 2019.
- The industry consented to treat Process & Washing effluents as “After treatment in common ETP (for Unit I & Unit II), shall be recycled / re-used in the plant and maintain Zero Discharge”. For domestic wastewater it is consented as “To send to common STP. After treatment in STP, the treated domestic effluents shall be used for utilities and on-land application within the industry premises only.”
- The Board has issued directions vide order dated 08.08.2017 ordering that “the industry shall dispose domestic wastewater and Low TDS effluents to CETP”.
- The Zonal Office, Hyderabad has issued amendment to CFO vide order dated 06.02.2018 for disposal of wastewater as given below:
  - a) The industry shall comply with all the CFO conditions and dispose the domestic wastewater & LTDS effluents to CETPs.
  - b) The industry shall not use any treated wastewater within / outside the premises.
- The industry has D.G. Sets of capacity 2 x 500 KVA and 1 x 1450 KVA.
- The industry generates solid / hazardous waste ETP sludge - 0.1 TPM (To M/s HWM Project (TSDF), Dundigal (V), Rangareddy District), Rejected tablets, Capsules etc - 10.0 TPM (To M/s HWM Project (TSDF), Dundigal (V), Rangareddy District), Bio-medical Waste - 0.5 TPM (To Common Bio-Medical Waste treatment / disposal facility), Spent mixed solvents - 1500 LPM (Shall be sent to authorized recyclers / solvent recovery units or authorized cement plants for incineration), HDPE Drums / Carboys - 200 Drums/month (After complete detoxification, shall be sold to Authorized

4

agencies / parties), Glass ware - 1000 Kgs/month (After detoxification sold to Authorized recyclers), Waste Oil - 500 LPM (To authorized waste oil re-processors / recycling units), Used lead acid batteries - 10 Nos./Annum (Return to the manufacturer / dealer on buy back basis) and Packing material - 5 TPM (Sold to authorized recyclers). The industry is a member unit of TSDF.

- The industry has submitted the Hazardous / Solid wastes and Bio-Medical Waste disposal details to the Joint Committee for the period from Dec, 2018 to Nov, 2019.
- The Board has issued certain directions vide order dated 27.07.2019. The compliance on directions are as follows:

Sl. No.	Condition	Compliance
1.	The industry shall comply with all the CFO condition issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During inspection no discharge was observed.
3.	The industry shall send all the pre-treated effluents / waste water to CETP-PETL.	The industry has provided common ETP &STP to treat the domestic and industrial wastewater generated from all three units. The treated water from ETP and STP is further treated in 3 Stage RO, the RO permeate is reused back and only RO rejects are lifted to M/s. PETL, CETP for further treatment and disposal. Whereas, as per the Board's amendment order dated 08.01.2018, the industry shall lift the entire effluents from Unit - I, Unit - II & Unit - III to CETP i.e., to M/s. PETL.
4.	The industry shall not cause any air pollution / odour nuisance to the surrounding areas.	--

**B. M/s. Hetero Labs Ltd. Unit - II, TSIIC, SEZ, Sy.No.410 & 411, Polepally (V), Jodcherla (M), Mahabubnagar District:**

- M/s. Hetero Labs Ltd. Unit - II is engaged in Pharmaceutical Formulations.
- The industry has obtained CFO of the Board vide order dated 14.05.2013 for Tablets - 160 Millions/annum, Capsules - 150 Millions/annum, Liquid Vials - 25 Millions/annum and Lyophilised Vials - 6 millions/annum with validity period upto 30.09.2016.
- Subsequently, the industry has obtained Auto-renewal of CFO vide order dated 18.08.2016 which is valid upto 30.09.2021.
- As per the production details, the industry has manufactured Tablets - 56.78 million Nos./annum against 160 million Nos./annum, Liquid Vials - 23.84 million Nos./annum against 25 million Nos./annum and Capsules - 0.06 million Nos./annum against 150 million Nos./annum during the period from Nov. 2018 to Nov. 2019

- The industry consumes water of about 240 KLD, for Process & Washings – 62 KLD, Cooling tower make up / boiler make up / utilities – 138 KLD and Domestic – 40 KLD. The industry has consumed an average of 25.132 KLD against the permitted capacity 240 KLD during the period from Dec. 18 to Nov. 2019.
- The industry generates about 107 KLD of wastewater from Process & Washings – 60.5 KLD, Cooling tower / Boiler blow down – 12.0 KLD and Domestic – 34.5 KLD. The industry has generated wastewater an average of 18.72 KLD against the permitted capacity 107 KLD during the period from Dec. 18 to Nov. 2019.
- The industry consented to treat Process & Washing effluents as “After treatment in common ETP (for Unit I & Unit II), shall be recycled / re-used in the plant and maintain Zero Discharge”. For domestic wastewater it is consented to “Send to common STP. After treatment in STP, the treated domestic effluents shall be used for utilities and on-land application within the industry premises only.”
- The Zonal Office has issued amendment to CFO vide order dated 06.02.2018 for disposal of wastewater as given below:
  - a) The industry shall comply with all the CFO conditions and dispose the domestic wastewater & LTDS effluents to CETPs.
  - b) The industry shall not use any treated wastewater within / outside the premises.
- The industries have provided tank in tank structure of capacity 25 KL for primary collection from there lifted to above ground level common ETP for further treatment.
- The industry has provided common ETP & STP for all the three units at Unit-III.
- The industry sending process, washings, cooling bleed off to common ETP and domestic effluents to common STP for treatment.
- The treated water from ETP and STP is further treated in 3 Stage RO, the RO permeate is reused back and only RO rejects are lifted to M/s. PETL, CETP for further treatment and disposal. Whereas, as per the Board’s amendment order dated 08.01.2018, the industry shall lift the entire effluents from Unit – I, Unit – II & Unit – III to M/s PETLCETP.
- The Board has issued CFO for 5 TPH oil fired boiler. But industry has installed briquette fired boiler – 5 TPH. As per the Board directions, industry has obtained CFO Amendment for change fuel from Oil fired to Briquette fired vide order dated 21.11.2019. The industry has provided bag filters to briquette fired boiler of capacity 5 TPH to control boiler emissions.
- The industry has submitted the Hazardous / Solid waste disposal details to the Joint Committee for the period from Dec, 2018 to Nov, 2019. The industry is member unit of TSDF and disposing its Hazardous waste there.
- The industry generates solid / hazardous waste ETP sludge - 0.2 TPM (To M/s HWM Project (TSDF), Dundigal (V), Rangareddy District), Rejected tablets, Capsules etc - 8.0 TPM (To M/s HWM Project (TSDF), Dundigal (V), Rangareddy District), Bio-medical Waste - 0.5 TPM (To Common Bio-Medical Waste treatment / disposal facility), Spent mixed solvents - 1500 LPM (Shall be sent to authorized recyclers / solvent recovery units or authorized cement plants for incineration), HDPE Drums / Carboys - 700 Drums/month (After complete detoxification, shall be sold to Authorized agencies /

recyclers), Waste Oil - 650 LPA (To authorized waste oil re-processors / recycling units), Used lead acid batteries - 10 Nos./Annum (Return to the manufacturer / dealer on buy back basis) and Packing material - 7 TPM (Sold to authorized recyclers).The industry has submitted the Hazardous / Solid wastes and Bio-Medical Waste disposal details to the Joint Committee for the period from Dec. 2018 to Nov. 2019.

- The Board has issued certain directions vide order dated 27.07.2019. The compliance on directions are as follows:

Sl. No.	Condition	Compliance
1.	The industry shall comply with all the CFO condition issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During inspection no discharge was observed.
3.	The industry shall send all the pre-treated effluents / waste water to CETP-PETL.	The industry has provided common ETP &STP to treat the domestic and industrial wastewater generated from all three units. The treated water from ETP and STP is further treated in 3 Stage RO, the RO permeate is reused back and only RO rejects are lifted to M/s. PETL, CETP for further treatment and disposal. Whereas, as per the Board's amendment order dated 08.01.2018, the industry shall lift the entire effluents from Unit - I, Unit - II & Unit - III to CETP i.e., to M/s. PETL.
4.	The industry shall not cause any air pollution / odour nuisance to the surrounding areas.	--

**C. M/s. Hetero Biopharma Limited (Formerly Hetero Drugs Ltd., Unit – III) is located at TSIIC SEZ Polepally (V), Jedcherla (M), Mahabubnagar District:**

- M/s. Hetero Biopharma Limited (Formerly Hetero Drugs Ltd. Unit – III) involved in Pharmaceutical Formulations.
- The industry has obtained CFO of the Board vide order dated 07.12.2015 for Darbepoetinalfa - 50000 Nos./month, Rituximab - 40000 Nos./month, Bevacizumab - 30000 Nos./month and Adalimumab - 30000 Nos./month with validity upto 30.09.2020.
- The industry has obtained CFO Expansion vide order dated 26.08.2019 for the following products
- The industry consumes water of about 184.5 KLD, for Process & Washings – 98.0 KLD, Boiler Feed & Cooling tower – 62.5 KLD and Domestic – 24.0 KLD.
- The industry generates about 132.28 KLD of wastewater from Process & Washings – 96.98 KLD, Boiler blow down & Cooling Bleed off – 14.3 KLD and Domestic – 21.0 KLD.

- The industry consented to treat Process & Washing effluents as that “After treatment in common ETP (for Unit I & Unit II), shall be recycled / re-used in the plant and maintain Zero Discharge”. To treat domestic wastewater it is consented to “Send to common STP. After treatment in STP, the treated domestic effluents shall be used for utilities and on-land application within the industry premises only.”
- The Board has issued directions vide order dated 08.08.2017 ordering that “*The industry shall dispose domestic wastewater and Low TDS effluents to CETP*”.
- The Zonal Office has issued amendment to CFO vide order dated 06.02.2018 for disposal of wastewater as given below:
  - a) The industry shall comply with all the CFO conditions and dispose the domestic wastewater & LTDS effluents to CETPs.
  - b) The industry shall not use any treated wastewater within / outside the premises.
- The industry has permission for oil fired boiler of capacity 1 x 5 TPH, but, the industry has installed briquette fired boiler of 1 x 5 TPH. As per the Board directions, the industry has obtained CFO amendment vide order dated 21.11.2019 for change of fuel from oil to Briquette for this boiler. The industry has also installed an additional oil fired boiler of capacity 1 x 5 TPH without permission of the Board. Later, the industry has applied for CFE through TS-iPASS. The TSPCB, Zonal Office, Hyderabad has rejected the CFE Expansion application vide letter dated 30.10.2019.
- The industry generates solid / hazardous waste ETP sludge – 900 kg/month, Reject/sweeping materials – 1000 kg/month (Shall be sent to M/s HWM Project (TSDF), Dundigal (V), Rangareddy District / authorized cement industries), Bio-medical waste - 3500 kgs/month (Shall be sent to authorised Bio-Medical Waste treatment & disposal facility), Glass ware - 950 kgs/month (After complete detoxification, shall be sent to authorized recyclers.) and Packing materials - 950 kgs/month (Shall be sold to authorized recyclers.), Spent mixed solvents – 500 LPM (Shall be disposed to authorized solvent recovery unit / cement industries), Used Oil - 50 LPM (Shall be disposed to authorized Recyclers / Re-processors), Lead Acid Batteries - 20 Nos./annum (Shall be return back to the manufacturers) and E-waste - 0.5 TPA (Shall be sent to authorized agencies).
- The Board has issued certain directions vide order dated 27.07.2019. The compliance on directions are as follows:

Sl. No.	Condition	Compliance
1.	The industry shall comply with all the CFO condition issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During inspection no discharge was observed.
3.	The industry shall send all the pre-treated effluents / waste water to CETP-PETL.	The industry has provided common ETP & STP to treat the domestic and industrial wastewater generated from all three units. The treated water from ETP and STP is further treated in 3 Stage RO, the RO permeate is reused back and only RO rejects are lifted to M/s PETL CETP for further

		treatment and disposal. Whereas, as per the Board's amendment order dated 08.01.2018, the industry shall lift the entire effluents from Unit – I, Unit – II & Unit – III to CETP i.e., to M/s. PETL.
4.	The industry shall all ways comply with stack emission monitoring standards	The Stack Monitoring results show that the particulate Matter emission (273 mg/Nm <sup>3</sup> ) monitored at the stack connected to the Briquette fired boiler of capacity - 5 TPD not meeting the Standard Prescribed (115mg/Nm <sup>3</sup> ) in the consent
5.	The industry shall obtain amendment to CFO order for operating briquette fired boiler of capacity 5 TPH	The industry has permission for oil fired boiler of capacity 1 x 5 TPH, but, the industry has installed briquette fired boiler of 1 x 5 TPH. As per the Board directions, the industry has obtained CFO amendment vide order dated 21.11.2019 for change of fuel from oil to Briquette for this boiler. The industry has also installed an additional oil fired boiler of capacity 1 x 5 TPH without permission of the Board. Later, the industry has applied for CFE through TS-iPASS. The TSPCB, Zonal Office, Hyderabad has rejected the CFE Expansion application vide letter dated 30.10.2019.

**OBSERVATIONS OF THE COMMITTEE:**

- The Committee inspected the industry on 30.10.2019 and found in operation.
- M/s. Hetero Labs Ltd., Unit – I, Unit – II and M/s. Hetero BioPharma Ltd. are located adjacent to each other with a common compound wall.
- The industry has provided Common ETP of capacity of 400 KLD to treat the Process, Washings, Cooling bleed off, Boiler blow down generated from the all the three units viz., Unit – I, Unit-II & Unit-III.
- The industry has provided common STP of capacity 220 KLD to treat the domestic wastewater generated from all three units. The treated water from ETP and STP is further treating in 3 Stage RO, the RO permeate is reused back and only RO rejects are lifted to M/s. PETL, CETP for further treatment and disposal. Whereas, as per the Board's amendment order dated 08.01.2018, the industry shall lift the entire effluents from Unit – I, Unit – II & Unit – III to CETP i.e., to M/s. PETL.
- During the inspection, the ETP and STP were in operation.
- Digital Flow meters provided at intake point for water consumption, at Inlet of STP, at ETP collection tank, at RO feed tank, RO rejects tank and at RO permeate tank,

- The industries have provided tank in tank structure of capacity 25 KL (Unit – II), 25 KL (Hetero Bio-pharma) and above ground tank of capacity 10 KL (for Unit – I) for primary collection from there lifted to above ground level common ETP for further treatment.
- The industries have lifted 37.47619 KLD of wastewater against the permitted quantity of 252.82 KLD. The representative of the industry informed that they are sending RO Rejects also to M/s. PETL and RO permeate is used for utilities.
- The industries have installed separate energy meters to ETP and STP and maintaining records.
- The industries have above ground level tanks with a total effluent storage capacity 600 KL for process, washings, etc. and above ground level storage tanks of total capacity 200 KL for domestic wastewater before sending to M/s. PETL.
- As per the CFO, all the three units generate wastewater of about 378 KLD. Whereas the industry has total effluent storage capacity of 800 KL, which is sufficient for storage of effluents for 2 days.
- The industry has permission for oil fired boiler of capacity 1 x 5 TPH, but, the industry has installed briquette fired boiler of 1 x 5 TPH. As per the Board directions, the industry has obtained CFO amendment vide order dated 21.11.2019 for change of fuel from oil to Briquette for this boiler. The industry has also installed an additional oil fired boiler of capacity 1 x 5 TPH without permission of the Board. Later, the industry has applied for CFE through TS-iPASS. The TSPCB, Zonal Office, Hyderabad has rejected the CFE Expansion application vide letter dated 30.10.2019.
- The industry has provided bag filters as APCE to the Briquette fired boiler. The industry has not installed separate energy meters to the APCE and not maintaining energy consumption records.
- The industry has provided separate shed for storage of Hazardous waste.
- Seepages were noticed from Unit-I to adjacent industry namely M/s. Shilpa Medicare Limited.
- The storm water drains of the industry (Unit-I, II & III) are connected to rain water collection tank of 55000 KL capacity.
- The samples collected from ETP Inlet & Outlet, STP Inlet & Outlet and RO permeate and reject. The analysis results are tabulated in Table 1 below:

**Table 1: Analysis Results of Inlet of ETP, Outlet of ETP (RO Inlet), RO Permeate, RO Rejects, Inlet of STP and Outlet of STP**

Parameters	Unit	Results					
		ETP Inlet	ETP outlet	RO permeate	RO Rejects	STP Inlet	STP Outlet
p <sup>H</sup> at 25°C	-	6.5	7.2	7.1	7.4	7.6	7.9
Total Suspended Solids	mg/L	162	145	10	218	50	28
Total Dissolved Solids (TDS)	mg/L	1,792	1,615	22	2,930	1,486	1,393
Chemical Oxygen Demand	mg/L	5,630	672	84	896	364	120
BOD <sub>3</sub> at 27°C	mg/L	719	58	8	87	49	17
Oil and Grease	mg/L	1.6	0.4	BDL	BDL	BDL	BDL

(10)

- The analysis results of ground water samples collected from Units – I & III are presented in Table 2 below:

**Table 2: Analysis results of Ground Water Samples collected from Unit-I & Unit - III**

Parameters	Unit	Results		Drinking water standards as per IS 10500: 2012
		Unit-I	Unit-III	
pH	-	7.81	7.60	6.5-8.5
Electrical conductivity	µS/cm	4330	2011	-
Total Suspended Solids	mg/L	12	< 5	-
Total Dissolved Solids	mg/L	2770	1304	500* (2000**)
Chlorides as Cl <sup>-</sup>	mg/L	1082	368	250* (1000**)
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	56	48	200* (400**)
Total Alkalinity as CaCO <sub>3</sub>	mg/L	336	364	200* (600**)
Total Hardness as CaCO <sub>3</sub>	mg/L	1640	800	200* (600**)
Calcium as Ca <sup>2+</sup>	mg/L	512	168	75* (200**)
Magnesium as Mg <sup>2+</sup>	mg/L	87	92	30* (100**)
Nitrates	mg/L	46	32	45
Fluoride	mg/L	0.9	0.63	1.0* (1.5**)
Phosphates	mg/L	0.5	0.15	-
Sodium as Na	mg/L	146	87	-
Potassium as K	mg/L	6	2	-
% Sodium	%	16	19	
SAR	-	1.6	1.3	-
Residual Sodium Carbonate (RSC)	me/L	BDL	BDL	
Boron	mg/L	BDL	BDL	-
Chemical Oxygen Demand (COD)	mg/L	64	--	-

**Note:** \* Acceptable limit, \*\* Permissible limit in the absence of alternate source and **BDL:** Below Detectable limit.

- Ambient Air Quality Monitoring (AAQM) & Source Emission Monitoring was carried out on 07.01.2020 & 08.01.2020 and the monitoring results are presented in Table 3 & 4 as given below:

**Table 3: AAQM results of M/s. Hetero Labs Ltd., Unit-I**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
At the periphery of the industry, near ware house (Upwind)	07.01.2020 & 08.01.2020	61	5.2	9.9

At the periphery of the industry, near unit 5 A block reception (Downwind)	07.01.2020 & 08.01.2020	60	BDL	BDL
<b>NAAQ Standards</b>		<b>100</b>	<b>80</b>	<b>80</b>

**Table 4: Stack Monitoring results of M/s. Hetero Labs Ltd., Unit-II**

S.No	Stack attached to	Parameter	Method No. / Instrument	Result	Standard Prescribed
1	Briquette fired boiler of capacity - 5 TPD	PM, mg/Nm <sup>3</sup>	IS:11255 (Part-1)-1985	273	115

The Stack Monitoring results show that the particulate Matter emission (273 mg/Nm<sup>3</sup>) monitored at the stack connected to the Briquette fired boiler of capacity - 5 TPD not meeting the Standard Prescribed (115mg/Nm<sup>3</sup>) in the consent.

**D. M/s. Shilpa Medicare Limited (Formerly Raichem Life Science Pvt. Ltd.), Plot No.S-20, S-21, S-22, S-23 & S-24,-A at TSIC-SEZ, Peddpally (V), Jadcherla (M) , Mahabubnagar District:**

- M/s. Shilpa Medicare Limited (Formerly Raichem Life Science Pvt. Ltd.) is a pharmaceutical formulations unit.
- The industry has valid CF O upto 31.05.2022 for Liquid Vials (5ml, 10 ml & 50 ml) - 8 millions / annum, Lyophilized (10ml & 50 ml) - 20 million / annum, Tablets - 50 million/annum and capsules - 7 millions/annum.
- During the period from Dec, 2018 to Nov, 2019, the industry has manufactured Liquid 852971 Nos. Vials (5ml, 10 ml & 50 ml) - 2.404586 millions against 8 millions and Tablets - 12604561.6 against permitted quantity of 50 millions.
- The industry consumes water of about 340.5 KLD, out of which for Process & Washings - 55.625 KLD, Boiler feed - 37.0 KLD, Industrial Cooling (make up) / Humidification / Water Spraying and DM Softener Plant - 123.875 KLD, Chiller make up - 11.5 KLD and Domestic & Gardening - 112.5 KLD. The industry has consumed an average of 108.9916 KLD against the permitted capacity 340.5 KLD during the period from Dec. 18 to Nov. 2019.
- The industry generates wastewater of about 137.125 KLD, out of which Process & Washings - 28.625 KLD, Boiler blow down - 7.0 KLD, Cooling tower blow down - 34.0 KLD and Domestic - 67.5 KLD. The industry has lifted total 6580 KL of effluents to M/s. PETL CETP i.e. an average of 18.27 KLD against permitted capacity of 137.125 KLD.
- As per the Consent order dated 29.06.2017, the industry shall treat the effluents as follows: “**Existing:** Shall be proposed to treat in ETP the treated effluents shall be further treated in RO System. The treated effluents shall be recycled back into the process. Thus, the industry shall achieve the zero discharge for trade effluents (existing), “**Expansion:** After treatment the treated effluents shall be sent to M/s. PETL, Patencheru.”. “**Domestic Effluents:** After treatment in STP, the treated domestic effluents shall be used for utilities and on-land application within the industry premises only”.
- As per the Temporary Revocation of Closure Order dated 26.09.2019, “industry shall not use the RO & ETP and shall send all the pre-treated process effluents to CETP for further

process & washings effluents to CETP and not lifting cooling bleed off & boiler blow down effluents.

- As per the records submitted by the industry, the industry has disposed ETP sludge – 3566 kg, Process Waste – 3869 kg and Date expired drugs – 1680 kg to TSDF and Bio-Medical waste – 3073 kg to CBWMTF during the period from Dec, 2018 to Nov, 2019.
- The industry has CFO for oil fired boiler of capacity 1 x 2.5 TPH and D.G. Sets of capacity 2 x 1000 KVA & 1 x 1500 KVA.
- The industry has applied for CFE Expansion for enhancement of production capacity and also for Briquette fired boiler of capacity 3 TPH boiler on 18.07.2019 through TS-iPASS and report was forwarded to Zonal Office, Hyderabad. The Zonal Office has placed the issue before CFE Committee meeting held on 29.10.2019. The committee recommended to issue CFE Expansion subject to submission of under on Rs.100/- stamp paper on following points:
  - The industry shall not operate the existing Briquette fired boiler of capacity 3 TPH without obtaining consent of the Board.
  - The industry shall dismantle all the below ground level tanks and also to provide tank in tank structure at process area before sending to M/s. PETL CETP.
  - The industry shall revalidate the Bank Guarantee of Rs.10 Lakhs for a period upto one year towards compliance of CFO conditions.
  - The industry shall comply with all the directions issued to the industry at time of temporary revocation of closure orders, vide order dated 26.09.2019.
- The approval of CFE Expansion for Briquette fired boiler is under process.
- The industry has CFO for oil fired boiler of capacity 1 x 2.5 TPH.
- The industry generates solid / hazardous waste viz., Packing materials – 6 Ton/month authorized to dispose to outside parties, ETP sludge – 1500 kg/month authorized to dispose to TSDF, Residue and wastes – 300 kg/month authorized to dispose to TSDF, Date expired, discarded and off-specification medicines – 4.0 Tons/month authorized to dispose to TSDF, waste oil / used oil – 400 LPM authorized to dispose authorized recyclers / re-processors, Detoxified containers and liners – 700 NPM authorized to dispose to outside parties after complete detoxification, Microbiology waste (category-3) generated from QC and R&D Lab and Waste sharps (Category-4) – 510 kg/month authorized to dispose to CBWMTF.
- The Board has issued Closure vide order dated 27.07.2019 for Non-compliance of Board directions & Consent conditions. Subsequently, the Board has issued restoration of power supply 900 KVA vide order dated 09.08.2019 to operate emergency services in the plant and maintain temperature of products stored in the ware house, stability chamber and cold room operations of air handling units to prevent degradation of the products.
- The Board has issued Temporary Revocation of Closure Order vide order dated 26.09.2019 with validity period upto 31.12.2019 stipulating certain conditions. Subsequently, industry has applied for permanent revocation of closure order on 19.11.2019. The Regional office, Hyderabad forwarded the report to Board on 20.12.2019.

**OBSERVATIONS OF THE COMMITTEE:**

- The Committee inspected the industry on 30.10.2019 and found in operation.
- Earlier, the industry has 3 Nos. of below ground level collection tanks of capacity 10 KL each. All the three below ground level collection tanks were closed as per the Board's directions.
- Presently, the industry has constructed 3 Nos. of below ground level tank in tanks for initial collection of Process & Washing effluents near the production blocks with hypo dozing system for deactivation and pumped into 6 Nos. of above ground level FRP tanks of each having capacity of 10 KL. From there, further pumped into 2 Nos. of existing above ground level RCC tanks of capacity 70 KL each for final storage and from there lifted to M/s. PETL for further treatment and disposal.
- The industry has total effluent storage capacity of 200 KL. As per the CFO, the industry generates wastewater of about 137 KLD, which is sufficient for one day storage.
- The industry is collecting process & washing effluents in collection tanks, after deactivation lifting directly to M/s. PETL CETP for further treatment and disposal.
- The industry is treating cooling tower and boiler blow down effluents in ETP of capacity 100 KL comprising of Primary Collection tank, Bar screen, Oil trap, Collection tank, Primary settling tank, Flush Mixer, Clarifier, MGF & ACF followed by 2 stage RO system.
- The domestic effluents are being treated in STP of capacity 20 KL consisting of above ground level collection tanks (3 Nos.) and Primary settling tank. After primary settling, the domestic effluents are pumped to ETP for further treatment along with cooling bleed off and boiler blow down. After treatment, the treated water further send to 2 stage RO system. RO permeate is reused for Gardening / Cooling tower makeup and the RO rejects are lifted to M/s. PETL along with process effluents for further treatment and disposal. However, the industry is not having sufficient land to utilize the treated water (RO permeate) within the premises.
- Mechanical flow meter installed at water intake point to measure water consumption. Digital flow meter installed at collection tank, RO feed, RO permeate and at RO rejects before sending to M/s. PETL.
- The industry has provided below ground level tank to collect storm water through underground pipeline near the security room and also collecting seepages coming from the neighbouring industry. The tank outlet is connected to outside TSIIC drains.
- The industry has installed online monitoring device to the inlet of storm water collection tank to monitor critical parameters (pH, COD, BOD, TSS) instead of storm water drain outlet.
- The industry has not connected the online monitoring device to the TSPCB server.
- The industry has FE system within the premises. The industry representative informed that they are not operating FE.
- The industry has Briquette fired boiler of capacity 3 TPH without Consent of the Board. The industry has installed Mechanical dust collector followed by bag filters as APCE to the Briquette fired boiler. The industry has applied for CFE Expansion for Briquette fired boiler of capacity 3 TPH boiler. The TSPCB, Zonal Office, Hyderabad has placed the

issue before CFE Committee meeting held on 29.10.2019. The committee recommenced to issue CFE Expansion subject to submission of undertaking on Rs.100/- stamp paper. The approval is under process.

- The Joint Committee during inspection collected Seepage water coming from M/s Hetero Labs Ltd., STP Inlet & Outlet, Collection Tank effluent before lifting to M/s PETL CETP and Bore Well water sample for analysis and the results are presented in Table 5-9 as given below:

**Table 5: Analysis Results of Seepage water, STP Inlet & STP Outlet collected in the premises of M/s. Shilpa Medicare Limited**

Parameters	Unit	Result		
		Seepage water	Inlet of STP	Outlet of STP
p <sup>H</sup> at 25°C	-	6.9	7.8	6.9
Total Suspended Solids	mg/L	25	101	<5
Total Dissolved Solids (TDS)	mg/L	606	1,151	218
Chemical Oxygen Demand	mg/L	44	192	32
BOD <sub>3</sub> at 27°C	mg/L	7	15	7
Oil and Grease	mg/L	BDL	BDL	BDL

BDL: Below detectable limit. The above results show that the seepage water is a soft water and not contaminated. The results further show that STP is functioning well.

**Table 6: Analysis Results of CETP Collection tank (collection tank for effluent before lifting to M/s. PETL)**

Parameters	Unit	Result	CETP Inlet Standards
p <sup>H</sup>	-	7.2	5.5-9.0
Total Suspended Solids	mg/L	139	-
Total Dissolved Solvents (Inorganic)	mg/L	1,194	5,000 mg/l
Chemical Oxygen Demand	mg/L	360	15,000 mg/l
Ammonical nitrogen as NH <sub>3</sub> -N	mg/L	8	50 mg/l
Oil and Grease	mg/L	0.3	20 mg/l
Phenolic compounds	mg/L	BDL	5.0 mg/l
Boron	mg/L	ND	2.0 mg/l
Chromium Hexavalent (as Cr+6)	mg/L	ND	2.0 mg/l
Cyanide (as CN)	mg/L	ND	2.0 mg/l
Fluoride (as F)	mg/L	0.8	15 mg/l
Nickel (as Ni)	mg/L	<0.1	3.0 mg/l
Copper (as Cu)	mg/L	<0.1	3.0 mg/l
Zinc (as Zn)	mg/L	0.6	15 mg/l
Lead (as Pb)	mg/L	ND	1.0 mg/l
Arsenic (as As)	mg/L	ND	0.2 mg/l
Mercury (as Hg)	mg/L	ND	0.01 mg/l
Cadmium (as Cd)	mg/L	ND	1.0 mg/l
Total Chromium (as Cr)	mg/L	ND	2.0 mg/l

BDL: Below detectable limit & ND: Not detectable.

The analysis results of collection tank effluent to be sent to CETP show that it meets the CETP inlet standards.

**Table 7: Analysis reports of Ground Water Samples collected from the Industry**

Parameters	Unit	Results	Drinking water standards as per IS 10500: 2012
		Borewell water	
pH	-	7.63	6.5-8.5
Electrical conductivity	µS/cm	3020	-
Total Suspended Solids	mg/L	78	-
Total Dissolved Solids	mg/L	2063	500* (2000**)
Chlorides as Cl <sup>-</sup>	mg/L	728	250* (1000**)
Sulphates as SO <sub>4</sub> <sup>2-</sup>	mg/L	26	200* (400**)
Total Alkalinity as CaCO <sub>3</sub>	mg/L	284	200* (600**)
Total Hardness as CaCO <sub>3</sub>	mg/L	1120	200* (600**)
Calcium as Ca <sup>2+</sup>	mg/L	307	75* (200**)
Magnesium as Mg <sup>2+</sup>	mg/L	86	30* (100**)
Nitrates	mg/L	13	45
Fluoride	mg/L	0.9	1.0* (1.5**)
Phosphates	mg/L	0.5	-
Sodium as Na	mg/L	170	-
Potassium as K	mg/L	4	-
% Sodium	%	25	-
SAR	-	2.2	-
Residual Sodium Carbonate (RSC)	me/L	BDL	-
Boron	mg/L	0.03	-
Chemical Oxygen Demand	mg/L	88	-

Note: \* Acceptable limit, \*\* Permissible limit in the absence of alternate source and BDL: Below Detectable Limit

The ground water samples collected from the industry shows that it is hard water. This is further reflected in the results of TH, Alkalinity, Ca & Mg ions concentrations.

**Table 8: AAQM results of M/s.Shilpa Medicare Limited.**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Near by security gate at the periphery of the industry (Upwind)	07.01.2020 & 08.01.2020	85	BDL	15.1
Near Injectable block No.1 adjacent to the boundary wall (Downwind)	07.01.2020 & 08.01.2020	59	4.8	9.0
NAAQ Standards		100	80	80

**Table 9: Stack Monitoring results of M/s. Shilpa Medicare Limited.**

S.No	Stack attached to	Parameter	Method No. / Instrument	Result	Standard Prescribed
1	Briquette fired boiler of capacity – 3TPH	PM, mg/Nm <sup>3</sup>	IS:11255 (Part-1)-1985	335	115

The Stack Monitoring results show that the particulate Matter emission (335 mg/Nm<sup>3</sup>) monitored at the stack connected to the Briquette fired boiler of capacity –3 TPH not meeting the Standard Prescribed (115 mg/Nm<sup>3</sup>) in the consent.

**E. M/s. Aurobindo Pharma Ltd. Unit – VII, Sy.No.408 to 412, 418 to 435 etc. TSIIC-SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District.**

- M/s. Aurobindo Pharma Ltd. Unit – VII is involved in Pharmaceutical Formulations.
- The industry has CFO with a validity period upto 31.03.2023 for production of Tablets – 15000 Millions/Annum, Capsules – 3000 Millions/Annum, Ointments - 25 Millions/Annum, Liquid Orals - 7.5 Millions/Annum, Dry powder for Oral Suspension Sachets - 25.0 Millions/Annum and Soft Gel Capsules - 100.0 Millions/Annum.
- As per the production details, the industry has manufactured Tablets and Capsules within the consented capacity for the period from Dec, 2018 to Nov, 2019 i.e., Tablets – 8059.197 Million Nos./Annum against 15000 Millions/Annum and Capsules – 4525.464 Million Nos./Annum against 3000 Millions/Annum.
- The industry consumes water of about 595 KLD. out of which, Process & Washings – 170 KLD, QC and R&D – 20 KLD, Garment Washing – 30 KLD, Boiler, Hot water generation, Water purification, (Softener/DM/ROs Regeneration) & Cooling tower Make-up – 225 KLD, Domestic & Gardening – 130 KLD and Decontamination of containers, liners, glass bottles, etc. – 20 KLD. The industry has consumed an average of 376.0 KLD against the permitted capacity 595 KLD during the period from Dec, 18 to Nov, 2019.
- The industry generates wastewater of about 398 KLD, out of which, 313 KLD from Process, Washings, Garment Washings, Boiler, Hot water generation & water purification, CT Bleed Off, Decontamination of containers, liners, glass bottles, etc. and 85 KLD from Domestic sections. The industry has generated wastewater an average of 124.722 KLD against the permitted capacity 398 KLD during the period from Dec. 18 to Nov. 2019. The industry has submitted details of wastewater lifted to CETP (M/s. PETL) for the period from Dec. 2019 to Nov. 2019. During the period from December, 2018 to November, 2019, industry has lifted total 39100 KL of treated wastewater to M/s. PETL at an average of 108.61 KLD against the permitted quantity of 398 KLD.
- The industry is consented for disposal of its effluent to CETP i.e., M/s. PETL, Patancheru for further treatment.
- The industry has CFO for oil fired boiler of capacity 10 TPH and 4 TPH (Standby). Now, the industry has obtained for CFE expansion vide order dated 14.09.2019 for coal fired boiler of capacity 6 TPH and oil fired boiler of capacity 5 TPH.
- The industry generates solid / hazardous waste viz., Off-Specification products/expired formulations - 15000 Kg/month, Off-specification raw material (incipient) - 2000 Kg/month, MEE salts - 1500 Kg/month, Spent laboratory Solvents - 5000 Liters /month,

Empty Capsules - 5 Millions No's/Annum. These wastes are consented to dispose to M/s. HWMP (TSDF), Dundigal, Rangareddy District / authorized cement industries for incineration. ETP Sludge - 3600 (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District), Empty HDPE Carboys - 6000 No's/month, Package materials/Liners - 3000 Kg/month and consented to dispose (After complete detoxification, to authorized agencies), Microbiological Waste - 500 Kgs/month shall be sent to common bio-medical waste treatment facility (CBMWTF)). Used Oil - 220 LPM (Sent to authorized Re-Processors / Re - Cyclers of waste oil), Lead Acid Batteries - 21 Nos./Annum (Returned to the manufacturers/ dealers on buy back basis.), Discarded /Used /Broken glass vials /glass bottles - 1400 Kg/month, Rejected Synthetic bottles used for product packing - 3000 Kg/month, Blister and Bilister package waste (3000 Kg/month) consented to (After complete detoxification, shall be sent to authorized scrap vendors) and Soft gel residue - 1000 Kg/month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District).

- The Board has issued certain directions vide order dated 27.07.2019.

**OBSERVATIONS OF THE COMMITTEE:**

- The Committee has inspected the industry on 10.12.2019 and was found in operation.
- The industry has below ground level RCC collection tank of capacity 125 KL to collect effluents of process, washings, etc. and below ground level collection tank of capacity 84 KL for collection of domestic wastewater. The industry has common above ground level RCC storage tank of capacity 250 KL for storage of RO Rejects and treated domestic water before lifting to M/s. PETL. Industrial effluents treated in ETP and in RO system. The RO permeate is reused and RO rejects are sent to PETL CETP along with domestic waste water.
- During the period from December, 2018 to November, 2019, the industry has lifted a total 39100 KL of treated wastewater to M/s. PETL at an average of 108.61 KLD against the permitted quantity of 398 KLD. The industry has RO System, but it is not operated for the past three months. The wastewater is lifted to CETP after pre-treatment.
- Mechanical Flow meter is provided at water intake point and Digital flow meter provided at the outlet of collection tank and final storage tank from where lifted to CETP, PETL.
- As per the CFO, the industry generates about 398 KLD, whereas the industry has total effluent storage capacity of 459 KL only.
- The industry has MEE(2stage) of capacity 60 KLD, but was not in operation.
- The industry is operating coal fired boiler of capacity 6 TPH with Bag filter followed by mechanical dust collector as APCE. Additional 5 TPH oil fired boiler is under erection without the Consent of the Board. The industry has obtained CFE vide order dated 14.09.2019 for both boilers and yet to apply for CFO of the Board.
- The industry has provided separate shed for storage of Hazardous waste.
- The industry has constructed below ground level RCC tank of capacity 160 KL near boiler area, which is just adjacent to compound wall and connected all storm water drains. The tank outlet is connected to outside through compound wall. The industry has total area of 50 Acres.

- The industry has three numbers of outlets in the compound wall near the boiler area for discharge of rain water.
- Spillages of white amorphous solid materials were observed near finished goods shed.
- The industry has provided separate shed for storage of Hazardous waste, but not provided the leachate collection system.
- It was observed that the drums without detoxification are stored in the open area along with packing material and scrap items.
- The dedicated area is not provided to store the waste oil drums.
- The industry is storing spent mixed solvents in MS tanks (2 Nos.) of each having 20 KL capacities. These tanks are not provided with vent condensers to collect the solvents vapours.
- The dust collector along with chimney is not provided in the mill room where crushing of rejected / expired medicines are carried out to avoid dust spreading into the atmosphere.
- The Board has issued certain directions vide order dated 27.07.2019. The compliance on directions is as follows:

S. No.	Directions	Compliance
1.	The industry shall comply with all the CFO conditions issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During the inspection, no discharge of wastewater was observed outside the premises.
3.	The industry shall dismantle all the below ground level effluent storage tanks.	The industry has not dismantled below ground level collection tank. The industry has below ground level collection tank of capacity 125 KL for the effluents of process, washings, etc., and another tank of capacity 84 KL for domestic wastewater for initial collection. From there it is lifted to common above ground level RCC storage tank of capacity 250 KL for storage of RO rejects and treated domestic water before lifting to M/s. PETL.
4.	The industry shall obtain an amendment for operation of additional 5 TPH oil fired boiler.	The industry has obtained CFE Expansion vide order dated 14.09.2019 for oil boiler of capacity 5 TPH. The industry yet to apply for CFO Expansion.
5.	The industry shall send the pre-treated effluents to CETP (PETL) regularly.	The industry treats all its effluents, except RO rejects, in its treatment facility and reusing it. The industry shall lift the entire effluents to M/s PETL CETP, as per the Board's directions dated 27.07.2019 for further treatment and disposal.

- The Committee collected wastewater samples from ETP Inlet, ETP Collection tank, ETP outlet before sending to PETL (Mixed with domestic sewage) and a bore well water sample. The analysis results are presented in the Tables 10-14 as given below:

**Table 10: Analysis results of ETP Inlet & ETP Collection tank**

Parameters	Unit	Result	Result
		ETP Inlet	ETP Collection tank
p <sup>H</sup> at 25 <sup>o</sup> C	-	6.12	6.18
Total Suspended Solids	mg/L	108	132
Total Dissolved Solids (TDS)	mg/L	1,270	6,603
Chemical Oxygen Demand	mg/L	886	1,882
BOD <sub>3</sub> at 27 <sup>o</sup> C	mg/L	155	332
Oil & Grease	mg/L	0.7	1.2

**Table 11: Analysis results of ETP outlet before sending to PETL**

Parameters	Unit	Result	CETP Inlet Standards
p <sup>H</sup>	-	6.18	5.5-9.0
Total Suspended Solids	mg/L	340	-
Total Dissolved Solvents (Inorganic)	mg/L	3,010	5,000 mg/l
Chemical Oxygen Demand	mg/L	1,537	15,000 mg/l
Ammonical nitrogen as NH <sub>3</sub> -N	mg/L	27	50 mg/l
Oil and Grease	mg/L	1.3	20 mg/l
Phenolic compounds	mg/L	BDL	5.0 mg/l
Boron	mg/L	0.6	2.0 mg/l
Chromium Hexavalent (as Cr+6)	mg/L	BDL	2.0 mg/l
Cyanide (as CN)	mg/L	ND	2.0 mg/l
Fluoride (as F)	mg/L	BDL	15 mg/l
Nickel (as Ni)	mg/L	ND	3.0 mg/l
Copper (as Cu)	mg/L	<0.1	3.0 mg/l
Zinc (as Zn)	mg/L	0.41	15 mg/l
Lead (as Pb)	mg/L	ND	1.0 mg/l
Arsenic (as As)	mg/L	<0.02	0.2 mg/l
Mercury (as Hg)	mg/L	<0.01	0.01 mg/l
Cadmium (as Cd)	mg/L	ND	1.0 mg/l
Total Chromium (as Cr)	mg/L	ND	2.0 mg/l

The analysis results of collection tank effluent to be sent to CETP show that it meets the CETP inlet standards

**Table 12: Analysis results of Borewell sample collected near Boiler area**

Parameters	Unit	Results	IS 10500 : 2012	
			Acceptable Limit	Permissible Limit
p <sup>H</sup> at 25 <sup>o</sup> C	-	6.48	6.5-8.5	No Relaxation
Total Suspended Solids	mg/L	42	-	-
Total Dissolved Solids (TDS)	mg/L	2,256	500	2000
Chemical Oxygen Demand	mg/L	82	-	-
Chlorides as Cl <sup>-</sup>	mg/L	826	250	1000
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	106	200	400

Total Alkalinity as CaCO <sub>3</sub>	mg/L	468	200	600
Total Hardness as CaCO <sub>3</sub>	mg/L	1,200	200	600
Calcium as Ca <sup>+2</sup>	mg/L	77	75	200
Magnesium as Mg <sup>+2</sup>	mg/L	245	30	100
Fluoride	mg/L	1.3	1.0	1.5
Nitrates	mg/L	13	45	No relaxation
Phosphates	mg/L	3.9	-	-
Sodium as Na	mg/L	292	-	-
Potassium as K	mg/L	2.6	-	-
Boron as B	mg/L	BDL	0.5	1.0
Manganese as Mn	mg/L	7.0	0.1	0.3
Iron as Fe	mg/L	3.24	0.3	No relaxation
Copper as Cd	mg/L	<0.1	0.05	1.5
Zinc as Zn	mg/L	1.68	5	15
Cadmium as Cd	mg/L	ND	0.003	No relaxation
Lead as Pb	mg/L	ND	0.01	No relaxation
Nickel as Ni	mg/L	ND	0.02	No relaxation
Total Chromium as Cr	mg/L	ND	0.05	No relaxation
Mercury as Hg	mg/L	ND	0.001	No relaxation
Total Arsenic	mg/L	ND	0.01	0.05

The ground water samples collected from the industry shows that it is hard water. This is further reflected in the results of TH, Alkalinity, Ca & Mg ions concentrations.

**Table 13: AAQM results of M/s. AurobindoPharma Ltd. Unit – VII**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Near the entrance gate (Upwind)	30.12.2019 & 31.12.2019	98	BDL	11.4
Near fire hydrant system (Downwind)	30.12.2019 & 31.12.2019	94	BDL	15.3
NAAQ Standards		100	80	80

**Table 14: Stack Monitoring results of M/s. AurobindoPharma Ltd. Unit – VII**

S.No	Stack attached to	Parameter	Method No. / Instrument	Result	Standard Prescribed
1	Furnace oil boiler of capacity - 4 TPH	PM, mg/Nm <sup>3</sup>	IS:11255 (Part-1)-1985	294	115

The Stack Monitoring results show that the particulate Matter emission (294 mg/Nm<sup>3</sup>) monitored at the stack connected to the Furnace oil boiler of capacity - 4 TPH not meeting the Standard Prescribed (115 mg/Nm<sup>3</sup>) in the consent.

**F. M/s. AurobindoPharma Ltd. Unit – XVI, Sy.No.408 to 412, 418 to 435 etc.SEZ-IP, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- M/s. AurobindoPharma Ltd., Unit – XVI is involved in Pharmaceutical formulations.

- The industry has valid CFO of the Board upto 31.03.2022 for Dry & Liquid Injectables – 30 Million units/annum.
- As per the production details, the industry has 7 manufactured Dry Liquid Injectables within the consented capacity i.e. 22.51 million units/annum against 30 Million units/annum.
- The industry consumes water of about 161 KLD for Process & Washings (Hand Wash) – 37.0 KLD, Boiler Feed – 30.0 KLD, QC & R&D – 4.0 KLD, Softener / DM / RO Regeneration – 15.0 KLD, Cooling tower make up – 45.0 KLD, Domestic – 25.0 KLD & Gardening – 5.0 KLD. The industry has consumed an average of 5.16 KLD against the permitted capacity 161 KLD during the period from Dec, 18 to Nov, 2019.
- The industry generates wastewater of about 71 KLD comprising of Process & Washings – 17 KLD, Boiler blow down – 5 KLD, QC & R&D – 4 KLD, Cooling tower bleed off – 5.0 KLD, Softener / DM / RO regeneration – 15.0 KLD and Domestic – 25.0 KLD. The industry consented to send to M/s. PETL, Patancheru for further treatment and disposal. The industry has lifted total 746KL of wastewater to M/s. PETL on an average of 2.072KLD during the period from December, 2018 to November, 2019.
- The industry is consented to dispose wastewater generated from Process & Washings, QC & R&D, Boiler blow down, Softener / DM / ROs regeneration & Cooling tower and Domestic effluents as “After pre-treatment, the treated wastewater shall be sent to M/s. PETL, Patancheru for further treatment and disposal”
- The industry has CFO for oil fired boiler of capacity 1 x 6 TPH, but installed and operating Oil fired Boiler of capacity 2 x 5 TPH for which the industry has obtained CFE Expansion vide order dated 18.09.2019 and yet to obtain CFO Expansion.
- The industry generates solid / hazardous waste viz., Off-Specification products/expired formulations (TSDF), Off-specification raw material (incipient) (TSDF), Mixed solvents from QC & R&D Laboratory (TSDF), ETP Sludge (wastewater storage) (TSDF), Microbiological waste (TSDF)/(CBMWTF), Discarded / Used / Broken Glass vials / Glass Bottles – 1800 kg/month (After complete detoxification shall be disposed to outside agencies / parties), Empty HDPE Carboys (5000 Nos./month) (Shall be sold to authorized recyclers), Package material / Liners – 3200 kg/month (Shall be sold to authorized recyclers), waste oil – 200 LPM (Shall be sent to authorized re-processors / Re-Cyclers of waste oil) and Lead Acid Batteries (14 Nos./annum) (shall be returned to the dealer / manufacturer on buy back basis (or) to authorized recyclers). The industry has not lifted any Hazardous Waste to Cement Industries / TSDF from Feb, 2018 to July, 2018.
- The Board has issued certain directions vide order dated 27.07.2019.

**OBSERVATIONS OF THE COMMITTEE:**

- The Committee has inspected the industry on 10.12.2019 and industry was found in operation.
- The industry has 2 Nos. of below ground level process effluent collection tanks of capacity 10 KL each for primary collection, which is adjoining to the storm water drain. The industry has 2 Nos. of below ground level domestic effluent collection tanks of capacity 10 KL each for primary collection. From there pumped to above ground level

- During the period from December, 2018 to November, 2019 has lifted total 746 KL of wastewater to M/s. PETL an average of 2.072 KLD.
- Mechanical flow meter installed at water intake point to measure the water consumption and Digital flow meter installed at final storage tank from where lifted to CETP, PETL.
- As per the CFO, the industry generates total wastewater of 71 KLD, whereas the industry has total effluent storage capacity of 180 KL, which is sufficient for 2.5 days.
- The industry has installed and operating 2 No. of 5 TPH Oil fired boilers for which the industry has obtained CFE Expansion vide order dated 18.09.2019 and yet to obtain CFO Expansion.
- The industry has provided separate shed for storage of Hazardous waste, but not provided leachate collection pit.
- The industry not provided rain water collection tank and observed that, all the storm water drains are connected to outside TSIIC drains.
- The Board has issued certain directions vide order dated 27.07.2019.
- The compliance on directions are as follows:

S. No.	Condition	Compliance
1.	The industry shall comply with all the CFO condition issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During the inspection, no discharge of wastewater was observed outside the premises.
3.	The industry shall dismantle all the below ground level effluent tanks.	The industry has not dismantled below ground level effluent collection tank.
4.	The industry shall obtain an amendment for operation of additional 5 TPH oil fired boiler.	The industry has obtained CFE Expansion for 5 TPH oil fired boiler vide order 18.09.2019 and yet to obtain CFO Expansion.
5.	The industry shall send the pre-treated effluents to CETP (PETL) regularly.	The industry is lifting only RO rejects pre-treated process, washings and domestic effluents to CETP, Patancheru for further treatment and disposal.

- The committee collected Wastewater samples collected from 1) effluent collection tank 2) storage tank before sending to PETL 3) Inlet of STP, 4) outlet of STP and 5) bore well water sample. The Analysis results these samples are provided in Tables 15 to 19 as given below:

**Table 15: Analysis results of Sample collected from Effluent Collection tank, STP Inlet & STP outlet**

Parameters	Unit	Result		
		Effluent Collection tank	STP Inlet	STP out
p <sup>H</sup> at 25 <sup>0</sup> C	-	6.45	6.29	6.83
Total Suspended Solids	mg/L	56	89	23
Total Dissolved Solids (TDS)	mg/L	291	901	309
Chemical Oxygen	mg/L	1,179	420	240

Demand				
BOD <sub>3</sub> at 27 <sup>o</sup> C	mg/L	145	92	20
Oil & Grease	mg/L	0.2	BDL	BDL

**Table 16: Analysis results of Storage tank effluent before sending to PETL (Mixed with treated sewage):**

Parameters	Unit	Result	CETP Inlet Standards
p <sup>H</sup>	-	6.70	5.5-9.0
Total Suspended Solids	mg/L	16	-
Total Dissolved Solvents (Inorganic)	mg/L	180	5,000 mg/l
Chemical Oxygen Demand	mg/L	556	15,000 mg/l
Ammonical nitrogen as NH <sub>3</sub> -N	mg/L	19	50 mg/l
Oil and Grease	mg/L	BDL	20 mg/l
Phenolic compounds	mg/L	BDL	5.0 mg/l
Boron	mg/L	BDL	2.0 mg/l
Chromium Hexavalent (as Cr+6)	mg/L	BDL	2.0 mg/l
Cyanide (as CN)	mg/L	ND	2.0 mg/l
Fluoride (as F)	mg/L	1.4	15 mg/l
Nickel (as Ni)	mg/L	ND	3.0 mg/l
Copper (as Cu)	mg/L	ND	3.0 mg/l
Zinc (as Zn)	mg/L	<0.1	15 mg/l
Lead (as Pb)	mg/L	ND	1.0 mg/l
Arsenic (as As)	mg/L	<0.02	0.2 mg/l
Mercury (as Hg)	mg/L	<0.01	0.01 mg/l
Cadmium (as Cd)	mg/L	ND	1.0 mg/l
Total Chromium (as Cr)	mg/L	ND	2.0 mg/l

**Table 17: Analysis results of Borewell sample collected from industry:**

Parameters	Unit	Results	IS 10500 : 2012	
			Acceptable Limit	Permissible Limit
p <sup>H</sup> at 25 <sup>o</sup> C	-	6.93	6.5-8.5	No Relaxation
Total Suspended Solids	mg/L	21	-	-
Total Dissolved Solids (TDS)	mg/L	1,286	500	2000
Chemical Oxygen Demand	mg/L	42	-	-
Chlorides as Cl <sup>-</sup>	mg/L	498	250	1000
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	53	200	400
Total Alkalinity as CaCO <sub>3</sub>	mg/L	344	200	600
Total Hardness as CaCO <sub>3</sub>	mg/L	916	200	600
Calcium as Ca <sup>+2</sup>	mg/L	206	75	200
Magnesium as Mg <sup>+2</sup>	mg/L	97	30	100
Fluoride	mg/L	BDL	1.0	1.5
Nitrates	mg/L	17	45	No relaxation
Phosphates	mg/L	1.2	-	-
Sodium as Na	mg/L	98	-	-
Potassium as K	mg/L	2.5	-	-
Boron as B	mg/L	BDL	0.5	1.0
Manganese as Mn	mg/L	<0.1	0.1	0.3

Iron as Fe	mg/L	0.18	0.3	No relaxation
Copper as Cd	mg/L	ND	0.05	1.5
Zinc as Zn	mg/L	<0.1	5	15
Cadmium as Cd	mg/L	ND	0.003	No relaxation
Lead as Pb	mg/L	ND	0.01	No relaxation
Nickel as Ni	mg/L	ND	0.02	No relaxation
Total Chromium as Cr	mg/L	ND	0.05	No relaxation
Mercury as Hg	mg/L	ND	0.001	No relaxation
Total Arsenic	mg/L	ND	0.01	0.05

**Table 18: AAQM results of M/s.AurobindoPharma Ltd. Unit – XVI**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Near the main gate adjacent to admin block (Upwind)	30.12.2019 & 31.12.2019	95	BDL	10.5
At the periphery of industry road (Downwind)	30.12.2019 & 31.12.2019	93	BDL	13.1
<b>NAAQ Standards</b>		<b>100</b>	<b>80</b>	<b>80</b>

**Table 19: Stack Monitoring results of M/s. AurobindoPharma Ltd. Unit – XVI**

S.No	Stack attached to	Parameter	Method No. / Instrument	Result	Standard Prescribed
1	Furnace oil boiler of capacity - 5 TPH	PM, mg/Nm <sup>3</sup>	IS:11255 (Part-1)-1985	92	115

The Stack Monitoring results show that the particulate Matter emission (92 mg/Nm<sup>3</sup>) monitored at the stack connected to the Furnace oil boiler of capacity - 5 TPH meeting the Standard Prescribed (115 mg/Nm<sup>3</sup>) in the consent.

**G. M/s. APL Health Care Ltd., Sy.No.410/P,411/P & 458/P, Plot No.S-1/B, TSIC, SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- M/s APL Health Care Ltd is engaged in Pharmaceuticals Formulations.
- The industry has obtained CFO of the Board vide order dated 26.04.2016 for Tablets - 383.33 MTPM, Capsules - 33.33 MTPM and Ointments - 1.1 MTPM which is valid upto 28.02.2021.
- As per the production details, the industry has manufactured Tablets within the consented capacity i.e. 22.10083 MTPM against 383.33 MTPM an average and 0.124 MTPM against 33.33 MTPM an average.
- The industry consumes water of about 252 KLD for Process – 2.0 KLD, Washings – 20.0 KLD, Drinking water – 10.0 KLD, Boiler Make up – 50.0 KLD, Softener / DM / ROs Regeneration – 15.0 KLD, Cooling Tower Make up – 85.0 KLD, Garment Washings – 10.0 KLD, Quality Control and R & D – 5.0 KLD, Wastewater management (Decontamination of drums, containers / container liners, etc.) – 10.0

KLD, Domestic – 20.0 KLD and Gardening – 25.0 KLD. The industry has consumed an average of 27.11598 KLD against the permitted capacity 252 KLD during the period from Dec, 18 to Nov, 2019.

- The industry generates wastewater of about 92.5 KLD from Process, Washings – 20 KLD, Quality Control & R & D – 5.0 KLD, Boiler Bleed – 5.0 KLD, Softener/DM/ROs Regeneration – 15.0 KLD, Cooling Tower(s) Bleed / Blow down – 7.5 KLD, Garment Washing - 10.0 KLD, Decontamination of drums, containers / container liners, etc. – 10.0 KLD and Domestic – 20.0 KLD. The industry has lifted total 6800 KL of wastewater to M/s. PETL at an average of 2.8 KLD against the permitted quantity of 92.5 KLD during the period from Dec, 2018 to Nov, 2019.
- The industry directed to lift all effluents to CETP i.e., M/s. PETL, Patancheru for further treatment and disposal.
- The industry has CFO for 1 x 2 TPH oil fired boiler. But industry has installed oil fired boilers 2x5 TPH and operating, for which the industry has obtained CFE expansion vide order dated 18.09.2019 and yet to apply for CFO.
- The industry has obtained CFO for D.G. Set capacity 2000 KVA and 125 KVA. The industry has also installed additional D.G. Sets 3 x 1500 KVA, 1 x 1000 KVA and 1 x 2000 KVA for which the industry has obtained CFE Expansion vide order dated 18.09.2019 and yet to apply for CFO .
- The industry generates solid / hazardous waste viz., Empty HDPE Carboys - 875 Nos./month (After complete detoxification, shall be disposed to authorized parties / agencies.), Package materials / Liners - 1250 kgs/month (Shall be sold to authorized agencies / dealers.), Off – Specification products/expired formulations - 4000 Kg/month, Off-specification raw material (incipient) - 3500 Kg/month (Shall be lifted to M/s. HWMP (TSDF), Dundigal, Rangareddy District / authorized cement industries for incineration), Waste Oils & Oil Emulsions - 10 Kgs/month (Shall be sent to authorized Re-Processors / Re-Cyclers of waste oil units), ETP Sludge - 500 Kgs/Month (Shall be lifted to M/s.HWMP (TSDF), Dundigal, Rangareddy District), Spent laboratory Solvents - 2000 Liters /month (Shall be lifted to M/s.HWMP (TSDF), Dundigal, Rangareddy District / authorized cement industries for incineration), Microbiological Waste - 500 Kg/month (Shall be lifted to Common Bio-Medical Waste Treatment Facility), Used Oil – 500 LPM (Shall be sent to authorized Re-Processors / Re-Cyclers of waste oil units) and Lead Acid Batteries - 10-15 Nos/Annum (Shall be sent to dealers / suppliers on buy back basis).

**OBSERVATIONS OF THE COMMITTEE:**

- The Committee has inspected the industry on 10.12.2019 and found in operation.
- The industry has provided below ground level process effluents collection tank of capacity 20 KL and pumped to above ground level collection tank of capacity -120 KL from where it is lifted to M/s. PETL.
- The industry lifted an average of 2.8 KLD of wastewater against the permitted quantity of 92.5 KLD during the period from Dec, 2018 to Nov, 2019.
- Mechanical flow meter installed at water intake point to measure water consumption and Digital flow meter installed at final waste water storage tank from where lifted to

- The industry has provided below ground level STP tanks. The treated water is being pumped to above ground level final storage tank before lifting to M/s. PETL.
- As per the CFO, the industry generates total wastewater of about 92.5 KLD, whereas the industry has total effluent storage capacity of 140 KL, which is sufficient to store the effluents nearly for 1.5 days. As per the CFO, the industry shall provide minimum storage capacity sufficient for 7 days.
- The industry installed and operating oil fired boilers of capacity 2 x 5 TPH and D.G. Sets 3 x 1500 KVA, 1 x 1000 KVA and 1 x 2000 KVA without obtaining CFO from the Board.
- The industry has constructed rain water collection tank of capacity 120 KL and outlet of the tank is routed to ETP. The industry has connected all the storm water drains to this collection tank to collect the first run off rain water. The industry has total area of 13 acres.
- The industry has provided separate shed for storage of Hazardous waste, but not provided leachate collection system.
- It was observed that the drums have not detoxified and stored openly without providing shed. Empty raw material packing material and scrap stored openly.
- The dust collector along with chimney not provided to mill room to avoid dust spreading into the atmosphere.
- The dedicated area is not provided to store the waste oil drums.
- The housekeeping was observed poor at Hazardous waste storage area.
- The Board has issued certain directions vide order dated 27.07.2019. The compliance on directions are as follows:

S. No.	Condition	Compliance
1.	The industry shall comply with all the CFO condition issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During the inspection, no discharge of wastewater was observed outside the premises.
3.	The industry shall dismantle all the below ground level effluent tanks.	The industry has not dismantled below ground level effluent collection tank.
4.	The industry shall obtain an amendment for operation of additional 5 TPH oil fired boiler.	The industry has obtained CFE Expansion for 5 TPH oil fired boiler vide order dated 18.09.2019. But, not obtained CFO.
5.	The industry shall send the pre-treated effluents to CETP (PETL) regularly.	The industry is lifting pre-treated process, washings and domestic effluents to PETL CETP for further treatment and disposal.

- The committee collected waste water samples from 1) effluent collection tank, 2) effluent storage tank before lifting to PETL (mixed with domestic effluents), 3) Inlet and outlet of STP and 4) Bore well water sample. The results are presented in tables No20 to 24 as given below:

**Table 20: Analysis results: Effluent collection tank:**

Parameters	Unit	Result
p <sup>H</sup> at 25 <sup>0</sup> C	-	6.61
Total Suspended Solids	mg/L	57
Total Dissolved Solids (TDS)	mg/L	2,146
Chemical Oxygen Demand	mg/L	1,175
Phenolic compounds	mg/L	BDL
Boron	mg/L	BDL
Chromium Hexavalent (as Cr <sup>+6</sup> )	mg/L	BDL
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	0.98

BDL:Below detectable limit&ND: Not detected

**Table 21: Analysis results of storage tank effluent mixed with treated sewage water before sending to PETL.**

Parameters	Unit	Result	CETP Inlet Standards
p <sup>H</sup>	-	6.67	5.5-9.0
Total Suspended Solids	mg/L	56	-
Total Dissolved Solvents (Inorganic)	mg/L	1,230	5,000 mg/l
Chemical Oxygen Demand	mg/L	897	15,000 mg/l
Ammonical nitrogen as NH <sub>3</sub> -N	mg/L	12	50 mg/l
Oil and Grease	mg/L	0.2	20 mg/l
Phenolic compounds	mg/L	BDL	5.0 mg/l
Boron	mg/L	BDL	2.0 mg/l
Chromium Hexavalent (as Cr+6)	mg/L	BDL	2.0 mg/l
Cyanide (as CN)	mg/L	ND	2.0 mg/l
Fluoride (as F)	mg/L	0.41	15 mg/l
Nickel (as Ni)	mg/L	ND	3.0 mg/l
Copper (as Cu)	mg/L	ND	3.0 mg/l
Zinc (as Zn)	mg/L	0.26	15 mg/l
Lead (as Pb)	mg/L	ND	1.0 mg/l
Arsenic (as As)	mg/L	<0.02	0.2 mg/l
Mercury (as Hg)	mg/L	<0.01	0.01 mg/l
Cadmium (as Cd)	mg/L	ND	1.0 mg/l
Total Chromium (as Cr)	mg/L	ND	2.0 mg/l

**Table 22: Analysis results of Borewell water sample collected near scrap yard located within industry:**

Parameters	Unit	Results	IS 10500 : 2012	
			Acceptable Limit	Permissible Limit
p <sup>H</sup> at 25 <sup>0</sup> C	-	6.66	6.5-8.5	No Relaxation
Total Suspended Solids	mg/L	38	-	-
Total Dissolved Solids (TDS)	mg/L	2,410	500	2000
Chemical Oxygen Demand	mg/L	32	-	-

Chlorides as Cl <sup>-</sup>	mg/L	984	250	1000
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	75	200	400
Total Alkalinity as CaCO <sub>3</sub>	mg/L	396	200	600
Total Hardness as CaCO <sub>3</sub>	mg/L	732	200	600
Calcium as Ca <sup>+2</sup>	mg/L	179	75	200
Magnesium as Mg <sup>+2</sup>	mg/L	69	30	100
Fluoride	mg/L	1.6	1.0	1.5
Nitrates	mg/L	38	45	No relaxation
Phosphates	mg/L	3.7	-	-
Sodium as Na	mg/L	392	-	-
Potassium as K	mg/L	2.3	-	-
Boron as B	mg/L	BDL	0.5	1.0
Manganese as Mn	mg/L	<0.1	0.1	0.3
Iron as Fe	mg/L	ND	0.3	No relaxation
Copper as Cd	mg/L	ND	0.05	1.5
Zinc as Zn	mg/L	<0.1	5	15
Cadmium as Cd	mg/L	ND	0.003	No relaxation
Lead as Pb	mg/L	ND	0.01	No relaxation
Nickel as Ni	mg/L	ND	0.02	No relaxation
Total Chromium as Cr	mg/L	ND	0.05	No relaxation
Mercury as Hg	mg/L	ND	0.001	No relaxation
Total Arsenic	mg/L	ND	0.01	0.05

**Table 23: Analysis results of STP Inlet and STP Outlet:**

Parameters	Unit	Results	
		STP Inlet	STP out
p <sup>H</sup> at 25 <sup>o</sup> C	-	7.68	7.45
Total Suspended Solids	mg/L	676	113
Total Dissolved Solids (TDS)	mg/L	5,688	3,713
Chemical Oxygen Demand	mg/L	356	124
BOD <sub>3</sub> at 27 <sup>o</sup> C	mg/L	78	19
Oil and Grease	mg/L	BDL	BDL

**Table 24: AAQM results of M/s. APL Health Care Ltd.,**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Near the main gate (Upwind)	30.12.2019 & 31.12.2019	158	5.8	13.8
At the top of the control panel room (Downwind)	30.12.2019 & 31.12.2019	141	BDL	BDL
<b>NAAQ Standards</b>		<b>100</b>	<b>80</b>	<b>80</b>

The PM<sub>10</sub> concentration (158 & 141 µg/m<sup>3</sup>) monitored at upwind & downwind direction inside the industry premises exceed NAAQ Standard (24hrs avg) of 100 µg/m<sup>3</sup>.

**Table 24: Stack Monitoring results of M/s. APL Health Care Ltd.,**

S.No	Stack attached to	Parameter	Method No. / Instrument	Result	Standard Prescribed
1	Briquette fired boiler - 5 TPH	PM, mg/Nm <sup>3</sup>	IS:11255 (Part-1)-1985	80	115

The Stack Monitoring results show that the particulate Matter emission (92 mg/Nm<sup>3</sup>) monitored at the stack connected to the Briquette fired boiler - 5 TPH meeting the Standard Prescribed (115 mg/Nm<sup>3</sup>) in the consent.

**H. M/s. Mylan Laboratory, (Formerly M/s. Glochem Industries Ltd.,) Sy.no.408, 410, Plot No.S-16 & S-17/A, TSIIC-SEZ, Polepally (V), Jadcharla (M), Mahabubnagar District:**

- The industry is engaged in Pharmaceutical formulations unit.
- The industry has obtained CFO of the Board vide order dated 29.04.2015 for production of Tablets Coated - 0.967 Billions/annum, Tablets Uncoated - 2.033 Billions/annum, Capsules - 0.5 Billions/annum with validity upto 31.03.2016. Subsequently, the industry has obtained Auto renewal of CFO vide order dated 26.02.2016 with validity upto 31.03.2021.
- During the period from Dec, 2018 to Nov, 2019, the industry has manufactured Tablet 641.95 millions/annum against the consented capacity 3000 millions Nov./annum (3 Billions Nos.).
- The industry consumes water of about 350 KLD for Process & Washings – 95 KLD, Laboratory (QC and R&D) – 5 KLD, Boiler make up – 85.0 KLD, Cooling tower make up – 110.0 KLD, DM/RO plant regeneration – 2.0 KLD, Detoxification facility – 2.0 KLD, Scrubbers – 1.0 KLD and Domestic – 20.0 KLD. The industry has consumed an average of 46.52 KLD against the permitted capacity 252 KLD during the period from Dec, 18 to Nov, 2019.
- The industry generates wastewater of about 150 KLD from Process, Washings - 95.0 KLD, Laboratory (QC and Domestic - 5.0 KLD, Boiler blow down – 5.0 KLD, Cooling bleed off – 10.0 KLD, DM/RO plant regeneration – 2.0 KLD, Detoxification facility – 2.0 KLD, Scrubbers – 1.0 KLD and Domestic 30 KLD. The industry has lifted wastewater an average of 32.11 KLD against the permitted capacity 150 KLD during the period from Dec, 18 to Nov, 2019.
- The industry directed to lift all effluents to CETP i.e., M/s. PETL, Patancheru for further treatment and disposal.
- The industry is having oil fired boiler of capacity 4 x 0.2 TPH, 1 X 2.0 TPH & 1 X 0.4 TPH.
- The industry generates solid / hazardous waste viz., ETP Sludge - 1500 Kgs / month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District), Spent mixed solvents - 2000 Kgs/month, Insulation Waste - 1000 Kgs / month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District / Cement Industries), Date expired /discharged off specification drugs (rejected tablets & capsules) – 15030 Kgs /month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District / Cement Industries), Discarded injection vials - 100 Kgs / month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy

Dundigal, Rangareddy District), Discarded personal protective equipment - 1000 Kgs / month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District), Discarded thermocol - 1000 Kgs / month (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District), HEPA filters / Oil filters - 50 nos / annum (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District), Discarded UF/RO - 30 nos / annum (Shall be sent to M/s. HWMP (TSDF), Dundigal, Rangareddy District), Used Oil - 350 LPM (Shall be sent to authorized Re-processors / Re – Cyclers), Discarded Container - 1200 nos/day (After complete detoxification, shall be sold to outside agencies / dealers), Container Liners - 3.0 TPM (After complete detoxification, shall be sold to outside agencies / dealers), Lead acid batteries - 78.0 nos/year (Shall be returned to the manufactures / dealers on buy back basis), E-waste - 3.0 TPA (Authorized collection center / recyclers/ dismantler/ disposal facility), Boiler FO soot - 1.0 TPM, Plywood boxes, tins - 2.0 TPM, PV/PVDC/Alum.Foil - --, Glass Scrap - 1.0 TPM, G.I. Scrap - 5.0 TPM, Aluminium scrap - 2.0 TPM, M.S. Scrap - 5.0 TPM, Waste paper, wood, packing materials, cartons, plastics etc. - 5.0 TPM and Packing materials - 5.0 TPM (Shall be sold to outside agencies / recyclers).The industry is member unit of TSDF.

**OBSERVATIONS OF THE COMMITTEE:**

- The Committee has inspected the industry on 12.12.2019 and found in operation.
- The industry has below ground level RCC tank of 60 KL for process & washings and 10 KL below ground level RCC tank for domestic wastewater from there pumped to above ground level RCC effluent storage tank of capacity 300 KL before sending to M/s. PETL.
- The industry is collecting effluents generated from process, washings, cooling tower bleed off / boiler blow down in the above ground level storage cum aeration tank. After pre-treatment, the effluents are lifted to CETP i.e. M/s. PETL for further treatment and disposal.
- The industry has provided STP for treatment of domestic wastewater. After pre-treatment, the domestic effluents are sent to above ground level storage tank and mixing with other pre-treated process, washings effluents before lifting to M/s. PETL.
- The industry lifted an average of 32.11 KLD of wastewater against the permitted quantity of 150 KLD during the period from Dec, 2018 to Nov, 2019.
- As per the CFO, the industry generates wastewater of about 300 KLD. Whereas the industry has storage capacity of 300 KL, which is sufficient for only one day.
- Mechanical flow meter installed at water intake point for measurement of water consumption. Digital Flow meters are not installed at inlet & outlet of ETP, STP to quantify the wastewater generation and disposal.
- The industry has provided separate shed for storage of Hazardous waste.
- The industry has one Bore well within the premises, but it is not in working condition.
- The industry has not provided rain water collection tank for collection of first run-off water. The industry has total area of 5 acres.
- All the storm water drains of the industry should be connected to first run off rain water collection tank before connected to outside TSIIC drains.

- The Board has issued certain directions vide order dated 27.07.2019. The compliance on directions are as follows:

S. No.	Condition	Compliance
1.	The industry shall comply with all the CFO conditions issued by the Board	--
2.	The industry shall not discharge any effluent / waste water within or outside their premises	During the inspection, no discharge of wastewater was observed outside the premises.
3.	The industry shall send all the pre-treated effluents / waste water to CETP-PETL.	The industry is lifting pre-treated process, washings and domestic effluents to PETL CETP for further treatment and disposal.
4.	The industry shall have minimum of 2 days storage capacity of effluents on above ground level, within the premises.	The industry has above ground level storage capacity of 300 KL capacity which is sufficient for only one day

- During inspection, the Joint Committee collected Process Effluent and Domestic Effluent before lifting to M/s. PETL, CETP. The analysis results of these samples are presented in the Tables 25& 26as given below:

**Table25: Analysis results of Waste Water samples**

Parameter	Method (*) No.	Unit	Results		CETP Inlet Standards
			Process Effluent	Domestic Effluent	
pH	4500-B	-	7.54	7.94	5.5 - 9.0
Total Suspended Solids	2540-D	mg/l	288	22	-
Total Dissolved Solids (Inorganic)	2540-E	mg/l	3,435	812	5,000mg/l
Chemical Oxygen Demand	5220-B	mg/l	822	8	15,000 mg/l
Ammonical nitrogen as NH <sub>3</sub> -N	4500-NH <sub>3</sub> C	mg/l	2	BDL	50 mg/l
Oil and Grease	5520 - B	mg/l	0.3	BDL	20 mg/l
Phenolic compounds	5530 C	mg/l	BDL	BDL	5.0 mg/l
Boron	4500- B,C	mg/l	BDL	BDL	2.0 mg/l
Chromium Hexavalent (as Cr+6)	3500 - Cr B	mg/l	ND	ND	2.0 mg/l
Cyanide (as CN)	4500 - CN -E	mg/l	ND	ND	2.0 mg/l
Fluoride (as F)	4500 -F, D	mg/l	0.4	BDL	15 mg/l
Nickel (as Ni)	3111 B	mg/l	ND	ND	3.0 mg/l
Copper (as Cu)	3111 B	mg/l	0.2	ND	3.0 mg/l
Zinc (as Zn)	3111 B	mg/l	0.4	0.2	15 mg/l

Lead (as Pb)	3111 B	mg/l	ND	ND	1.0 mg/l
Arsenic (as As)	3114 C	mg/l	< 0.02	< 0.02	0.2 mg/l
Mercury (as Hg)	3112 B	mg/l	< 0.01	< 0.01	0.01 mg/l
Cadmium (as Cd)	3111 B	mg/l	ND	ND	1.0 mg/l
Total Chromium (as Cr)	3111 D	mg/l	ND	ND	2.0 mg/l

**BDL:** Below detectable limit and **ND:** Not detected

The above results, show that the pre-treated effluents sent to PETP CETP meet the inlet standards of CETP

**Table 26: AAQM results of M/s. Mylan Laboratory,**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Opp. OHC block (Upwind)	07.01.2020 & 08.01.2020	100	16	11.2
EHS block entrance (Downwind)	07.01.2020 & 08.01.2020	65	14.5	17.2
<b>NAAQ Standards</b>		<b>100</b>	<b>80</b>	<b>80</b>

All the parameters concentration monitored at upwind & downwind direction inside the industry premises meeting NAAQ Standard (24hrs avg) of 100 µg/m<sup>3</sup>.

**I. M/s. Evertrogen Life Sciences (Formerly M/s. Optimus Generics Ltd.), Plot No.S-8, S-13/P & S-14/P, TSIIC, SEZ, Green Industrial Park, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- M/s. Evertrogen Life Sciences (Formerly M/s. Optimus Generics Ltd.) is a Pharmaceutical Formulation Unit.
- The industry has valid CFO upto 30.11.2020 for production of Tablets – 0.108 Billion Nos./Month, Capsules – 0.016 Billion Nos./Month and Sachets – 0.008 Billion Nos./Month.
- During Dec, 2018 to Nov, 2019, the industry has manufactured Tablets - 0.0113 billions/month against permitted capacity 0.108 Billion Nos./Month, Capsules - 0.0002 billions/month against permitted capacity 0.016 Billion Nos./Month and Sachets - 0.00017 billions/month against permitted 0.008 Billion Nos./Month.
- The industry consumes water of about 143.0 KLD for Process & Washings – 19.0 KLD, Cooling Tower – 37.0 KLD, Hot & Cold water system – 52.0 KLD, Domestic – 16.0 KLD and Gardening – 15.0 KLD. The industry has installed flow meters. During the period from Dec, 2018 to Nov, 2019 the industry has consumed an average of 85.94 KLD against permitted capacity 143 KLD and.
- The industry generates wastewater of about 55.0 KLD, out of which, Process & Washings – 18.0 KLD, Cooling Tower bleed off – 9.0 KLD, Purified water system – 13.0 KLD and Domestic – 15.0 KLD. The industry has generated wastewater of about 37.505 KLD against permitted capacity 55 KLD during the period from Dec, 2018 to Nov, 2019. The industry has lifted total 12502 KL of wastewater to M/s. PETL at an average of 37.505 KLD against the permitted quantity of 55 KLD.
- The industry has Hot Water Generator of capacity 2 x 2.0 lakh k.cal/hr & 8 x 1.50 k.cal/hr.

- The industry generates solid waste, Date expired, Discarded and off specification medicines – 1 TPM, ETP sludge – 0.1 TPM, Residue & Waste – 2.0 TPM consented to lift to TSDF, Packing materials – 2.0 TPM consented to dispose to authorized agencies after complete detoxification, Container and Container liners – 200 NPM consented to dispose to authorized agencies after complete detoxification, used lead acid batteries – 2 NPA consented to return back to the manufacturer / dealer on buy back basis and STP sludge consented to use as manure for greenbelt development within the premises. The industry has submitted details of Hazardous / solid waste and Bio-Medical Waste generation and its disposal details for the period from Dec, 2018 to Nov, 2019.
- The Board has issued Extension of Temporary Revocation of Closure Orders vide order dated 27.07.2019 with validity period upto 31.12.2019 stipulating certain conditions. Subsequently, industry has submitted representation for permanent revocation of closure orders on 13.11.2019. The Regional office Hyderabad forwarded report to the Board office on 20.12.2019.

**OBSERVATION OF THE COMMITTEE:**

- The industry was inspected on 12.12.2019 and industry was found in operation.
- The industry has 2 Nos. of below ground level tank in tank structure of capacity 3 KL each for primary collection of the Process and Domestic effluents. The industry has 4 Nos. of above ground level collection tanks of capacity 96 KL, 36 KL & 2 x 18 KL respectively before disposing to CETP.
- The industry has total effluent storage capacity about 174 KL which is sufficient to store 3 days generation.

S. No.	Condition	Compliance
1.	The industry shall comply with all the CFO conditions issued by the Board.	--
2.	The industry shall not produce any un-consented products.	The industry is manufacturing consented products.
3.	The industry shall not discharge any effluent / waste water within or outside the factory premises.	No discharge of wastewater was observed outside the industry premises during the inspection.
4.	The industry shall dismantle all the below ground level effluent storage tanks.	The industry has 2 Nos. of below ground level tank in tank structure for primary collection of process & domestic effluents, from there lifted to above ground level storage tanks before sending to CETP.
5.	The industry shall ensure that there are no seepages / overflow from the effluent storage tank.	No seepages and overflow from the storage tanks were observed during the inspection.
6.	The industry shall send all the pre-treated effluents along with Domestic effluent to M/s. PETL, Patancheru for further treatment & disposal after meeting the CETP	The industry is sending pre-treated effluents along with domestic wastewater to M/s. PETL, Patancheru for further treatment &

	inlet standards.	disposal.
	7. The industry shall submit the month details of production, effluent generated & disposal to E.E., RO-Hyderabad.	Submitted.
• T h e	8. The industry shall store ETP / STP sludge under roofed shed till its disposal.	The industry has separate roofed shed for storage of Hazardous waste.
i n	9. The industry shall revalidate the BG of Rs.8 lakhs till further orders from the Board.	The industry has revalidated the Bank Guarantee of Rs.8 Lakh upto 18.04.2020.

dustry is consented to dispose the wastewater generated from Process & Washings, Cooling Tower bleed off and Purified water system after treatment in ETP, the treated effluents shall further treated in RO System. The RO permeate shall reused for cooling tower make up and the RO rejects shall disposed by Forced Evaporation. Subsequently, the Board has issued directions to the industry vide order dated 04.01.2018 and directed to dispose process, washings and domestic effluents to CETP.

- The industry treating the process & washings in the ETP. After treatment in ETP, the treated water is being lifted CETP i.e. M/s. PETL for further treatment and disposal. The industry has provided STP for treatment of domestic effluents, after treatment the treated domestic wastewater is lifted to M/s. PETL along with other treated wastewater.
- The industry has provided RO plant and FE system. Presently, the industry is not operating RO and FE system.
- The industry has consumed an average of 85.94 KLD against permitted capacity 143 KLD during the period from Dec, 2018 to Nov, 2019.
- The industry has submitted details of wastewater lifted to CETP, M/s. PETL from Dec, 2018 to Nov, 2019. As per the records, the industry has lifted total effluents of 13502 KL i.e. an average of 37.505 KLD against the permitted capacity 55 KLD.
- During the last one year period i.e. from Dec, 2018 to Nov, 2019, the industry has lifted total 1950 kg of Hazardous waste to TSDF in the month of February, 2019 vide manifest no.13207.
- The industry has lifted Bio-Medical waste total quantity 1787.95 kg to M/s. Sventhans & Co. during the period from Dec, 2018 to 2019.
- The compliance on Extension of Temporary Revocation of Closure Orders conditions are as follows:
- During inspection, the Joint Committee collected effluent samples from ETP Collection Tank, Pretreated water before lifting to M/s. PETL, CETP and Inlet & Outlet of STP. The analysis results of these samples are presented in **Tables 27-29** as given below:

**Table 27: Analysis results of ETP Collection Tank and Inlet & Outlet of STP**

Parameters	Method (*) No.	Unit	Result		
			ETP Collection Tank	STP Inlet	STP Outlet
pH at 25°C	4500-B	-	7.68	7.54	7.59

Total Suspended Solids	2540-B	mg/L	224	< 5	< 5
Total Dissolved Solids (TDS)	2540-C	mg/L	6,422	758	629
Chemical Oxygen Demand	5220-B	mg/L	905	36	16
Oil and Grease	5520 - B	mg/L	0.8	BDL	BDL

**Table 28: Analysis results of Pretreated effluent before lifting to M/s. PETL, CETP**

Parameter	Method (*) No.	Unit	Result 12277	CETP Inlet Standards
pH	4500-B	-	7.08	5.5 - 9.0
Total Suspended Solids	2540-D	mg/l	< 5	-
Total Dissolved Solids (Inorganic)	2540-E	mg/l	794	5,000
Chemical Oxygen Demand	5220-B	mg/l	226	15,000
Ammonical nitrogen as NH <sub>3</sub> -N	4500-NH <sub>3</sub> C	mg/l	6.0	50
Oil and Grease	5520 - B	mg/l	BDL	20
Phenolic compounds	5530 C	mg/l	BDL	5.0
Boron	4500- B,C	mg/l	BDL	2.0
Chromium Hexavalent (as Cr+6)	3500 - Cr B	mg/l	BDL	2.0
Cyanide (as CN)	4500 - CN -E	mg/l	ND	2.0
Fluoride (as F)	4500 -F, D	mg/l	0.3	15
Nickel (as Ni)	3111 B	mg/l	ND	3.0
Copper (as Cu)	3111 B	mg/l	ND	3.0
Zinc (as Zn)	3111 B	mg/l	0.2	15
Lead (as Pb)	3111 B	mg/l	ND	1.0
Arsenic (as As)	3114 C	mg/l	< 0.02	0.2
Mercury (as Hg)	3112 B	mg/l	< 0.01	0.01
Cadmium (as Cd)	3111 B	mg/l	ND	1.0
Total Chromium (as Cr)	3111 D	mg/l	ND	2.0

**BDL:** Below detectable limit and **ND:** Not detected

The above results show that Pretreated effluent sent to CETP for further treatment meets the CETP Inlet Standards.

**Table 29: AAQM results of M/s. Evertrogen Life Sciences**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Near security gate (Upwind)	09.01.2020 & 10.01.2020	95	4.7	BDL
Near water pre- treatment block (Downwind)	09.01.2020 & 10.01.2020	91	BDL	1.1
NAAQ Standards		100	80	80

**J. M/s. Shri Kartikeya Pharma (SEZ Unit), Sy.No.408-412, 418-435, 437-445, Polepally (V), Jadcherla (M), Mahaboobnagar District:**

- M/s. Shri Kartikeya Pharma is engaged in Ashwagandha Extraction.
- The industry has obtained CFO of the Board vide order dated 17.08.2017 for production of Ashwagandha Extract – 1000 kg/day with validity period upto 31.03.2022.
- As per the production records, the industry has manufactured Ashwagandha Extract – 307.522 kg/day (Avg./day) against the consented capacity of 1000 kg/day.
- The industry consumes water of about 22.7 KLD out of which, 18.0 KLD for Process, 2.0 KLD for washings, 2.0 KLD for Boiler feed, 0.5 KLD for cooling and 0.2 KLD for domestic purpose.
- The industry generates wastewater of about 20.4 KLD, out of which 18.0 KLD from Process, 2.0 KLD from Washings, 0.1 KLD from Boiler blow down, 0.1 KLD from Cooling tower bleed off and 0.2 KLD from Domestic section. The industry has lifted 1.11 KLD (Average/day) of effluents to M/s. PETL against consented capacity of 20.4 KLD during the period from December, 2018 to November, 2019.
- The industry is consented to send all pre-treated effluents / waste water to CETP.
- The industry has provided ETP for treatment of waste water before sending to M/s. PETL.
- The industry has HSD fired boiler of capacity 1.5 TPH with chimney height 30 mtrs.
- The Board has issued certain direction vide order dated 27.07.2019.

**OBSERVATION OF THE COMMITTEE:**

- The Committee has inspected the industry on 12.12.2019 and found in operation.
- The industry has below ground level collection tank in tank near tray washing i.e. Syntex tank placed in RCC tanks.
- The industry has provided above ground level 4 Nos. x 5 KL tanks (Syntex tanks) for storage before lifting to CETP i.e. PETL.
- The industry has lifted effluents to M/s. PETL 1.11 KLD (Average/day) against consented capacity of 20.4 KLD for the period from December, 2018 to November, 2019.
- The industry has installed mechanical flow meters at water intake point for measurement of water consumption and at ETP Inlet. The industry has not provided Digital flow meter to the final storage before lifting to CETP.
- The industry has installed Forced Evaporation System, but not in operation during inspection.
- The industry has storm water drains and connected to outside TSIIC drains.

- The Board has issued certain direction vide order dated 27.07.2019.

The compliance on directions are as follows:

S. No.	Condition	Compliance
1.	The industry shall comply with all the CFO condition issued by the Board.	--
2.	The industry shall not discharge any effluent / wastewater within or outside the premises.	During the inspection, no discharge of wastewater was observed outside the premises.
3.	The industry shall dismantle all the below ground effluent storage tanks.	The industry has below ground level collection tank in tank near tray washing i.e. Syntex tank placed in RCC tanks.
4.	The industry shall send all the pre-treated effluents / waste water to CETP.	The industry is lifting pre-treated process, washings and domestic effluents to CETP, Patancheru for further treatment and disposal.
5.	The industry shall take all the measures to ensure that there is no smell nuisance due to operations of the industry.	The industry is carrying within the closed building.
6.	The industry shall provide / maintain water meters to quantify the actual water consumption & wastewater generation.	The industry has installed mechanical flow meters at water intake point for measurement of water consumption and at ETP Inlet.
7.	The industry shall provide separate rain water drains.	The industry has provided separate rain water drains.
8.	The industry shall dispose ETP Sludge generated to TSDF regularly.	Not submitted.
9.	The industry shall revalidate the BG of Rs.1 lakh till further order from the Board.	The industry has revalidated Bank Guarantee of Rs.1 Lakhs for period upto 06.09.2020.

- During inspection, the Joint Committee collected effluent samples from Inlet & Outlet of ETP and Borewell water sample. The analysis results of these samples are presented in the Tables 30-33 as given below:

**Table 30: Analysis results of Inlet & Outlet of ETP**

Parameters	Method (*) No.	Unit	Results		CETP Inlet Standards
			ETP Inlet	ETP Outlet	
pH at 25°C	4500-B	-	6.65	7.70	5.5 - 9.0

Total Suspended Solids	2540-B	mg/L	90	45	-
Total Dissolved Solids (TDS)	2540-C	mg/L	2,919	2,284	5,000
Chemical Oxygen Demand	5220-B	mg/L	254	163	15,000
BOD 3 at 27°C	IS 3025, 1993	mg/L	51	20	--
Oil and Grease	5520 - B	mg/L	0.1	BDL	20 mg/L

**Table 31: Analysis results of Borewell Water Sample**

Parameters	Unit	Results	Drinking water standards as per IS 10500: 2012
		Borewell Water	
pH	-	7.38	6.5-8.5
Electrical conductivity	µS/cm	2637	-
Total Solids	mg/L	1824	-
Total Suspended Solids	mg/L	<5	-
Total Dissolved Solids	mg/L	1824	500* (2000**)
Chlorides as Cl <sup>-</sup>	mg/L	585	250* (1000**)
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	64	200* (400**)
Total Alkalinity as CaCO <sub>3</sub>	mg/L	348	200* (600**)
Total Hardness as CaCO <sub>3</sub>	mg/L	896	200* (600**)
Calcium as Ca <sup>+2</sup>	mg/L	210	75* (200**)
Magnesium as Mg <sup>+2</sup>	mg/L	90	30* (100**)
Nitrates	mg/L	58	45
Fluoride	mg/L	BDL	1.0* (1.5**)
Turbidity	mg/L	19.8	-
Phosphates	mg/L	<0.1	-
Sodium as Na	mg/L	108	-
Potassium as K	mg/L	2	-
% Sodium	%	21	-
SAR	-	2.0	-
Boron	mg/L	1.7	-
Residual sodium Carbonate(RSC)	mg/L	BDL	-
Copper	mg/L	<0.1	0.05*(1.5**)

Nickel	mg/L	ND	0.02
Zinc	mg/L	<0.1	5*(15**)
Cadmium	mg/L	ND	0.003
Lead	mg/L	ND	0.01

**Note:** \* Acceptable limit, \*\* Permissible limit in the absence of alternate source, **BDL:** Below Detectable limit and **ND:** Not Detectable.

The above results show that Pretreated effluent sent to CETP further treatment meets the CETP Inlet Standards.

**Table 32: AAQM results of M/s. ShriKartikeyaPharma (SEZ Unit),**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Near Electrical Panel room (Downwind)	09.01.2020 & 10.01.2020	94	6.9	12.2
Near Main gate (Downwind)	09.01.2020 & 10.01.2020	80	6.4	12.8
NAAQ Standards		100	80	80

**Table 33: Stack Monitoring results of M/s. Shri Kartikeya Pharma (SEZ Unit),**

S.No	Stack attached to	Parameter	Method No. / Instrument	Result	Standard Prescribed
1	HSD boiler - 1.5 TPH	PM, mg/Nm <sup>3</sup>	IS:11255 (Part-1)-1985	17	115

The Stack Monitoring results show that the particulate Matter emission (17 mg/Nm<sup>3</sup>) monitored at the stack connected to the HSD boiler - 1.5 TPH meeting the Standard Prescribed (115 mg/Nm<sup>3</sup>) in the consent.

**K. M/s. Amneal Oncology Pvt. Ltd. (Formerly M/s. Epsilon Pharmaceuticals Private Limited), Plot No.A-3, S-4 & A-5A, Sy.No.411, 425 etc. Polepally (V), Jadcherla (M), Mahabubnagar District:**

- M/s. Amneal Oncology Pvt. Ltd is a Pharmaceutical Formulations Unit.
- The industry has CFO with validity period upto 31.05.2020 for the following products. i. e., Cyclophosphamide for Injection – 1g/2g, Cyclophosphamide for Injection – 500 mg, Docetaxel of Injection – 20mg, Docetaxel Injection Concentrate – 80 mg, Gemcitabine HCL for Injection – 1g / 2g, Gemcitabine for Injection – 200 mg, Oxaliplatin for Injection – 50 mg / 100 mg / 200 mg, Paclitaxel for Injection – 10 mg / 30 mg / 100 mg, Paclitaxel for Injection – 150 mg / 300 mg & Paclitaxel Protein Bound – 100 mg - 16,80,000 vials per annum.
- The industry has obtained CFO Expansion Order with a validity period upto 31.05.2028 for the various injectable formulations – 10,00,000 Vials/annum *with a condition that, the industry shall pay the consent fees annually from the financial year 2019-2020 till validity of the Consent Order.*
- The industry consumes total water of about 152.0 KLD for Process & Washings – 26.0 KLD, Cooling – 19.0 KLD, Boiler feed – 33.0 KLD, Domestic – 18.0 KLD, Regeneration (Process and Utility) – 22.0 KLD, Gardening – 25.0 KLD and Canteen Use – 9.0 KLD.

- The industry generates wastewater of about 89.0 KLD from Process & Washings - 21.7 KLD, Cooling - 9.5 KLD, Boiler blow down - 13.3 KLD, Regeneration (Process and Utility) - 18.5 KLD Domestic - 17.5 KLD and Canteen - 8.5 KLD.
- The industry has oil fired boiler of capacity 1.5TPH and 2.8TPH and provided individual chimneys of height 30 mtrs for proper dispersion of the flue gases.
- The industry has D.G. sets capacities 1 X 750 KVA & 1 X 1010 KVA and provided with acoustic enclosures
- The industry generates hazardous/solid waste such as ETP Sludge - 18 TPA consented to lift to the TSDF, Waste oil - 4100 LPA consented to sold to authorized recycler / re-processors, HDPE drums /Carboys - 4000 Drums/Annum consented to sold to outside authorized agencies after complete detoxification, Packing material / Liners - 4.2 TPM consented to sold to outside authorized agencies after complete detoxification and Used Lead Acid Batteries - 6 NPA consented to return back to the manufacturer / dealer on buy back basis, Glass ware - 110 kg/day consented to dispose to recycling units after detoxification, Off-specification products / expired formulation - 15 TPA - To TSDF, Off-Specification Raw materials - 12 TPA - To TSDF, Mixed Solvents from the QC - 2 TPA - To TSDF, Microbiological waste - 12 TPA - To CBMWTF.
- The Board has issued Closure vide order dated 27.07.2019 for Non-compliance of Board directions & Consent conditions. Subsequently, the Board has issued restoration of power supply vide order dated 09.08.2019 to restore power supply of 900 KVA to operate emergency services in the plant and maintain temperature of products stored in the warehouse, stability chamber and cold room operations of air handling units to prevent degradation of the products.
- Subsequently, the Board has issued Temporary Revocation of Closure Orders vide order dated 06.09.2019 for a period upto 31.12.2019 stipulating certain conditions. Subsequently, industry submitted representation for permanent revocation of closure order on 11.12.2019. The Regional office, Hyderabad forwarded report to the Board office on 20.12.2019.

**The condition wise compliance of Temporary Revocation of Closure order dated 06.09.2019 are as follows:**

S. No.	Condition	Compliance
1.	The industry shall comply with all the CFO conditions issued by the Board.	The condition wise compliance of Schedule - B Conditions of CFO Order dated 20.11.2018 is reported below.
2.	The industry shall not produce any un-consented products.	The industry manufactured consented products within the consented capacity. During the period from Dec, 2018 to Nov, 2019, the industry has manufactured Injectable- 46,384 Nos. Vials against permitted capacity 16,40,000/- vials.
3.	The industry shall provide additional above ground effluent collection tank to store the effluents to ensure two days holding capacity within a month.	The industry has converted ETP & STP tanks into effluent storage tanks viz., ETP Equalization tank - 35 KL, Aeration tank - 80 KL, RO Feed tank - 35 KL, STP Equalization tank - 15 KL and STP treated water storage tank - 15 KL. From these

		tanks finally pumped to 2 Nos. of HDPE tanks of 10 KL capacity each before sending to M/s. MANA CETP. The industry has total effluent storage capacity 200 KL which is sufficient for 2 days.
4.	The industry shall ensure that there are no seepages / overflow from the effluent storage tanks.	During inspection, no overflow was observed from effluent storage tanks.
<u>O</u> <u>B</u> <u>S</u>	5. The industry shall send all he effluents along with Domestic effluents to M/s. PETL, Patancheru for further treatment & disposal after meeting the CETP inlet standards.	The industry lifted process, washings, cooling bleed off along with domestic effluents to M/s. MANA CETP for further treatment and disposal. During the period from December, 2018 to November, 2019 has lifted total 7390 KL of wastewater to M/s. MANA CETP at an average of 20.52 KLD of wastewater against the permitted quantity of 89 KLD
<u>E</u> <u>R</u> <u>V</u> <u>A</u> <u>T</u>	6. The industry shall not discharge any treated / untreated effluents within / outside the industry premises.	During inspection, no discharge of wastewater was observed outside the industry premises.
<u>I</u> <u>O</u> <u>N</u>  <u>O</u> <u>F</u>  <u>T</u> <u>H</u> <u>E</u>  <u>C</u> <u>O</u>	7. The industry shall provide sufficient capacity of first run off rain water collection tank (@24 KL/acre) at appropriate location within a month. The contaminated rain water collected shall be disposed to CETP duly following manifest system.	The industry has provided rain water collection tank of capacity 120 KL & 5 KL and routed to collection tank to collect the first run off water and proposed lift to CETP along with other effluents. During the inspection, the industry constructing storm water drains and the line connectivity to tank is under progress. The industry shall connect all the storm water lines to the rain water collection tank and first run off shall be lifted to CETP along with other effluents and maintain records.
<u>M</u> <u>M</u> <u>I</u> <u>T</u>	8. The industry shall submit monthly details of production, effluent generated & disposal to E.E., RO, Hyderabad.	Submitting.
<u>T</u> <u>E</u> <u>E</u>  <u>T</u>	9. The industry shall revalidate he BG of Rs.4 Lakhs before its expiry till further orders from the Board.	The industry has revalidated BG of Rs.4 Lakhs with validity period upto 1 <sup>st</sup> November, 2020.

h

e Committee has inspected the industry on 12.12.2019 and found in operation.

- Earlier, the industry has above ground level ETP & STP consisting of Collection tank, Aeration tank, settling tank, ACF, PSF and Sludge Drying Beds.
- The industry has stopped STP & ETP operations. During the inspection, it was observed that, the industry has disconnected the pipeline connections, electricity connections to the STP & ETP. The industry converted ETP & STP tanks into effluent storage tanks.
- The industry has below ground level tank in tank structure i.e. 5 KL syntax tanks placed in

to above ground level collection tanks (ETP & STP tanks) viz., ETP Equalization tank – 35 KL, Aeration tank - 80 KL, RO Feed tank – 35 KL , STP Equalization tank – 15 KL and STP treated water storage tank – 15 KL. From there pumped to 2 Nos. of HDPE tanks of 10 KL capacity, and finally lifted process, washings, cooling bleed off along with domestic effluents to M/s. MANA CETP for further treatment and disposal. During the period from December, 2018 to November, 2019 has lifted total 7390 KL of wastewater to M/s. MANA CETP at an average of 20.52 KLD of wastewater against the permitted quantity of 89 KLD.

- The industry has total effluent storage capacity 200 KL which is sufficient for 2 days.
- Mechanical flow meter provided at Effluent collection tank, Domestic waste water collection tank and Digital flow meter provided at final treated waste water storage tank. The industry shall install Digital flow meter with totalizer facility instead of Mechanical flow meters.
- The industry has provided rain water collection tank of capacity 120 KL & 5 KL and routed to collection tank to collect the first run off water and proposed lift to CETP along with other effluents. During the inspection, the industry was constructing storm water drains and line connectivity is under progress. The industry representative informed that, excess rain water is letting out to TSIIC drain.
- The industry shall connect all the storm water lines to the rain water collection tank and first run off shall be lifted to CETP along with other effluents and maintain records.
- The industry has lifted 12655 kg of Hazardous waste to TSDF during the period from Dec, 2018 to Nov, 2019.
- The industry has lifted 8073.63 kg of Bio-Medical waste to CBMWTF during the period from Dec, 2018 to Nov, 2019.
- The industry is not maintaining records pertaining to waste oil disposal.
- The industry has provided separate shed for storage of Hazardous waste.
- The industry has MEE. The representative informed that, they are not operating MEE and lifting the entire effluents to CETP for further treatment and disposal.
- On the day of inspection, the Borewell was not in operation. Hence, sample water sample not collected.
- During inspection, the Joint Committee collected an effluent sample before lifting to MANA CETP. The analysis results are presented in the Tables 34 & 35 as given below:

**Table 34: Analysis results of waste water sample**

Parameter	Method (*) No.	Unit	Result 12280	CETP Inlet Standards
pH	4500-B	-	7.55	5.5 - 9.0
Total Suspended Solids	2540-D	mg/l	< 5	-
Total Dissolved Solids (Inorganic)	2540-E	mg/l	1,494	5,000
Chemical Oxygen Demand	5220-B	mg/l	99	15,000
Ammonical nitrogen as NH <sub>3</sub> -N	4500-NH <sub>3</sub> C	mg/l	12	50
Oil and Grease	5520 – B	mg/l	BDL	20
Phenolic compounds	5530 C	mg/l	BDL	5.0

Boron	4500- B,C	mg/l	BDL	2.0
Chromium Hexavalent (as Cr+6)	3500 - Cr B	mg/l	BDL	2.0
Cyanide (as CN)	4500 - CN -E	mg/l	ND	2.0
Fluoride (as F)	4500 -F, D	mg/l	0.2	15
Nickel (as Ni)	3111 B	mg/l	ND	3.0
Copper (as Cu)	3111 B	mg/l	ND	3.0
Zinc (as Zn)	3111 B	mg/l	0.3	15
Lead (as Pb)	3111 B	mg/l	ND	1.0
Arsenic (as As)	3114 C	mg/l	< 0.02	0.2
Mercury (as Hg)	3112 B	mg/l	< 0.01	0.01
Cadmium (as Cd)	3111 B	mg/l	ND	1.0
Total Chromium (as Cr)	3111 D	mg/l	ND	2.0

**BDL:** Below detectable limit and **ND:** Not detected.

The above results show that Pretreated effluent sent to CETP further treatment meets the CETP Inlet Standards.

**Table 35: AAQM results of M/s. Anneal Oncology Pvt. Ltd.**

Sampling Location	Date of Monitoring	Concentration in Micro Gram per Cubic Meter		
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
At the periphery of the industry beside oil storage tank (Upwind)	30.12.2019 & 31.12.2019	149	BDL	11.0
At the periphery of the industry near second gate of the unit (Downwind)	30.12.2019 & 31.12.2019	96	4.0	10.2
<b>NAAQ Standards</b>		<b>100</b>	<b>80</b>	<b>80</b>

The PM10 concentration (149 µg/m<sup>3</sup>) monitored at upwind & downwind direction inside the industry premises exceed NAAQ Standard (24hrs avg) of 100 µg/m<sup>3</sup>.

## 7. Monitoring of Ground water, Surface water and Soil samples from surroundings of TSIIC SEZ Polepally:

### A. Ground Water & Surface water:

The joint committee inspected in and around TSIIC SEZ Polepally and collected Ground water & Surface watersamples to know about the impact of pollution due to the industries located in SEZ Polepally. The analysis results of Ground water & Surface watersamples are presented in the Table 36 as given below:

**Table 36: Analysis results of Ground Water Samples collected from surroundings of SEZ**

Parameters	Unit	Sampling locations										
		11005	11007	11008	11009	11010	11011	11012	11013	11014	11016	11018
pH	-	7.43	6.90	7.14	7.23	7.21	7.19	7.36	7.18	7.11	7.68	7.68
Electrical	µS/cm	789	1090	1745	3540	4150	5040	4050	2032	4280	1360	1551

44

Total Suspended Solids	mg/L	< 5	< 5	< 5	< 5	21	< 5	< 5	< 5	< 5	< 5	< 5
Total Dissolved Solids	mg/L	446	712	996	2336	2685	3384	2429	1084	2817	758	960
Chlorides as Cl <sup>-</sup>	mg/L	55	104	238	779	1016	1303	874	325	1063	126	232
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	11	30	36	170	61	58	221	49	53	25	28
Total Alkalinity as CaCO <sub>3</sub>	mg/L	364	264	420	336	388	400	428	384	328	480	360
Total Hardness as CaCO <sub>3</sub>	mg/L	272	350	590	1430	1710	2090	1350	750	1510	450	470
Calcium as Ca+2	mg/L	62	92	108	280	308	264	180	144	284	96	84
Magnesium as Mg+2	mg/L	28	29	78	177	228	348	219	95	194	51	63
Nitrates	mg/L	5	44	43	42	15	16	31	45	40	22	24
Fluoride	mg/L	0.80	0.59	0.51	0.70	0.35	0.61	0.34	0.63	0.47	0.50	0.60
Phosphates	mg/L	0.52	BDL	BDL	BDL	BDL	BDL	0.35	0.61	BDL	0.43	0.83
Sodium as Na	mg/L	60	41	104	116	108	120	309	87	193	101	116
Potassium as K	mg/L	2	2	3	2	1	2	4	2	3	2	3
% Sodium	%	32	20	27	15	12	11	33	20	22	33	35
SAR	-	1.6	1.0	1.9	1.3	1.1	1.1	3.6	1.4	2.2	2.1	2.3
Residual Sodium Carbonate(RSC)	me/L	0.6	BDL									
Boron	mg/L	BDL	BDL	BDL	0.01	BDL	BDL	0.02	BDL	BDL	BDL	BDL

**BDL:** Below Detectable limit

**Sample code : Sample details / collection point**

- 11005 - Borewell sample collected from agricultural fields of E.AshanaGoud, Mudireddipalli
- 11007 - Borewell sample collected in front of M/s. Raju Hair cutting saloon, Mudireddipalli
- 11008 - Borewell sample from grampanchyatborewell near the house of Sri. SrikanthGoud, # 3-69 Rayapally (V)
- 11009 - Borewell sample collected from agricultural fields of Sr. Chennaiah, Rayapally (V), Jadcherla(M)
- 11010 - Borewell sample collected from agricultural fields of Sri. Ganesh Goud, Sy.No.412/7/E, Rayapally (V), Jadcherla (M).
- 11011 - Borewell sample collected from agricultural fields of Sri.VenkateshGoud, Rayapally(V), Jadcherla (M)
- 11012 - Borewell sample collected from agricultural fields of Sri.GopalGoud, Polepally (V)
- 11013 - Borewell sample collected near the house of Sri.Ramaswamy, Polepally (V)
- 11014 - Borewell sample collected from borewell no.2 of agricultural fields of Sri.Raghunandhan Chari, GundlagaddaThandaJadcherla (M)
- 11016 - Borewell sample collected within the premises of M/s.L&T Construction (Skills Taining Institute) Polepally (V) Jadcherla(M), Mahabubnagar District

- 11018 - Borewell sample collected within the premises of M/s. Supreme Industries, Polepally (V), Jadcherla (M).

The analysis results of ground water samples collected from bore wells of agricultural fields from surroundings of SEZ used for irrigation meet the IS:11624-1986 (Reaffirmed 2009), Guidelines for the Quality of Irrigation Water w.r.t. Total Salt Concentration, Sodium Adsorption Ratio (SAR), Residual Sodium Carbonate (RSC) and Boron Content. As per the above standard, the water quality rating based on the total salt concentration is provided in the Table 37 as given below:

**Table 37: water quality rating based on the total salt concentration**

Sl. No.	Class	Range of EC, $\mu\text{mhos/cm}$
1	Low	Below 1500
2	Medium	1500-3000
3	High	3000-6000
4	Very High	Above 6000

As per the above rating based on the total salt concentration, the water samples Code Nos. 11009 to 11012 & 11014 falls under high class as EC reported for these samples in the range of 3000-6000, water samples Code Nos. 11013 & 11018 fall under Medium Class and the remaining samples fall under Low Class.

As per the standard IS:11624-1986 (Reaffirmed 2009), the water quality rating based on SAR is provided in the Table 38 as given below:

**Table 38: water quality rating based on the SAR**

Sl. No.	Class	SAR Range
1	Low	Below 10
2	Medium	10-18
3	High	18-26
4	Very High	Above 26

As per the above rating based on SAR, all the water samples fall under Low Class (SAR < 10).

As per the standard IS:11624-1986 (Reaffirmed 2009), the water quality rating based on RSC is provided in the Table 39 as given below:

**Table 39: water quality rating based on the RSC**

Sl. No.	Class	RSC Range, me/L
1	Low	Below 1.5
2	Medium	1.5-3.0
3	High	3.0-6.0
4	Very High	Above 6

As per the above rating based on RSC, all the water samples fall under Low Class (RSC < 1.5).

As per the standard IS:11624-1986 (Reaffirmed 2009), the water quality rating based on Boron Content is provided in the Table 40 as given below:

**Table 40: water quality rating based on Boron Content**

Sl. No.	Class	Boron, ppm
1	Low	Below 1.0
2	Medium	1.0-2.0
3	High	2.0-4.0
4	Very High	Above 4

As per the above rating based on Boron Content, all the water samples fall under Low Class (Boron < 1.0).

**Table 41: Analysis results of Surface Water Samples collected from surroundings of SEZ**

Parameters	Unit	Results			
		11006	11015	11017	11019
pH	-	7.16	7.84	7.59	7.69
Electrical conductivity	µS/cm	257	1664	1668	2359
Chemical Oxygen Demand	mg/L	40	192	200	64
BOD 3 days 27°C	mg/L	14	33	26	36
Total Suspended Solids	mg/L	< 5	7	27	5
Total Dissolved Solids	mg/L	168	1024	965	1523
Total Alkalinity as CaCO <sub>3</sub>	mg/L	100	176	312	172
Total Hardness as CaCO <sub>3</sub>	mg/L	104	470	500	1310
Calcium as Ca <sup>+2</sup>	mg/L	24	112	140	156
Magnesium as Mg <sup>+2</sup>	mg/L	11	46	37	224
Nitrates	mg/L	4	7	19	6
Sodium as Na	mg/L	17	193	161	261
Potassium as K	mg/L	8	13	17	16
Boron	mg/L	0.16	0.69	0.67	BDL
Free Ammonia	mg/L	BDL	BDL	0.53	BDL
% Sodium	%	24	46	40	30
SAR	-	0.7	3.9	3.1	3.1
Oil & Grease	mg/L	-	-	BDL	-
Residual Sodium Carbonate (RSC)	me/L	BDL	BDL	BDL	BDL
Total coliform	MPN/100ml	240	33	350	280
Fecal coliform	MPN/100ml	49	5	79	79

**BDL:** Below Detectable Limit. Except the presence of Total & Faecal Coliforms, no major variations observed in the Physico-Chemical characteristics of the above surface water samples.

**Sample code : Sample details / collection point**

- 11006 - Water sample collected from MudireddipalliCheruvu
- 11015 - Stagnated water collected from pit in GandlagaddaThanda (V), Jadcherla(M)
- 11017 - Waste water sample collected from nallahinfront of M/s. Thermo cables Unit 2, Polepally (V), Jadcherla (M)
- 11019 - Stagnated water collected from a pond located infront of M/s. Shilpa Medicare, Polepally (V), Jadcherla (M).

**B. Soil Samples:**

The joint committee inspected in and around SEZ TSIIC Polepally and collected Soil samples to know about the impact of pollution due to the industries located in SEZ Polepally. The analysis results of Soil samples are presented in **Table 42** as given below:

**Table 42: Analysis results of Soil Samples collected from Northern side of SEZ**

Parameter	Results	
	(12269)	(12275)
Colour	Light grey	Light brown
State	Solid	SOLID
pH @ 25 °C (1:5)	7.91	8.02
Electrical Conductivity (1:5) us/cm	44.9	636
Organic Carbon (%)	1.67	0.9
Calcium as Ca (mg/kg)	1600	800
Magnesium as Mg (mg/kg)	3400	3880
Boron	3.5	1.76
Nitrogen as N %		
Phosphorus as P (mg/kg)	2.48	485
Potassium as K (mg/kg)	900	664
Copper (mg/l)	ND	ND
Zinc (mg/l)	<0.1	<0.1
Cadmium (mg/l)	ND	ND
Nickel (mg/l)	ND	ND
Lead (mg/l)	<0.2	<0.2
Chromium (mg/l)	<0.2	<0.2

12269 - Soil sample collected from agricultural field of Sri A. Ganesh Goud, Sy.no.412/7/E, Rayapally village, Jadcherla (M), Mahaboobnagar District.

12275 – Soil samples collected from agricultural field of Sri K. Kishan, Chakali GaddaThanda.

The analysis results of above soil samples collected from the agricultural fields from northern side of SEZ, where complainants fields are located, reveals that the pH of the soil is slightly alkaline as pH is reported as 7.91 & 8.02 against the standard of 6.5-7.5, salinity effect is negligible as EC is reported less than 1dSm-1, Micro nutrients like Zinc & Copper are less than critical levels of 0.7 ppm and 0.3 ppm respectively and Heavy Metals like Cadmium, Nickel, Lead and Chromium are less than permissible limits of 0.5 ppm, 2 ppm, 5 ppm and 2 ppm respectively.

**L. M/s. Suvarna Apparel & Fashion Exports Limited., Sy.Nos.103 to 109 & 148 to 152, Rangareddyguda (V), Balanagar (M), Mahabubnagar District:**

- M/s. Suvarna Apparel & Fashion Exports Limited is a textile unit involved in the manufacturing of the Grey Yarn Knitting and Knitted Fabrics Processing.
- The industry has CFO with a validity period upto 28.02.2022 for the manufacturing of the Grey Yarn Knitting and Knitted Fabrics Processing - 125 Tons/month.
- During the period from Dec, 2018 to Nov, 2019, the industry has manufactured Grey Yarn Knitting and Knitted Fabrics Processing – 60.28083 Tons/month (Avg.) against permitted capacity 125 Tons/month.
- The industry consumes water of about 276.5 KLD for Process & Washings – 266.0 KLD, Boiler Feed & Cooling Tower make up – 8.0 KLD and Domestic – 2.5 KLD.
- The industry generates wastewater of about 260.5 KLD from Process & Washings – 230.0 KLD, Dyeing effluents – 30.0 KLD and Domestic – 0.5 KLD.

- The industry has husk fired boiler of capacity 6 TPH and Thermic Fluid Heater of capacity 1.5 Lakh K.cal/hr. The industry has provided Multi cyclone followed by common water trough system followed by bag filter to control the boiler emissions.
- The industry has D.G. Sets of capacity 320 KVA, 225 KVA and 62.5 KVA.
- The Board has issued Closure Order to the industry for Non-Compliance of Board directions& Consent conditions vide order dated 27.07.2019.
- Subsequently, the Board has issued Restoration of single phase power supply vide order dated 08.11.2019 as per the request of the industry for rectification works by duly not permitting the industry production activity till the industry obtains Revocation of Closure Orders.

**OBSERVATION OF THE COMMITTEE:**

- The Committee has inspected on 11.12.2019 and the industry was not in operation due to closure order issued by the Board.
- The industry has separate pipeline for collection of HTDS & LTDS effluents.
- The industry has ETP, followed by RO (2stage) system. The RO rejects along with HTDS effluents is sent to MEE followed by centrifuge.
- Mechanical flow meter installed at raw water intake point to measure the water consumption. Digital flow meter installed at RO feed, RO permeate and at MEE feed tank.
- The industry has provided closed shed for storage of husk& husk ash, but the openings were observed.
- The industry has provided concreted platform for filter press. The leachate is routed to Aeration tank-II for treatment.
- The industry has not provided proper shed for storage of hazardous waste.The industry has not provided hazardous waste storage area with elevated concreted platform by providing leachate collection pit.
- The industry has husk fired boiler of capacity 6 TPH and Thermic Fluid Heater of capacity 1.5 Lakh K.cal/hr. The industry has provided Multi cyclone followed by common water through system followed by bag filter to control the boiler emissions.
- The D.G. Sets stack shall be extended above the roof of the building with sufficient height as per the CPCB guidelines of Emission Regulations Part-IV.
- The borewell sample was not collected due to power disconnection.
- The condition wise compliance of Closure Order conditions are as follows:

S. No.	Closure Order dated 27.07.2019 condition	Compliance status
1.	The industry is not segregating the high TDS & low TDS effluents as per the CFO order.	The industry has separate pipeline for collection HTDS &LTDS effluents.
2.	The industry is not lifting the total high TDS & low TDS effluents generated after pre-treating the effluents in ETP.	
3.	The industry has not constructed closed shed / silo for storage of boiler ash and	The industry has provided closed room for storage of

	storing ash openly.	boiler ash.
4.	The industry has not upgraded the ETP and not lifted the ETP sludge & MEE salts stored in the premises.	The RO rejects along with HTDS effluents are sent to MEE followed by pusher filter. The industry has
5.	MEE system was in dilapidated / not in working condition indicating that the industry is discharging HTDS effluents without proper treatment.	The industry has MEE plant for evaporation of HTDS effluents
6.	The industry is arresting overflow of plant effluents and discharging the same on land near the production block.	The industry is not in operation due to closure order
7.	The industry is not operating the Force Evaporation System regularly viz., Multi Effect Evaporator (MEE) followed by pusher centrifuge to evaporate the R.O. Rejects and dyeing effluents.	
8.	The industry is not upgraded the air pollution control equipment (APCE) attached to 6 TPH Boiler.	The industry has provided Multi cyclone followed by common water trough system followed by bag filter to control the boiler emissions.
9.	As per the stack monitoring report carried out at Husk fired boiler of capacity – 6 TPH, the SPM – 570 mg/Nm <sup>3</sup> against the standards (115 mg/Nm <sup>3</sup> )	The industry is not in operation due to closure order
10.	The Board Officials have collected Bore Well samples from Mango garden of Sri Rajender Reddy, adjacent to the industry i.e., about 20 mtrs. distance on Southern side of the industry. The analysis results indicate that the parameters i.e., TDS, Chlorides, Total Alkalinity, Total hardness, Calcium as Ca <sup>+2</sup> , Magnesium as Mg <sup>+2</sup> & COD are exceeding the permissible limits of the drinking water standards. Date of sampling please.	Borwell sample collected from Mango garden on 11.12.2019. The results are awaited.
11.	Housekeeping within premises is poor.	The industry has improved house keeping

- It was alleged by Sri Satyanarayana, Supervisor of Mango Garden located adjacent to this industry on the southern side alleged that the industry was earlier discharging its effluent inside the factory premises without any treatment as a result the bore well water in Mango Garden was contaminated. Hence, it was decided by the Joint Committee to collect soil samples at different locations inside the premises of M/s. Suvarna Apparel & Fashion Exports Limited. The ground water sample could not be collected as the bore

well pump was out of order. The analysis results soil samples are presented in the Table 43 as given below:

**Table 43: Analysis results of soil samples**

S. No	Parameter	Results			
		Eastern side	Western side	Northern side	North- East side
1.	Colour	Brown	Light grey	Grey	Grey
2.	State	Solid	Solid	Solid	Solid
3.	pH @ 25 °C (1:5)	9.02	9.74	5.6	9.76
4.	Electrical Conductivity (1:5) us/cm	489	121.1	25.07	930
5.	Organic Carbon (%)	1.4	2.21	0.4	1.36
6.	Calcium as Ca (mg/kg)	800	800	2400	3200
7.	Magnesium as Mg (mg/kg)	486	ND	4370	3400
8.	Boron (mg/kg)	3.8	1.44	4.38	3.7
9.	Nitrogen as N %	0.1	0.1	0.1	0.04
10.	Phosphorus as P (mg/kg)	25.0	ND	49.0	52.34
11.	Potassium as K (mg/kg)	1213	ND	1088	743
12.	Copper (mg/l)	ND	ND	ND	ND
13.	Zinc (mg/l)	<0.1	0.1	<0.1	<0.1
14.	Cadmium (mg/l)	ND	ND	ND	ND
15.	Nickel (mg/l)	ND	ND	ND	ND
16.	Lead (mg/l)	<0.2	0.2	<0.2	<0.2
17.	Chromium (mg/l)	<0.2	<0.2	<0.2	<0.2

**ND:** Not Detected.

- The above soil analysis results show that the pH of the soil inside the premises at northern side is acidic (pH5.6) and in East, West and North-East side it is highly alkaline (pH in the range of 9.02 to 9.76).
- The soil is not contaminated with heavy metals. The electrical conductivity of the soli analysis results shows that the salinity effect is negligible.
- The micro nutrients and Heavy Metal levels in the soil are less than critical and permissible levels respectively.
- During inspection of M/s. Suvarna Apparel & Fashion Exports Limited, the Joint Committee decided to collect soil and ground water samples outside the industry premises to know the impact of pollution on soil and ground water due to this industry.

#### **8. Monitoring of Ground water and Soil samples from the surroundings of M/s. Suvarna Apparel & Fashion Exports Limited:**

##### **A. Ground Water:**

The joint committee inspected in and around M/s. Suvarna Apparel & Fashion Exports Limited, and collected ground water samples from complainants agricultural fields bore well at **Gundlapotlapally** Village (Sample Code Nos. 12258 & 12259) located at about 2-3 KMs away towards eastern side of the industry and from Mango garden of Sri. Rajender Reddy (Sample Code No. 12198) which is located just adjacent to the industry towards Southern side in order to

know about the impact of pollution due to this industry. The analysis results of these Ground water samples are presented in Table 44 as given below:

**Table 44: Analysis results of ground water samples of complainants of M/s Suvarna Apparel & Fashion Exports Limited**

Parameters	Unit	Results			Drinking water standards as per IS 10500: 2012
		12258	12259	12198	
pH	--	7.27	7.06	6.39	6.5-8.5
Electrical conductivity	µS/cm	2562	2715	--	--
Total Suspended Solids	mg/L	< 5	< 5	38.0	--
Total Dissolved Solids	mg/L	1848	1540	4627	500* (2000**)
Chlorides as Cl <sup>-</sup>	mg/L	585	735	2479	250* (1000**)
Sulphates as SO <sub>4</sub> <sup>-2</sup>	mg/L	41	57	131	200* (400**)
Total Alkalinity as CaCO <sub>3</sub>	mg/L	296	300	424	200* (600**)
Total Hardness as CaCO <sub>3</sub>	mg/L	1136	1276	3720	200* (600**)
Calcium as Ca <sup>2+</sup>	mg/L	240	195	936	75* (200**)
Magnesium as Mg <sup>2+</sup>	mg/L	130	191	335	30* (100**)
Nitrates	mg/L	9	62	19	45
Fluoride	mg/L	BDL	BDL	1.4	1.0* (1.5**)
Phosphates	mg/L	<0.1	<0.1	1.7	--
Sodium as Na	mg/L	70	88	252	--
Potassium as K	mg/L	1	1	2.6	--
% Sodium	%	12	13	12.85	--
SAR	--	0.9	1.1	1.80	--
Boron	mg/L	1.8	1.6	0.2	--
Residual Sodium Carbonate (RSC)	me/L	-17.8	-20.5	-70	--
Copper	mg/L	< 0.1	< 0.1	ND	0.05*(1.5**)
Nickel	mg/L	ND	ND	ND	0.02
Zinc	mg/L	< 0.1	0.125	0.8	5*(15**)
Cadmium	mg/L	ND	ND	ND	0.003
Lead	mg/L	ND	ND	ND	0.01
Manganese as Mn	mg/L	--	--	0.15	--
Iron as Fe	mg/L	--	--	< 0.1	--
Mercury as Hg	mg/L	--	--	ND	--
Total Arsenic	mg/L	--	--	ND	--

- 12258 - Borewell water sample collected from agriculture field of Sri. Shankaraiah, Gundlapotlapally
- 12259 - Borewell water sample collected from agriculture field of Sri. Gopal, Gundlapotlapally
- 12198 - Borewell water sample collected in Mango field of Rangareddygudem

- The above analysis results show that the parameters like TDS, Chlorides, Total Alkalinity, Total Hardness, Calcium and Magnesium exceed the permissible limit of drinking water standards in all the three ground water samples. The sample collected in Mango garden which is located just adjacent to the industry has got concentrations significantly higher than other two ground water samples w.r.t. the above parameters.
- The above bore well waters are used only for irrigation purposes. As per IS:11624 – 1986 (RA 2009) the Guidelines for the Quality of Irrigation Water, the Sodium Absorption Ratio (SAR), Residual Sodium Carbonate (RSC) and Boron meet the water quality criteria for irrigation.

**B. Soil:**

The Joint Committee collected soil samples in the Mango garden located just adjacent to M/s. Suvarna Apparel & Fashion Exports Limited on the southern side where ground water sample was also collected as the supervisor of the Mango garden Sri Satyanarayana had alleged that yield of Mango from Mango plants reduced considerably due to the discharge of untreated effluents inside the industry premises that contaminated the ground water of Mango garden which in turn contaminated the soil of the Mango garden as the same ground water is used for Mango plants. The total area of the Mango garden is about 10 acres and before collecting soil samples the entire area was divided into four grids (Grid 1 – 4). The samples collected in each grid at various places below one metre depth were mixed together thoroughly and a portion from each grid was taken to the laboratory for the analysis. Sri Satyanarayana, Supervisor of Mango Garden also alleged that Sri Dilip Reddy's land located on the northern side of M/s. Suvarna Apparel & Fashion Exports Limited is also got affected due to the discharge of untreated industrial effluent of this industry. The Committee decided to collect a sample here too. The soil samples collected below one metre depth at various locations in Dilip Reddy's land was combined together thoroughly and a portion was taken to the laboratory for the analysis. No agricultural activity is going on in Dilip Reddy's land at present as it appears barren land and one Hollow Block Brick Unit is functioning in this land. The analysis results of soil samples collected from Mango garden and Sri Dillip Reddy's land are presented in the **Table 45** as given below:

**Table 45: Analysis results of soil samples collected adjacent to M/s. Suvarna Apparel & Fashion Exports Limited**

Parameter	Results				
	Sri Dilip Reddy's Land	Mango Garden Grid 1	Mango Garden Grid 2	Mango Garden Grid 3	Mango Garden Grid 4
Colour	Light brown	Dark brown	Brown	Dark brown	Brown
State	SOLID	Solid	solid	Solid	Solid
pH @ 25 <sup>o</sup> C (1:5)	9.22	6.61	6.04	6.53	6.55

Electrical Conductivity (1:5) us/cm	35.4	49.5	70.3	31.0	37.5
Organic Carbon (%)	1.04	11.22	3.3	2.4	1.95
Calcium as Ca (mg/kg)	800	800	800	800	1600
Magnesium as Mg (mg/kg)	3880	1458	486	486	-
Boron	1.96	2.2	5.4	3.2	3.0
Nitrogen as N %	---	0.1	0.1	0.1	0.1
Phosphorus as P (mg/kg)	ND	ND	50.23	115.26	25.79
Potassium as K (mg/kg)	ND	879	945	967	934
Copper (mg/l)	<0.1	ND	ND	ND	ND
Zinc (mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (mg/l)	ND	ND	ND	ND	ND
Nickel (mg/l)	ND	ND	ND	ND	ND
Lead (mg/l)	<0.2	---	---	<0.2	<0.2
Chromium (mg/l)	<0.2	<0.2	<0.2	<0.2	<0.2

- The analysis results of above soil samples reveals that the pH of the Mango Garden soil is almost neutral except at Grid 2 which is slightly acidic and Sri Dilip Reddy's soil is highly alkaline. The Electrical Conductivity values of the soil reveal that the salinity effect on the soil is negligible. The micro nutrients and Heavy Metal levels in the soil are less than critical and permissible levels respectively.

#### RECOMMENDATION OF THE JOINT COMMITTEE (INDUSTRY WISE):

##### 1. M/s Hetero Labs Ltd., Unit – I, Unit – II & Unit – III, TSIIC, SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District:

- The industry should stop the operation of oil fired boiler of capacity 1 X 5 TPH immediately as it is operated without permission of the SPCB.
- The industry should install separate energy meters to the APCE connected with Briquette fired boiler of capacity 1 x 5 TPH.
- The industry treats all its effluents, except RO rejects, in its treatment facility and reuse it against SPCB order dated 08.01.2018 which says that the industry shall lift the entire effluents from Unit – I, Unit – II & Unit – III to M/s PETL CETP. The industry should strictly comply the Board's order dated 08.01.2018.
- The industry shall take adequate control measures to prevent seepages to the adjacent industry namely M/s Shilpa Medicare Ltd., during rainy season.
- The industry should take control measures to meet the particulate matter emission from the stack attached to the Briquette fired boiler of capacity - 5 TPD.

##### 2. M/s. Shilpa Medicare Limited (Formerly Raichem Life Science Pvt. Ltd.), Plot No.S-20, S-21, S-22, S-23 & S-24,-A at TSIIC-SEZ, Peddpally (V), Jadcherla (M) , Mahabubnagar District:

- The industry should provide first run off rain water collection tank of appropriate capacity based on the area of the industry and first run off collected shall be lifted to CETP along with other effluents and maintain records.
- The industry should provide adequate storage capacity to store the effluents for minimum of seven days capacity as prescribed in CFO.
- The industry should take control measures to meet the particulate matter emission from the stack attached to the Briquette fired boiler of capacity-3TPH.

3. **M/s. Aurobindo Pharma Ltd. Unit – VII, Sy.No.408 to 412, 418 to 435 etc.TSIIC-SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- The industry should dismantle the below ground level effluent storage tanks being used to store industrial effluents as well as domestic waste water as per the Board's directions dt. 27.07.2019.
- The industry should go for first run off rain water collection tank of appropriate capacity considering the total area of the industry (50 Acres) as the existing tank capacity of 160 KL is highly insufficient and first run off collected shall be lifted to CETP along with other effluents and maintain records.
- The industry should provide the leachate collection system in the Hazardous waste storage shed.
- The empty raw material storage drums should be detoxified properly and stored in the closed shed before disposal.
- The dedicated storage area should be provided to store the waste oil drums before its disposal.
- The dust collector along with chimney should be provided in the mill room where crushing of rejected / expired medicines are carried out.
- The industry should obtain necessary permission from the Board for the operation of coal fired boiler of capacity 6 TPH with Bag filter followed by mechanical dust collector as APCE as it is operated without CFO of the Board.
- The industry should provide vent condensers in the storage tanks (2 Nos.) of capacity of 20 KL each where mixed spent solvents are stored.
- The industry treats all its effluents, except RO rejects, in its treatment facility and reusing it. The industry shall lift the entire effluents to M/s PETL CETP, as per the Board's directions dated 27.07.2019 for further treatment and disposal.
- The industry should take control measures to meet the particulate matter emission from the stack attached to the Furnace oil boiler of capacity - 4 TPH.

4. **M/s. Aurobindo Pharma Ltd. Unit – XVI, Sy.No.408 to 412, 418 to 435 etc. SEZ-IP, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- The industry should dismantle all the below ground tanks being used for storage of waste water.
- The industry should stop the operations of 2 No. of 5 TPH Oil fired boilers and operate after obtaining the CFO of the Board.
- The industry should provide leachate collection pit in the hazardous waste storage facility. The industry should provide first run off rain water collection tank of appropriate capacity based on the area of the industry and first run off collected shall be lifted to CETP along with other effluents and maintain records.

5. **M/s. APL Health Care Ltd., Sy.No.410/P,411/P & 458/P, Plot No.S-1/B, TSIIC, SEZ, Polepally (V), Jadcherla (M), Mahabubnagar District:**

- The industry should dismantle all the below ground level tanks being used for storage of waste water.

- The industry should stop the operations of 2 No. of 5 TPH Oil fired boilers immediately as it is operated without CFO of the Board. The industry should not operate D.G. Sets 3 x 1500 KVA, 1 x 1000 KVA and 1 x 2000 KVA without obtaining CFO from the Board.
  - The industry should provide leachate collection pit in the hazardous waste storage facility.
  - The industry should provide first run off rain water collection tank of appropriate capacity based on the area of the industry and first run off collected shall be lifted to CETP along with other effluents and maintain records.
  - The empty raw material storage drums should be detoxified properly and stored in the closed shed before disposal.
  - The dedicated storage area should be provided to store the waste oil drums before its disposal.
  - The dust collector along with chimney should be provided in the mill room where crushing of rejected / expired medicines are carried out.
  - The industry should improve the house keeping in the hazardous waste storage area.
6. **M/s. Mylan Laboratory, (Formerly M/s.Glochem Industries Ltd.), Sy.no.408, 410, Plot No.S-16 & S-17/A, TSIIC-SEZ, Polepally (V), Jadcharla (M), Mahabubnagar District:**
- The industry should dismantle all the below ground level tanks being used for storage of waste water.
  - The industry should provide adequate storage capacity to store the effluents for minimum of seven days capacity as prescribed in CFO.
  - The industry should provide first run off rain water collection tank of appropriate capacity based on the area of the industry and first run off collected shall be lifted to CETP along with other effluents and maintain records.
  - The industry should provide Digital Flow meters at inlet & outlet of ETP and STP to quantify the wastewater generated and disposed to PETL CETP.
7. **M/s. Evertrogen Life Sciences (Formerly M/s. Optimus Generics Ltd.), Plot No.S-8, S-13/P & S-14/P, TSIIC, SEZ, Green Industrial Park, Polepally (V), Jadcherla (M), Mahabubnagar District:**
- The industry should provide adequate storage capacity to store the effluents for minimum of seven days capacity as prescribed in CFO.
  - The industry should provide first run off rain water collection tank of appropriate capacity based on the area of the industry and first run off collected shall be lifted to CETP along with other effluents and maintain records.
8. **M/s. ShriKartikevaPharma (SEZ Unit), Sy.No.408-412, 418-435, 437-445, Polepally (V), Jadcherla (M), Mahaboobnagar District:**
- The industry should provide adequate storage capacity to store the effluents for minimum of seven days capacity as prescribed in CFO.
  - The industry should not operate FE system without obtaining permission from Board.
  - The industry should install digital flow meter to the final storage tank to quantify the waste water disposed to CETP.

9. **M/s. Amneal Oncology Pvt. Ltd. (Formerly M/s. Epsilon Pharmaceuticals Private Limited), Plot No.A-3, S-4 & A-5A, Sy.No.411, 425 etc. Polepally (V), Jadcherla (M), Mahabubnagar District:**

- The industry should provide adequate storage capacity to store the effluents for minimum of seven days capacity as prescribed in CFO.
- The industry should provide first run off rain water collection tank of appropriate capacity based on the area of the industry and first run off collected shall be lifted to CETP along with other effluents and maintain records.
- The industry shall install Digital flow meter with totalizer facility instead of Mechanical flow meters.

10. **M/s. Suvarna Apparel & Fashion Exports Limited., Sy.Nos.103 to 109 & 148 to 152, Rangareddyguda (V), Balanagar (M), Mahabubnagar District:**

- The industry should provide proper shed for storage of hazardous waste and the storage area has to be provided with elevated concreted platform with dyke wall and leachate collection pit.
- The industry should extent the D.G. Sets stack above the roof of the building where it is installed with sufficient height as per the CPCB guidelines of Emission Regulations Part-IV.
- The industry should provide closed sheds for storage husk and husk ash to avoid the fugitive emissions.
- The soil analysis results show that the pH of the soil inside the premises is in the range of 5.6 to 9.76 which indicates the soil is either acidic or alkaline in nature. This may be due to discharge of untreated effluents inside the premises earlier.
- The industry is right now under closure order. The industry should not be allowed to resume its operations until unless it upgrades ETP, MEE system with crystallizer and APCE attached with 6 TPH Boiler in all respects.
- It was learnt that the industry is going to close its operations permanently and in this regard the industry has reportedly submitted a letter to Member secretary, Telangana SPCB, Hyderabad.

**CONCLUSIONS:**

1. All the industries located in TSIIC SEZ Polepally, Jadcherla Mandal, Mahabubnagar District, Telangana are Pharmaceutical Formulations Units only except M/s Shri Kartikeya Pharma which is engaged in Ashwagandha extraction. All these industries are falling under Orange Category only and not Red Category as informed by the Petitioner to the Hon`ble NGT. It may also be informed here that Pharmaceutical Formulation industries are not coming under the purview of Environmental Clearance.
2. The industries located in TSIIC SEZ Polepally may be directed to comply with the recommendations of the Joint Committee for non-compliances as given above and submit the Action Taken Report (ATR) with time bound action plan to Telangana SPCB. Also as directed by the Hon`ble NGT in its Order dated September 20, 2019, Telangana SPCB may be directed to initiate action against violating industries by imposing environmental compensation for the violation period observed based on `polluter pays` principle as per the guidelines prepared by CPCB.

3. The analysis results of ground water samples collected from bore wells of agricultural fields from surroundings of SEZ used for irrigation meet the IS:11624-1986 (Reaffirmed 2009), Guidelines for the Quality of Irrigation Water w.r.t. Sodium Adsorption Ratio (SAR), Residual Sodium Carbonate (RSC) and Boron Content. As regards to Total Salt Concentration, nearly 50 % of the bore well samples used for agricultural purposes fall under High Class as Electrical Conductivity is reported in the range of 3540 to 5040  $\mu\text{mhos/cm}$ . As the historical data of ground water quality of this area is not available, the reason for high salt content in these samples could not be explained clearly. The extensive use of ground water for agricultural purpose may be one of the reasons as there are no other water sources in this area other than ground water.
4. The analysis results of soil samples collected from the agricultural fields from northern side of SEZ, where complainants fields are located, reveals that the pH of the soil is slightly alkaline as pH is reported as 7.91 & 8.02 against the standard of 6.5-7.5, salinity effect is negligible as EC is reported less than  $1\text{dSm}^{-1}$ , Micro nutrients like Zinc & Copper are less than critical levels of 0.7 ppm and 0.3 ppm respectively and Heavy Metals like Cadmium, Nickel, Lead and Chromium are less than permissible limits of 0.5 ppm, 2 ppm, 5 ppm and 2 ppm respectively. This above results show that soil is not polluted. However, it is suggested that the farmers may take the advice of district agricultural officer and take corrective measures accordingly as the Joint Committee do not have expertise in this field.
5. The discharge of either treated or untreated effluents from any of the industries located in TSIIC SEZ Polepally from its premises was not noticed by the Joint Committee during inspection and monitoring of these industries.
6. The Joint Committee noticed that TSIIC SEZ Polepally is lacking the drainage facility for collection and diversion of storm water. TSIIC may be directed to provide this facility immediately.
7. It is suggested that TSIIC may install piezometric wells in all the four directions of SEZ to monitor the quality of ground water from time to time and develop green belt in the SEZ area.
8. M/s. Suvarna Apparel & Fashion Exports Limited is located at Sy.Nos.103 to 109 & 148 to 152, Rangareddyguda (V), Balanagar (M), Mahabubnagar District and not in TSIIC SEZ Polepally. The distance between the former and later is more than 7 KM. M/s. Suvarna Apparel & Fashion Exports Limited was not in operation during inspection of the Joint Committee due to closure order issued by Telangana SPCB.

*S. Jeyapaul*  
**S. JEYAPPAUL)**  
 Scientist 'D'

*G. Hanumantha Reddy*  
**(G. HANUMANTHA REDDY)**  
 Joint Chief Environment Engineer (FAC)



**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 189/2019

(With Report dated 30.07.2019)

Sarvan Kumar, Advocate

Applicant(s)

Versus

State of Telanganas

Respondent(s)

Date of hearing: 20.09.2019

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

For Applicant(s): Mr.Sarvan Kumar, in person

For Respondent(s): Mr. Dhananjay Bajjal, Advocate for TSPCB

**ORDER**

1. The question for consideration is the remedial action against pollution caused by Pharma companies at TSIIC SEZ in Jadcharla, Mahaboob Nagar, Telangana.
2. Vide order dated 15.04.2019, a factual and action taken report was sought from the Telangana Pollution Control Board (TPCB).
3. Accordingly, report dated 30.07.2019 has been filed to the effect that two industries have been closed and nine industries have been required to comply with the norms. Closure order in respect of the said two industries was later revoked. Again on 27.07.2019, closure order has been passed in respect of three industries and directions have been issued in respect of nine other industries requiring them to send pre-treated effluents for treatment. The report does not show

steps taken between 2017 and 2019 though one of the annexures shows that even in the year 2018 closure order was passed.

4. In view of the fact that the industrial area in question is a polluted area and the industries in question are 'red category' industries, strict vigilance is required to be maintained for upholding the environmental norms. We also consider it appropriate to require a joint report from the Central Pollution Control Board (CPCB) and the TSPCB after three months. TSPCB will be the nodal agency for compliance. The TSPCB may enforce the principle of 'Polluter Pays' in respect of the units which have been found to be violating the environmental norms or which may be hereafter be found to be doing so. Compliance in this regard may also be included in the next report.

A copy of this order be sent to the CPCB and the TSPCB by e-mail for compliance.

List for further consideration on 24.01.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

September 20, 2019  
Original Application No. 189/2019  
DV