Report Regarding Inspection of 21 Industries in Village Ferozpur Bangar, Distt. Sonepat, Haryana

{Original Application No 418 of 2015 (M.A No. 968/2015 & M. A. No. 1224/2015) in the matter of Ferozpur Welfare Society vs. State of Haryana and Ors.}

In compliance of the order of the Hon’ble National Green Tribunal dated August, 30, 2018 regarding Item 18, inspections of the 21 Industries (Respondent No. 11 to 31) were carried out on September, 17, 18, 24 and 25, 2018 along with Shri Naveen Gulia, Regional Officer, HSPCB and Shri Lalit Malik, AEE, HSPCB. The following Industries were inspected:

1. Raj Katha Products Pvt. Ltd., Village Ferozpur Bangar, Sonepat, Haryana. (Respondent No.12)

This unit was inspected on September, 17, 2018. However, being VishvaKarma Day, the maintenance work of the unit was taken up and as such the plant was not in operation. However, interactions were held
with Shri Dig Vijay, Supervisor of the Factory who stated the following: -

(i) This unit was started in the year 2001

(ii) Consent to Operate (CTO) was given on 18/2/16 by HSPCB which is valid up to 31\textsuperscript{st} March, 2019.

(ii) DG Sets (250 KVA x 2) are provided.

(iii) Khair Wood / Cashew Husk are used as main raw material.

(iv) Fresh water through bore well (7.5 H. P) – 700 Lit / day is drawn.

As the plant was not operational during the visit on September 17, 2018, this unit was again inspected on 24\textsuperscript{th} September 2018. It was found that on this day (24.09.2018), the plant was fully operational and the proprietor of the unit was also present.

1.1 Observations

- Effluent Treatment Plant (ETP) was seen functional and sample was collected. The results are given in Table 1 below. It may be seen from this Table that BOD and COD levels are 14 mg/lit and 47.2 mg/lit as
against the prescribed standards of 30 mg/lit and 250 mg / lit respectively.

Table 1 Effluent Analysis Report of Raj Katha Products Pvt. Ltd.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameter</th>
<th>Result</th>
<th>Permissible Limit</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sample No.</td>
<td>6379</td>
<td>6580</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sample Collected from</td>
<td>1146</td>
<td>Outlet of ETP</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Appearance</td>
<td>Brownish</td>
<td>Light Grey</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Odour</td>
<td>Foet</td>
<td>Mid</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>pH Value</td>
<td>8.27</td>
<td>8.51</td>
<td>5.5-9.0</td>
</tr>
<tr>
<td>6</td>
<td>Suspended Solids mg/l</td>
<td>304.0</td>
<td>11.0</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>BOD mg/l</td>
<td>230.0</td>
<td>14.0</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>COD mg/l</td>
<td>677.8</td>
<td>47.2</td>
<td>240</td>
</tr>
<tr>
<td>9</td>
<td>Oil &amp; Grease mg/l</td>
<td>15.0</td>
<td>N.D.</td>
<td>10</td>
</tr>
</tbody>
</table>

The Conditions of the work, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this 03. day of October, 2018

Rajasthan State Pollution Control Board (Laboratories)

WDC-113, 7th & 8th Floor, Sector-25, Panchkula, Haryana

To

The Member Secretary, HSPCB, Panchkula
Regional Office, Sonipat. This test report relate only to the particular sample submitted for testing.
- Effluent after treatment is evaporated and as such it is a “Zero Discharge” Unit.

- Boiler (based on wood as fuel) of 800 Kg per day capacity to generate steam of 7.5T/hour. A cyclone has been provided to control dust particulates from Chimney of 100 feet.

- Stack height of DG Sets is lower than the prescribed standard and as such the height has to be increased.

- The proprietor informed during the 2nd visit to the plant that a wet scrubber has been proposed to be installed and for which order has been placed on 19th September, 2018, which will be installed within a month.

- HSPCB has given consent to the unit which is valid up to 31st March, 2019.

- Sample of flue gases from Stack was collected on 24th September 2018 when the plant was operational. The results are given in Table 2 below. It may be seen from this Table that the levels of suspended particulate matters (SPM), Sulphur dioxide and Nitrogen dioxide were found as 126 mg/Nm3, 19.2 mg/Nm3 and 10 mg/Nm3 respectively.
which are well below their prescribed standards of 800 mg/Nm³, 600 mg/Nm³ and 300 mg/Nm³ respectively.

Table 2  Flue Gases analysis of stack of Raj Katha Products Pvt. Ltd.
[Gen Set with lower stack height.]

[Effluent Treatment Plant.]
Waste products (used wood/ cashew husk) stored in open and in haphazard way indicating bad housekeeping.
[Chimney of boiler of M/s Raj Katha Products Pvt. Ltd.]
1.2 Recommendations

Following recommendations are made:

- Stack height of DG Sets should be increased in consultation with HSPCB as per the required standard.
- Wet scrubber should be installed within a month as promised by the proprietor during the visit.
- Effluent generated from ETP is about 5000-6000 litres per day and as such an electro-magnetic flow meter be provided in the ETP plant so as to record the quantity of treated effluent being sent to Evaporation Unit (2 Evaporators have been provided, one is stand by). There should be a separate electric meter for ETP.
- Housekeeping needs improvement as the raw material (khair wood and cashew husk) were stored in a haphazard manner and in open. Similarly, waste solid materials came from the process are stored in open and is used as feed stock to the boiler for burning. There should be proper sheds provided for storing raw material and waste products of wood to be used as boiler fuel.
- Housekeeping should be improved.

This plant was inspected on September 17, 2018 along with the representatives of HSPCB (Regional Officer and AEE). Shri Vrindavan Patil, Plant Manager was present during the inspection and he informed the following: --

(i) This Unit was started in 2009 and produces animal/poultry feed products.

(ii) DG Sets of following capacity are installed

320 KVA x 1, 160 KVA x 1 and 180 x 1 KVA.

(iii) Water requirement: 40,000 litres needed for 1.5 days and is taken from a contractor who brings from nearby agricultural fields. Use of water for agricultural fields for industrial uses is not desirable and as such the unit should have its own bore well after taking necessary permission from CGWA.

(iv) Boiler (coal based) is provided with stack of 30 meters with a wet scrubber. Coal used per day is about 300-400kg. Cinder/ash (50-60kg/day) is generated and is disposed of in low lying areas nearby.
2.1 Observations

- Ventilation is poor in the plant and needs improvement by installation of more exhaust fans.

- Samples of emissions from Chimney were taken and the results are given in the following Table-3:

Table 3: Analysis report of stack emissions from Maharashtra Feed Pvt. Ltd.
It may be seen from the above Table 3 that particulate emissions of 409.6 mg/Nm3 from the stack are well within the prescribed standard of 800 mg/Nm3 and therefore as far as stack emission of particulate matters is concerned, this unit is complying with the stipulated standard. Similarly, the levels of Sulphur Dioxide and Oxides of Nitrogen were found 15.4 mg/Nm3 and 8.0 mg/Nm3 respectively which are below their prescribed standards.
2.2 Recommendations

(i) Ventilation in the plant, specially in bagging area, needs to be improved.

(ii) Unit should have its own bore well for meeting the water requirement after taking necessary permission from the Central Ground Water Authority. (CGWA)

3. Raj Sons Polymers village. Ferozpur Banger, Kharkhoda, (Respondent No.18)

This Unit was inspected on 17th September 2018 and was stated to have been started in 2001 as was mentioned by Shri Mukesh, owner of the factory. This Unit manufactures raw material for production of Melamine Plates.

3.1 Observations

Following observations were made:

(i) Boiler (wood based thermic fluid type): 100-150 kg per day wood is used. Chimney height is 60 meters and a cyclone is provided for
removing dust particles from the flue gases. Ash / cinder coming out of boiler is disposed of in a plot of 2000 square meters owned by the factory. It is proposed to provide a wet scrubber after the cyclone to increase the efficiency of dust trapping system.

(ii) Water requirement: Bore well (0.5 H. P) for meeting fresh water requirement for cleaning of internal roads and floors has been provided only as this water is hard and not fit for drinking or industrial process purposes. Fresh water tanker (4000 litres for two days needed) is taken through a contractor at a rate of Rs. 200 per tank. Contractor is bringing this water from nearby agricultural fields which is not desirable.

(iii) DG Sets (180 KVA x 1) is being phased out. A new DG Set of 250 KVA is provided. Waste oil generated from DG Set is given to a contractor approved by HSPCB.

As the Plant was closed during inspection for maintenance on 17th September, 2018, it was revisited on 24th September, 2018. It was noticed that the height of stack of DG Set has been raised as required to meet the standard prescribed. A wet scrubber has been proposed to be
provided shortly (2-3 Days). It is a “Zero Discharge” unit and as such no treated effluent is discharged outside the factory premises.
3.2 Recommendations

This unit has provided necessary Air Pollution Control Device (APCD) and is having “Zero Discharge.” However, to improve further APCD, a wet scrubber should be provided. HSPCB should periodically monitor this unit with respect to compliance with the stipulated conditions as
given in consent to operate (CTO) and ensure that wet scrubber is provided within a month and no treated effluent is discharged outside the factory premises.

4. M/s Bharat Processor (Zinc Factory), through proprietor Shri Surrender, Village Ferozpur Bangar, Distt. Sonepat. (Respondent No.17)
During the inspection it was found that this unit was dismantled and closed. Same premises has been given for fabrication works on rent. As such, now there is no possibility of pollution problems posed by this unit.

5. M/s Katari Enterprises, through proprietor Shri Puran Singh, Village. Ferozpur Bangar, Distt. Sonepat. (Respondent No.20)
During inspection on September 18, 2018, this unit was found closed and dismantled. As such, there is no possibility of causing pollution problems from this unit.

During inspection on September 18, 2018, this unit was found closed and dismantled. As such, there is no possibility of causing pollution problems from this unit.

7. M/s Prem Paint, through its proprietor Shri Sunil, Vill. Ferozpur Bangar, Distt. Sonepat. (Respondent No.22)

During inspection on September 18, 2018, this unit was found closed and dismantled. As such, there is no possibility of causing pollution problems from this unit.


It was observed during the inspection that plastic bags are stored. This unit was closed and dismantled since December, 2015 as informed by HSPCB. As such, there is no possibility of causing pollution problems from this unit.
9. M/s Micro Industries, Kila No. 53, Qutabgarh Road Ferozpur
Bangar, Distt Sonepat. (Respondent No. 23)

This unit was inspected on September 18 and was found to manufacture rubber sheets (“Hawaii chapals” in the brand name of “Good Day”). Interactions were held with Shri Mohamad Ali, father of owner of the unit. The following observations are made:

9.1 Observations

(i) Water requirement: No water is required for process. However, one tanker of water is taken from a contractor which is sufficient for use for drinking and washing purposes for a week. Wood based Boiler (thermo fluid type) has been provided.

(ii) It was observed that chimney was broken and was stated to be under replacement. APCD (Cyclone was provided but was in a dilapidated condition and needs to be replaced urgently. In view of the bad condition of the cyclone and broken chimney, air sample from stack could not be taken. As such, this unit is non-compliant unit.
(iii) DG Set (125 KVA): Stack height is less and needs to be increased as per the standard prescribed. Waste oil is given to an authorised agent and the consent given by the Board is valid up to 31/03/21. DG Set is old and was seen making a lot of noise and should be replaced with new one meeting the noise standard.

[Above photo was taken during visit to M/s Micro Industries on Sept, 18, 2018. Chimney was found broken and Cyclone was leaking. Both needs replacement]
9.2 Recommendations

(i) Gen set stack height should be increased to meet the prescribed standard.

(ii) Broken Chimney be replaced/ repaired and should have the required height in consultation with HSPCB.

(iii) Cyclone (Air Pollution Control Device) should be replaced with new one and a wet scrubber should also be provided with no discharge system.

It is recommended that this unit be closed down till APCD (cyclone and wet scrubber) and proper chimney are provided.


This unit was visited on September 18 and manufactures polyester resins. It has a thermo - fluid type boiler based on diesel as fuel. DG Set provided is of lower stack height. The unit is located in a plot area of 470 square yards and was commissioned in 2011.
[ DG Set of M/s Ganpati Associates]
10.1 Observations

Following observations are made:

(i) DG Set - 40 KVA (stack height is low)

(ii) Boiler based on thermo - fluid heater (TFH): HSD oil is used in the boiler and the tank for storing 200 litres of HSD is provided.

(iii) No effluent is generated. It is a “Zero Discharge” unit.

10.2 Recommendations

Stack height of the DG Set is required to be increased as per the prescribed standard in consultation with HSPCB.
This unit was inspected on September 18 and was found closed/dismantled.

This unit was found non-operational during inspection on September, 18 ,2018. It was reported that maintenance work is being carried out.
This unit manufactures resins. No responsible person was available during the inspection. Time frame for re-starting the unit also could not be indicated by the staff present there.

12.1 Recommendations
This unit should not be allowed to operate till HSPCB accords CTO.

13. M/s Jain Paint, through its proprietor Rajesh Jain, Village Ferozpur Banger, Distt, Sonepat (Respondent No. 29)
This unit was found closed/ dismantled during inspection on 18th September, 2018.

14 M/s Techno Polymers, Vill. ferozpur Banger Tehsil Kharkhoda, Sonepat. (Respondent No .26)

This unit manufactures resins which is used as adhesive for fibre sheets. The raw materials include diethyl glycol, mono ethyl glycol, propylene glycol and plastic waste (PET). The unit was inspected on September 18 and found closed and as such was re- inspected on 25th September 2018 and was found operating.

14.1 Observations

The following observations were made:

(i) DG Set of 40 KVA with low stack height was provided.
(ii) Thermo-fluid boiler using HSD as fuel was provided. Chimney of the boiler is to be enhanced as per the prescribed standard.
(iii) Fresh water is brought from neighbouring area of Delhi.
(iv) The unit was closed at the time of inspection on September 18 due to electrical faults and as such was revisited on 25th September, 2018.
The proprietor informed during revisit on September, 25, 2018 that the stack height will be increased as per the required standard for which steps have been taken as was evidenced by procured iron pipes to be used for enhancing chimney height. As the stack height of DG Set was also lower, the owner has promised that he would also raise the stack height as per the requirement.
[Above photos were taken during inspection of the unit.]
14.2 Recommendations

Stack height of chimney and DG Set are required to be increased as per the standards in consultation with Haryana State Pollution Control Board (HSPCB) and until the same is done, the unit should not be allowed to operate.

15 M/s Sai Polymer, through proprietor Shri Ajay Gupta (Resin Paint), Vill Ferozpur Banger, Distt. Sonepat (Respondent No 24).
During the inspection on September 18, this unit was found closed. As informed by HSPCB, this unit was sealed by the HSPCB as the unit was not having Consent to Establish (CTE) and Consent to Operate (CTO).

16 Shri Giriraj oil company, Delhi Kharkhoda Road, Village Ferozpur bangar, Tehsil Kharkhoda, Distt. Sonepat. (Respondent No. 13)
Inspection was carried out on 24th September 2018 along with Regional Officer (RO), HSPCB and other staff of the Board. This unit is located
in an area of about 1500 square meters and is engaged in recycling / reprocessing of used/ waste oil for which it has consent to operate up to 30th September, 2022 from HSPCB. During the inspection, Shri Deepak Kumar, Proprietor was present.

**16.1 Observations**

The following observations are made:

- It was informed by the proprietor that the plant is operational only 3-4 days in a month as there is shortage of waste / used oil. The plant has annual capacity of processing waste oil up to 6000 kilo litres per annum but about 400-500 kilo litres per annum waste oil is being processed.

- Effluent treatment plant (ETP) has been provided and was seen operating. No effluent coming out of ETP is being discharged outside the factory premises and the entire treated effluent is evaporated.

- Chimney height is about 22 meters and Air Pollution Control Device(APCD) has been installed.

- DG Set of 125 KVA Capacity with adequate stack height has been provided.
- Residue waste emanating from the plant, being hazardous in nature, is being collected and sent to M/s Gujarat Enviro Infra Structure Pvt. Ltd. Faridabad, Haryana which is an approved agency by the HSPCB Board.

- It was informed by the owner that about 1000 litres of water is required per day which is being supplied through a laid pipe line by Shri Mukesh of Ferozpur Banger, village, Distt. Sonepat, for which an amount of Rs. 2500 per month is being paid by the factory. It came to our knowledge that Shri Mukesh also supplies water to other units in the area. It appears he is drawing ground water from agricultural fields through bore wells which is being used for commercial/ industrial purposes without taking permission from Central Ground Water Authority.

- Samples of air emissions from stack and ETP were taken during the inspection and the results are given Table 4 and Table 5 respectively:
Table 4: Stack Sample analysis of flue gases from Shri Giriraj Oil Company:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameter Name</th>
<th>Result</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sample Number</td>
<td>3140</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Name of plant Section</td>
<td>Furnace</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Stack Attach to</td>
<td>Furnace</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Normal operating Schedule (hr/day)</td>
<td>8-10</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Type of Chimney</td>
<td>Metal</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Stack Height from the ground level</td>
<td>20m</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Diameter of stack</td>
<td>0.8 m</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Stack Temperature Deg C</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Average stack velocity m/sec</td>
<td>8.03</td>
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</tr>
<tr>
<td>10</td>
<td>Quantity of Emission m³/sec</td>
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<tr>
<td>11</td>
<td>Suspended particulate matter mg/ m³</td>
<td>60.6</td>
<td>150.0</td>
</tr>
<tr>
<td>12</td>
<td>Sulphur dioxide mg/ m³</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Nitrogen dioxide mg/ m³</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Method of Testing: As per relevant part of Indian Standard for measurement of Air Pollution IS:5182 and Emission regulation part III of Central Pollution Control Board.

The Condition of the seals, listening and container had the signature of the representative of the industry and the Board.

Signed 63 day of Oct-18.

Haryana State Pollution Control Board’s Laboratory
SCK-11, 1st & 2nd Floor, Sector-25, Panipat, Haryana

The lab report relate only to the particular sample submitted for testing.
It may be seen from Table 4 above that the levels of Particulate Matter, Sulphur Dioxide and Nitrogen Dioxide are 60.6 mg/Nm³, 11.0 mg/Nm³ and 7 mg/Nm³ respectively which are well below their prescribed standards.

Table 5: Analysis of effluent from M/s Giriraj Oil Company.
It may be seen from Table 5 above that BOD and COD levels are 15 mg/ lit and 100.8 mg/ lit which are well below the prescribed standards of 30 mg/ lit and 250 mg/ lit respectively.

[Effluent Treatment Plant]
Chimney of the Plant-Sample is being taken by HSPCB

Chimney of the plant.
16.2 Recommendations

(i) The unit should make its own arrangements for meeting water requirement after taking necessary permission from the Central Ground Water Authority.

(ii) Separate Electric Meter should be provided for ETP.

17 Om Sai Plastic Factory, through proprietor Shri Neeraj Goyal, Village Ferozpur Bangar, Distt, Sonepat. (Respondent No. 15)
This unit was inspected on 24th September, 2018 along with the RO, HSPCB and other staff of HSPCB. This unit was found closed/dismantled.

18 M/s Unplanned Battery Factory, Through proprietor Shri Meenu, Vill. Ferozpur Bangar, Distt. Sonepat. (Respondent No. 16) This unit was inspected on 24th September 2018 and found closed/dismantled.

19 M/s Vijay Enterprises, through its proprietor Shri Inderpal Jeet, Vill. Ferozpur Bangar, Distt. Sonepat. (Respondent No. 28) This unit was inspected on 24th September, 2018 and was found closed. In fact, as informed by RO, HSPCB, this unit was closed by HSPCB as it was operating without CTE/CTO. The premises of this unit is used as go down for storing chemicals such as refined glycerine, steric acid etc. No manufacturing activities were seen.

20 M/s Aluminum Waste Factory, through its proprietor Shri Sunil Rana, Parveen, Garhi Road, Vill. Ferozpur Bangar, Distt. Sonepat. (Respondent No. 30)
Inspection was made on 25th September, along with the Officers of HSPCB. There was no trace of this unit at the given address. It appears this unit was dismantled and was not seen for the last 3-4 years as was revealed by Shri Rajesh Rana, Principal of Shri Anoop Niketan High School, Garhi Kundal, Sonepat. This School is located quite close to the then existing unit which is no more there at the given address.

21 M/s Aluminum Waste Factory, through its proprietor Manoj, Ladrawan Road, Vill. Ferozpur Bangar, Distt Sonepat. (Respondent No. 31)

Efforts were made along with RO, HSPCB and his staff to locate this unit at the above given address but this unit could not be traced and as such may be taken as dismantled/ closed.

22 Pyrolysis Plants in Ferozpur Bangar, village Distt. Sonepat.

It was informed by RO, HSPCB that about 10 pyrolysis plants were there in this village which were causing significant air pollution problem in the area. The details of these plants are as under:
22.1 Unnamed Pyrolysis Oil (unit-1), Near Ashoka Brothers Sanitation India Pvt. Ltd., Kutub Garh Road, Vill. Ferozpur Bangar, Khakhoda, Sonepat (Pyrolysis plant)

22.2 M/s Triveni Petro Chem, Opp. Katha Factory, Kutubgarh Road, Vill. Ferozpur Bangar, Khakhoda, Distt. Sonepat (Pyrolysis plant)

22.3 M/s S.P. Enterprises, Khewat No. 178, Vill. Ferozpur Bangar, Tehsil Khakhoda, Distt. Sonepat Pyrolysis plant

22.4 Unnamed Pyrolysis Oil (unit-3), Opp. Rana Enterprises, Kutubgarh Road, Ferozpur Bangar, Khakhoda, Sonepat (Pyrolysis plant)

22.5 Unnamed Pyrolysis Oil (unit-2), Near Ashoka Brothers Sanitation India Pvt. Ltd., Kutub Garh Road, Vill. Ferozpur Bangar, Khakhoda, Sonepat (Pyrolysis plant)

22.6 M/s Mayank Industry (Pyrolysis Oil unit), Vill. Ferozpur Bangar, Tehsil Khakhoda, Distt. Sonepat (Pyrolysis plant)

22.7 M/s Unnamed Pyrolysis unit-4, along S.P. Inds., (operated by Sh. Jitender Kumar S/o Prithvi Singh), Vill. Ferozpur Bangar, Tehsil Khakhoda, Distt. Sonepat (Pyrolysis plant)
22.8 M/s Unnamed Pyrolysis Unit by Sh. Rakesh Kumar S/o Sh. Raghubir Singh, Vill. Ferozpur Bangar, Tehsil Kharkhoda, Distt. Sonepat (Pyrolysis plant)

22.9 M/s Unnamed Pyrolysis unit (By Gopal), Opp. Jain wood Industries, Vill. Ferozpur Bangar, Tehsil Kharkhoda, Distt. Sonepat (Pyrolysis plant)

22.10 M/s Unnamed Pyrolysis unit (Along unit of rakesh Kumar S/o Raghuvir Singh), Vill. Ferozpur Bangar, Tehsil Kharkhoda, Distt. Sonepat (Pyrolysis plant)

Pyrolysis plants are known to cause significant air pollution problems. But now not a single pyrolysis plant exists in the area as these plants have been closed and dismantled. It is quite possible that because of these pyrolysis plants operating in the area earlier, there would have been significant air pollution problems. Now since these plants have already been closed down, the major source of air pollution in the area has already been eliminated.
23 Discussions

Out of 21 Respondent Units inspected, 14 units were found closed/dismantled. As such only 7 units are operational in the area. These operational units are listed below along with the recommendations:

23.1 M/s Maharashtra Feed Pvt. Ltd, Vill. Ferozpur Bangar, Tehsil Kharkhoda, Distt. Sonepat. (Respondent No.11)

Recommendations:
(i) Ventilation in the plant, specially in bagging area needs to be improved.
(ii) Unit should have its own bore well for meeting the water requirement after taking necessary permission from the Central Ground Water Authority. (CGWA).
(iii) Housekeeping should be improved and better work practices should be followed.
(iv) Personal Protective equipment, wherever needed, should be provided to the workers.
(v) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

23.2 M/s Raj Katha Products Pvt. Ltd., Vill. Ferozpur Banger, Sonepat (Respondent No.12)

**Recommendations**

(i) Stack height of DG Sets should be increased in consultation with HSPCB so that it is at least 3 meters above the adjoining building.

(ii) Wet scrubber should be installed within a month as promised by the proprietor during the visit.

(iii) Effluent generated from ETP is about 5000-6000 litres per day and as such an electro-magnetic flow meter be provided in the ETP plant so as to record the quantity of treated effluent being sent to Evaporation Unit (2 Evaporators have been provided, one is stand by). There should be a separate electric meter for ETP.

(iv) Housekeeping was very bad as the raw materials (khair wood and cashew husk) were stored in a haphazard manner and in open.
Similarly, waste solid materials from the process are stored in open and used as feed stock to the boiler for burning. There should be proper sheds provided for storing raw material and waste products of wood to be used as boiler fuel.

(v) Housekeeping should be improved and better work practices should be followed.

(vi) Personal Protective equipment, wherever needed, should be provided to the workers.

(vii) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

23.3 M/s Shri Giriraj Oil Company, Delhi Khakhoda Road, Village Ferozpur Bangar, Tehsil Khakhoda, Distt. Sonepat.

**Recommendations**

(i) The unit should make its own arrangements for meeting water requirement after taking necessary permission from the Central Ground Water Authority.

(ii) Separate Electric Meter should be provided for ETP.
(iii) Housekeeping should be improved and better work practices should be followed.

(iv) Personal Protective equipment, wherever needed, should be provided to the workers.

(v) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

23.4 M/s Raj Sons Polymers, Vill. Ferozpur Banger, Kharkhoda

Recommendations

(i) This unit has provided necessary Air Pollution Control Device (APCD) and is having “Zero Discharge.” However, to improve further APCD, a wet scrubber should be provided with Zero Discharge. HSPCB should periodically monitor this unit with respect to compliance with the stipulated conditions as given in consent to operate (CTO) and ensure that wet scrubber is provided within a month.
(ii) Housekeeping should be improved and better work practices should be followed.

(iii) Personal Protective equipment, wherever needed, should be provided to the workers.

(iv) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

23.5 M/s Micro Industries, Kila No. 53, Qutabgarh Road, Ferozpur Bangar, Distt. Sonepat.

**Recommendations**

(i) DG Generator set stack height should be increased to meet the prescribed standard. Existing DG Set is old and makes a lot of noise and should be replaced with a new one in consultation with HSPCB.

(ii) Broken Chimney be replaced/ repaired and should have the required height in consultation with HSPCB.
(iii) Cyclone (Air pollution control device) should be replaced with new one and a wet scrubber should also be provided with zero discharge system.

**It is recommended that this unit be closed down till APCD (cyclone) and proper chimney are provided.**

(iv) House keeping should be improved and better work practices should be followed.

(iv) Personal Protective equipment, wherever needed, should be provided to the workers.

(v) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

Recommendations

(i) Stack height of the DG Set is required to be increased as per the prescribed standard by HSPCB.

(ii) Housekeeping should be improved and better work practices should be followed.

(iii) Personal Protective equipment, wherever needed, should be provided to the workers.

(iv) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

23.7 M/s Techno Polymers, Vill. Ferozpur Banger, Tehsil Khakhoda, Sonepat.

Recommendations

(i) Stack height of chimney and DG Set are required to be increased as per the standards in consultation with Haryana State Pollution Control
Board(HSPCB) and until the same is done, the unit may not be allowed to operate.

(ii) Housekeeping should be improved and better work practices should be followed.

(iii) Personal Protective equipment, wherever needed, should be provided to the workers.

(iv) Annual Environment Audit Report should be submitted by the unit to HSPCB based on which CTO conditions shall be reviewed by HSPCB and if need be additional conditions may be imposed.

24 General Recommendations

In addition to the recommendations made above for 7 operating units, the following general conditions are also important to further improve in - plant working conditions and protect and improve environmental conditions in the area. As such it is recommended that following general environmental conditions should also be implemented by the concerned units, HSPCB and Central Pollution Control Board(CPCB).

(I) ISO 14000 certification should be obtained by all the 7 units operating in the area. This will be helpful in promoting effective
environmental management and will provide cost–effective tools that make use of best practices for organising and applying information about environmental management.

(II) Boilers, irrespective of their capacities, should provide cyclone and wet scrubber system as part of APCD to reduce particulate emissions from the stacks. At present the limit of 800 mg / m³ prescribed for suspended particulate matter (SPM) from the stacks should be reviewed by CPCB/ HSPCB and be reduced to 200 mg / m³ which can easily be achieved by the units if APCD (cyclone and wet scrubber) are provided. The standard of 800 mg/ m³ is very old and with present day technology of APCD, it is possible to prescribe more stringent emission norms to reduce pollution load in the ambient air. This is very much desirable in National Capital Region (NCR) where air pollution is a big problem and central and state governments are making sincere efforts to control air pollution in NCR. Sonepat, Haryana, where these 7 units are operational is part of NCR and as such stringent emission standards are required. As such, CPCB/ HSPCB should review the present standards and suggest/ notify
stringent standards for boilers / DG Sets which would go a long way in improving air quality.

(III) Periodical monitoring and surveillance of these 7 operating units should be carried out by HSPCB to ensure that stipulated environmental conditions and pollution control measures are working properly and in case of non-compliance, the units should be closed down.

(IV) Even though the units are having individual ETPs and are stated to be having “Zero Discharge” of effluent, it would be desirable on the part of HSPCB to do surprise checks/inspections to see compliance with the prescribed standards.

(V) There is need to provide Green Belt all around the units as during inspection it was noticed that the same was almost non-existent.

25 Conclusion

It has been observed during inspections of the operating 7 units that there was no discharge of effluents from these units. In fact, all the operational units generating effluents have installed Effluent Treatment Plants (ETP) for treatment of the effluent emanating from their plants.
All these units generating effluent were having no discharge outside their factories and were coming under the category of “Zero Discharge” units. As such, there is no possibility of water pollution problems to the adjoining areas from these units if ETPs are operated and maintained properly.

Similarly, as for as air pollution is concerned, the boilers are of small size and use wood or HSD as fuel and are provided with air pollution control devices (cyclone etc.) including chimneys in most of the units, the possibility of causing significant air pollution problems in the area is quite remote if APCD are maintained and operated properly. The boiler of M/s Maharashtra Feed Pvt. Ltd. is using coal (300-400 kg per day) which is a small amount and the boiler is equipped with Air Pollution Control Device (wet scrubber) and therefore the possibility of causing any significant air pollution problem is not envisaged from this unit if APCD is maintained and operated properly.

In fact, there used to be significant air pollution problems earlier in the area from a number of Pyrolysis Plants (about 10 units) existing in the area, which have already been closed down and dismantled long back by HSPCB.
It is hoped that if environmental measures and safeguards suggested as recommendations in para 23 and 24 above for 7 operating units are implemented, there will be further improvement in environment in the area.

26 Acknowledgement

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Dr. G. K. Pandey

Former Expert Member, NGT/ Court Commissioner

New Delhi, 4th October 2018