Task Force Committee Meeting held on 14.06.2019

Agenda No.:

M/s. Krebs Bio-chemicals Ltd., Kothapalli (V), Kasimkota (M), Visakhapatnam District and involved in manufacturing of bulk drugs.

The Board has reviewed the status of pollution control measures taken by the industry before External Advisory Committee (TF) meeting held on 16.09.2016 and issued directions to the industry on 03.10.2016 for non-compliance of Board directions and consent order conditions.

The Board has issued CFO & HW Authorization on 01.06.2017 with validity upto 31.03.2021 for manufacturing of Bulk Drug products. The industry permitted to manufacture 7 products at any given time i.e., 4 products from Group A to a maximum of 100% capacity (1058.25 kg/day) and 3 products from Group B to a maximum of 100% capacity (1700 kg/day). Thus the industry proposed to manufacture a maximum capacity of 2758.25 kg/day.

The Board has reviewed the status of pollution control measures taken by the industry before EAC (TF) meeting held on 10.10.2018 and issued specific directions for discharge of untreated effluents outside the premises and non-compliance of consent order conditions.

The Board has issued the following directions on 02.01.2019 under Sec.33 (A) of Water (Prevention and Control of Pollution) Amendment Act, 1988 and under Sec.31 (A) of Air (Prevention & Control of Pollution) Amendment Act, 1987:

1. The industry shall segregate effluents into a) process effluents which are bio-degradable, b) boiler blow down and cooling water blowdown, c) process effluents with high COD & TDS, d) RO rejects, e) MEE condensate and f) domestic effluents (Canteen & overflow from septic tanks) and shall treat as per the options mentioned in the consent order. The industry shall maintain records for all the above segregate effluents and store separately in individual tanks.
2. The industry shall evaporate all the effluents stored within the premises in MEE within 30 days and maintain records pertaining to the quantity of effluents taken into MEE and MEE salts generated & disposed to TSDF.
3. The industry shall not discharge any effluents outside the premises under any circumstances.
4. The industry shall operate the ZLD system continuously.
5. The industry shall store the Hazardous solid waste and detoxified container & container liners on a raised platform in a closed shed with leachate collection system.
6. The industry shall remove all the pipe lines which are leading to compound wall and outside the premises.
7. The industry shall take necessary measures for control of spillages from the process area and tanks.
8. The industry shall prepare a detailed environment management plan covering all the aspects mentioned in these directions including micro water shed management plan to isolate and prevent discharge of contaminated run off to outside the premises.
9. The industry shall dispose off the Hazardous waste stored within the premises to TSDF immediately.
10. The industry shall submit a BG for Rs.10.0 Lakhs towards the compliance of the above directions in prescribed format to EE, RO, Visakhapatnam within 10 days.
11. The industry shall comply with all the directions issued by the Board vide order dated: 03.10.2016 & 29.10.2018.
12. The industry shall ensure continuous compliance of conditions issued in the CFO and HWA order.

The industry vide letter dt.22.01.2019 requested time for compliance of directions and waving of Bank Guarantee of Rs.10.00 Lakhs. It was also informed that the industry was segregating organic and in-organic effluents storing separately before required treatment given to them. It was stated that they are operating MEE system continuously and committed to treat the effluents which were stored earlier. It was also informed that they consulted one service provider for preparation and implementation of EMP and Micro Watershed Management Plan.

In the mean time, a complaint was filed by Sri E.A.S. Sharma addressed to the Secretary, MoEF&CC and also to the Chief Secretary, GoAP on 05.01.2019. The officials of RO & ZO,
Visakhapatnam have inspected M/s Krebs Bio Chemicals Industries Ltd., Visakhapatnam on 06.05.2019 to verify the facts of the complaint and compliance with the Board directions.

The JCEE, ZO, Visakhapatnam issued stop production order on 09.05.2019 to the industry for not operating ZLD system & discharging untreated effluents, non-compliance of Board directions & consent order conditions duly obtaining the approval of Chairman, APPCB.

The industry represented to ZO, Visakhapatnam vide Lr. dt.10.05.2019 stating that they required 2 months time to comply the directions in Stop Production Order dt.09.05.2019 and also for lifting of effluents (450 KL) in storage tanks to M/s Coastal Waste Management project, Parawada for treatment after getting permission from the Board. The ZO, Visakhapatnam has forwarded industry’s request to the Board office.

Another complaint received from Sri E.A.S. Sharma on 15.05.2019 through e-mail addressed to Secretary, MoEF&CC and also to the Chief Secretary, GoAP against the industry.

The Board has reviewed the status of pollution control measures taken by the industry before EAC (TF) meeting held on 28.05.2019 and upon recommendations of the committee directed the officials of ZO & RO, Visakhapatnam to inspect the industry and verify the status of various items mentioned in their representation and to collect the bore well samples at a distances of 200m, 300m, 500m, 1000m from the industry along with GPS location & details of owners of bore wells, existing at downstream villages within five days and to verify the conditions stipulated in stop production order.

The EE, RO, Visakhapatnam inspected the industry on 31.05.2019 and furnished the report has follows:

The RO, Vizag collected ground water samples at different locations as shown by the villagers on 29.05.2019 along with hand bore well samples also. The industry was inspected on 31.05.2019 for verification of the status of the compliance submitted by the industry. The following observations were made during the inspection:

1. The Industry was not in operation at the time of inspection.
2. The industry is having 7 (including SRP) no of blocks and present the industry is operating two blocks, B and J and Solvent recovery system (D Block).
3. The industry has transported about 390 KLD of effluents to M/s. Ramky Pharmacity for further treatment and disposal (19.05.2019 to 26.05.2019).
4. The industry has removed all the effluents stored at the elevated place, where the seepage and the effluent filled up to brim level was observed at the time of inspection and filled up with soil.
5. The small pools of the lagoons are removed and closed with soil.
6. The industry has pumped all the effluents in to existing tanks aeration tank and effluent collection sump, about 400 to 500 KL of effluents are stored.
7. The industry has stored the effluents of quantity 50 to 60 KLD below ground storage tanks near raw water collection sump.
8. The industry has removed all the hose pipes exist in the premises.
9. The industry still in process of converting the oil fired boiler to coal fired boiler with dust collector as APC which is proposed to be completed by 15.06.2019.
10. The industry is in the process of separating the boiler blow down and condensate streams without mixing in to effluents and proposed to be completed by 15.06.2019.
11. The industry is in the process of providing separation effluent collection sumps (tank in tank) for each block and proposed to be completed by 15th June.
12. The industry has submitted that they had submitted the sample to M/s. Coastal Waste Management Project, Parawada, for sending of Hazardous waste and after the analysis reports proposed to dispose the HW.

- The ground water samples are collected from bore wells existing at the village for verification of ground water whether it is fit for drinking or not. The samples are collected at the following locations:

1. Bore well sample collected from Kona Nageswararao House.
2. Hand Bore well sample collected from MPP School
3. Hand Bore well sample collected near Ramalayam temple.
5. Bore well sample collected from Konda Kannababu House.
6. Hand Borewell sample collected from Goodala Jaganadharao land.
7. Hand Borewell sample collected from Dairy Farm.
8. Sample collected from bore well located in Sarada Riverbed.

The analysis values are submitted as follows:

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<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>6.46</td>
<td>6.74</td>
<td>6.57</td>
<td>6.49</td>
<td>6.33</td>
<td>7.07</td>
<td>6.56</td>
<td>7.56</td>
<td>6.5 – 8.5</td>
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<td>2</td>
<td>Conductivity (µS/cm)</td>
<td>2570</td>
<td>1935</td>
<td>3040</td>
<td>2970</td>
<td>4870</td>
<td>255</td>
<td>2910</td>
<td>785</td>
<td>--</td>
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<tr>
<td>3</td>
<td>TDS at 105°C</td>
<td>1680</td>
<td>1260</td>
<td>2020</td>
<td>1945</td>
<td>3180</td>
<td>180</td>
<td>1940</td>
<td>520</td>
<td>2000</td>
</tr>
<tr>
<td>4</td>
<td>COD</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>BDL</td>
<td>BDL</td>
<td>BDL</td>
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</tr>
<tr>
<td>5</td>
<td>Chlorides as Cl</td>
<td>523</td>
<td>377</td>
<td>656</td>
<td>621</td>
<td>1370</td>
<td>29</td>
<td>621</td>
<td>49</td>
<td>1000</td>
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<tr>
<td>6</td>
<td>Total Hardness as CaCO3</td>
<td>768</td>
<td>584</td>
<td>904</td>
<td>868</td>
<td>1732</td>
<td>100</td>
<td>1048</td>
<td>200</td>
<td>600</td>
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<tr>
<td>7</td>
<td>Total Alkalinity</td>
<td>480</td>
<td>340</td>
<td>280</td>
<td>380</td>
<td>384</td>
<td>120</td>
<td>368</td>
<td>336</td>
<td>600</td>
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<td>8</td>
<td>Phosphates as PO4³⁻</td>
<td>0.30</td>
<td>0.08</td>
<td>0.03</td>
<td>0.07</td>
<td>0.05</td>
<td>0.02</td>
<td>0.04</td>
<td>0.05</td>
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<td>9</td>
<td>Sulphates as SO4²⁻</td>
<td>119</td>
<td>72</td>
<td>97</td>
<td>115</td>
<td>165</td>
<td>14</td>
<td>138</td>
<td>17</td>
<td>400</td>
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<td>10</td>
<td>Fluorides as F⁻</td>
<td>0.51</td>
<td>0.50</td>
<td>0.47</td>
<td>0.39</td>
<td>0.09</td>
<td>0.30</td>
<td>BDL</td>
<td>0.78</td>
<td>1.5</td>
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<td>11</td>
<td>Nitrates Nitrogen as NO3⁻</td>
<td>5.82</td>
<td>10.8</td>
<td>16</td>
<td>20.4</td>
<td>4.36</td>
<td>0.20</td>
<td>15.5</td>
<td>0.68</td>
<td>45</td>
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<td>12</td>
<td>Nitrates Nitrogen as NO2⁻</td>
<td>0.99</td>
<td>0.27</td>
<td>1.11</td>
<td>0.03</td>
<td>0.82</td>
<td>0.27</td>
<td>0.52</td>
<td>0.68</td>
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</tr>
<tr>
<td>13</td>
<td>Ammonical Nitrogen as NH3⁻</td>
<td>BDL</td>
<td>BDL</td>
<td>BDL</td>
<td>BDL</td>
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<td>BDL</td>
<td>BDL</td>
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<tr>
<td>14</td>
<td>Calcium as Ca²⁺</td>
<td>208</td>
<td>131.2</td>
<td>220.8</td>
<td>211.8</td>
<td>339.2</td>
<td>19.2</td>
<td>192</td>
<td>36.8</td>
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<td>15</td>
<td>Magnesium as Mg²⁺</td>
<td>60.26</td>
<td>62.21</td>
<td>85.54</td>
<td>82.62</td>
<td>214.8</td>
<td>12.6</td>
<td>138</td>
<td>26.2</td>
<td>100</td>
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</tbody>
</table>

As per the analysis of the ground water samples collected, the water is fit for drinking at 2 locations (6 & 8) and the other water samples are not fit for drinking water purpose, as the presence of Conductivity. TDS and Conductivity are more due to the deep shallow wells and ground strata.

RO Recommendations:

1. The effluents stored (50 KL) in the effluent collection sumps at raw water storage area shall be transported to JNPC, Parawada and shall be emptied immediately.
2. The effluents stored (400 KL) in the aeration sump at ETP area shall be transported to JNPC, Parawada and shall be emptied immediately.
3. The effluents stored (100 KL) in the effluent collection sump at ETP area shall be transported to JNPC, Parawada and shall be emptied immediately.
4. All the underground tanks shall be dismantled immediately.
5. The industry shall not store any effluent in below ground storage tanks.
6. The industry shall complete the conversion of oil fired boiler to coal fired boiler by 15.06.2015 as informed by the industry.
7. The industry shall complete decanter rectification by 15.06.2019.
8. The industry shall provide separate effluent collection sumps at all the blocks and shall provide tank in tank facility.
9. The industry shall provide separate the steam condensate without mixing with the effluents and shall provide separate collection sumps by 15.06.2019.
10. The industry shall operate the ZLD system during its operations, if there is any operational problems, the industry shall restrict the production to 25%.
11. The industry shall transport the hazardous waste stored within the premises to TSDF immediately.
12. The industry shall provide separate digital flow meters at the MEE inlet, MEE condensate, inlet of the Spray drier.
13. The industry shall provide ETP for the LTDS effluents and shall operate the RO system continuously.
14. The industry shall provide 2 Drinking water RO’s for the D/s Villages as committed during the EAC meeting.
15. The industry shall comply with all the above before the industry start its operations.

**Conclusion:**

In view of above, the External Advisory Committee is requested to discuss the issues in view of repeated complaints received from Sri E.A.S. Sharma regarding discharge of effluents and non-operation of pollution control measures and recommend further course of action.

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