

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

Original Application No. 107/2019

(With report dated 13.09.2019)

Shah Alam

Applicant(s)

Versus

State of Uttar Pradesh

Respondent(s)

Date of hearing: 01.11.2019

**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. SATYAWAN SINGH GARBYAL, EXPERT MEMBER
HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER**

For Respondent(s): Mr. Pradeep Misra, Advocate for UPPCB

ORDER

1. The issue for consideration is the remedial action against violation of environmental norms by M/s Jubilent group of Industries at Gajraula, District Amroha, U.P., affecting the health of the inhabitants.
2. In pursuance of earlier order of this Tribunal, report dated 13.09.2019 has been filed by a joint Committee of the CPCB, UPPCB, Health Department, District Admin., U.P Jal Nigam, Horticulture Department and the Krishi Vigyan Kendra, Amroha. The Committee carried out inspection on 17th&18th July, 2019 by visiting the Jubilant Group of Industries comprising:
 - a) Coal based Captive Co-Generation Power Plant (48 MW capacity-as per consent to operate)
 - b) M/s Jubilant Life Sciences Ltd. (Distillery Unit), Bharatigram, Gajraula, District - Amroha, UP (Ethyl Alcohol)
 - c) M/s. Jubilant Life Sciences Ltd. (Chemical Unit I), Bharatigram, Gajraula, District - Amroha, UP (Formaldehyde,

Acetaldehyde, Ethyl Acetate, Acetic Acid, Acetic Anhydride, etc.,) and

- d) M/s. Jubilant Life Sciences Ltd. (Chemical Unit II).Bharatigram, Gajraula, District - Amroha, UP (Pyridine & Fine Chemicals)
- e) M/s. Jubilant Agri & Consumer Products Ltd. (Fertilizer Unit), Bharatigram, Gajraula, District - Amroha, UP (Single Super Phosphate, Granulated SSP, Sulphuric Acid)
- f) M/s. Jubilant Agri & Consumer Products Ltd. (Polymer unit), Bharatigram, Gajraula (Solid PVA & derivatives, Polyurethane derivatives, Wood Finish, Estergum).

3. After examining sources of fresh water, water consumption, rain water harvesting system and analysis of ground water samples, the Committee made observations with reference to the water balance. It was found that the unit did not have NOC for drawl of ground water after 04.04.2019. As per report of the CGWB dated 31.03.2013, District Amroha had deteriorated from 'semi-critical' to 'over-exploited' category. The Committee thereafter made observations with regard to other different processes.

4. With regard to captive power plant, it was observed that the plant failed to meet emissions norms with respect to NO₂.

5. With regard to molasses based distillery, it was found that there was no permission of ground water after 04.04.2019. The raw spent wash generation was 1956.27 KLD and designed feed capacity of MEE was 1740 KLD which indicated that MEE was inadequate to concentrate entire RSW/BMSW. The rain water harvesting system in the compost area was found to be contaminated by the spent wash. It was concluded that the unit operated at 90 KLD of alcohol production, which is more than 44 KLD corresponding to incinerator operation 3.2 kl/hr as a result of which accumulated spent wash in lagoons

and other storage facility for bio-composting which was not permitted during monsoon period as per the consent condition. Hence, there was possibility of by-pass of such accumulated spent wash during rainy season which could not be over ruled. Further, area of the covered bio-compost yard was damaged therefore, bio-composting during rainy season should be prohibited. In the adequacy report of Year: 2017 submitted by the unit, as per the MEE plant performance data (Copy of register data) (Section-7-III), showed only 25-30 % Solids in the final product. So incineration of slop containing such low solid content in the slop boiler during entire year was questionable. However, as per analysis result, total solids of spent wash at MEE inlet was 13.81 %, which indicated that, Raw Spent Wash/RO reject/mix of Raw Spent Wash and RO Reject was being fed into MEE for concentration only. No Spent wash from lagoons A & B was recirculated. It was therefore concluded that the unit only employed bio-composting route for spent wash disposal after MEE concentration for total production of 91 KLD even during rainy season which was gross violation of consent conditions. The lagoon was partitioned into two parts for which 12,000 m³ volume had been filled up with soil, however, filled up area was yet to be lined using concrete. In compliance of the CPCB direction dated 07.12.2015, the unit should restrict its storage capacity of lagoons for bio-composting upto 15869 m³ - 15900 m³ and for incineration through slop fired boiler upto 1841.3 m³- 1900 m³, making a total of 17800 m³. Whereas the unit was having a storage capacity of 32,000 m³ in lagoon A and B and 350 m³ for the slop for incineration. The unit representative informed that the diluted spent wash generated due to rain from the compost yard collected through garland drain was being

collected and recycled to the lagoon. However, the same was required to be recycled to MEE for further concentration. Analysis result of sample collected from inlet of Lagoon 'A' showed pH-6.62, COD-187206 mg/I, TS-194820 mg/I, which required to be recycled through MEE for concentration. Possibility of storage of RO reject also could not be ruled out. The temporary lining of the sludge storage/ponding area was found damaged. Leachate Spent wash which was found stored in this ponding area with COD-14095 mg/I, BOD-2930- mg/I, Total Solids-28500 mg/I, which indicates the storage of leachate spent wash posing threat to ground water quality. The composting mass should have a certain moisture content in it for organisms to survive. The optimum moisture content should be between 50-60 %. The moisture tends to occupy the free air space between the particles. Hence, when the moisture content is very high anaerobic conditions set in. However, when press mud as filler material was continuously mixed with spent wash till it's field capacity before draining out as liquid i.e., upto 96 % moisture content, resulting in almost no pore spaces available for aeration. In this circumstance, the unit may not be allowed to operate its distillery unit till the stored diluted (24%) spent wash in the lagoon B (16000 m³) get consumed through slop boiler after concentrating through MEE. The unit was having total Bio-composting area of 30.0 Acres. Out of which Covered area is 16.8 Acre & remaining 13.2 Acres was uncovered. For utilization of concentrated spent wash generated from 183 KLD molasses based distillery unit (for non-monsoon season), the total area available was 30.0 acres, which is adequate. Further, the compost was reported to be given to the marketing companies. This is also to submit that, prior to the selling

of compost, the distillery unit was required to get the compost samples analysed and execute marketing with proper marking / specifications of the compost on the bags. However, no document was available regarding sell of compost.

6. With regard to distillery unit, it was observed:

- “2. The unit is not operating incinerator/slop furnace as per design capacity (11.5 KL/Hr) to consume the concentrated spent wash generated during the non-monsoon/monsoon season which resulted accumulation of excess spent wash with leachate (bio-compost area) in lagoons. Since, the lagoons are almost filled up, only the freeboard is left, incinerator operates only at 30% of its installed capacity (50% of the requisite capacity), covered compost yard is completely filled with press mud having high moisture content and damaged roof of covered compost yard which will not allow further disposal of spent wash for bio-composting, the unit shall be directed to stop its distillery manufacturing process and shall consume the already stored spent wash through further concentration for the use in the incinerator under supervision of UPPCB. Thereafter capacity of distillery plant shall be restricted to the capacity as decided by UPPCB till the incinerator is commissioned at full capacity.
3. The unit shall restrict its storage capacity of concentrated spent wash upto 17800 m³ including 07 days for incinerator and 30 days for bio-composting, both separately.
4. The unit made partition in the lagoon by filling it with soil and made two lagoons i.e., Lagoon 'A' and Lagoon 'B'. However, the unit shall make the filled up area lined, by using concrete.
5. The unit shall dismantle/fill/level the additional storage capacity of the lagoon in time bound manner.
6. The unit is storing spent wash either in Lagoon 'A' or Lagoon 'B', hence the spent wash found stored in Lagoon 'A' and Lagoon 'B' shall have the same properties. The unit shall operate MEE uniformly maintaining the quality of the concentrated spent wash for efficient use in bio-composting as well as in incineration.
7. The unit shall restrict the use of excess spent wash in bio-composting so that the situation of generation of diluted spent wash does not arise.
8. The unit shall stop storage of the lagoon sludge in open area to avoid further dilution with rain water and shall use the sludge directly for bio-composting.
9. Spent wash conveyor line from the unit to the lagoons as well as to the compost yard shall be rechecked for any leakage. UPPCB shall verify the same.

10. *The pipelines for carrying the spent wash to the ash ponds shall be dismantled after recycling the stored spent wash from the ash pond to the lagoons.*
 11. *The unit may be asked to implement the requisite facility as per suggestion of the water audit report so that detailed study may be carried out to reduce the withdrawal of the ground water.*
 12. *The unit may not be allowed to continue bio-composting during rainy season as the covered bio-compost yard was found damaged.*
 13. *CGWA may be directed to investigate the infrastructure developed by the unit for rain water harvesting facilities inside and outside the premises and may take decision on the renewal applications of the unit for abstraction of the ground water.*
 14. *Environmental compensation (EC) for illegal disposal of spent wash causing potential threat to ground water where ground water of the area is already deteriorated to "over exploited" category. Also EC with regard to operation of the distillery plant and disposal of spent wash in violation of consent condition may also be imposed.*
 15. *Rain water harvesting system at biocomposting site may not be advisable to avoid contamination of the ground water with colored effluent.*
 16. *As per the analysis result, CPU RO Permeate have pH-9.48, COD-2083 mg/I and BOD-1078 mg/I is being utilized in cooling tower which may not be appropriate for having such high pH. The unit may install additional system to improve the quality of CPU permeate.*
 17. *The unit shall set up proper and separate systems for concentration of spent wash upto 45 % solids and upto 30 % solids for incineration and for bio-composting respectively."*
7. Finally, the following recommendations have been made:

"18.0 Recommendations based on the above Observations

18.1. Water and Waste water Management

1. *M/s. Jubilant Life Sciences Ltd., Gajraula has installed meters at borewells for withdrawal of raw water, waste water generation, ETP inlet and outlet for measurement of effluent discharge and recycled water consumption points. However, all the consumption points are not metered. It is recommended that all fresh water consumption points and effluent recycling points should be metered.*

2. *All existing meters should be periodically calibrated and records to be maintained.*
 - a. *At inlet (make up water separately for fresh water and recycled treated waste water) and outlet (blow down) of cooling towers.*
 - b. *Condensate generated from each stream and recycled;*
 - c. *Individual waste water streams at source of generation, effluent treatment plant and recycling points;*
 - d. *Inlet of STP etc.*
3. *The existing turbine type water flow meters on bore wells should be converted to digital magnetic flow meters for better accuracy.*
4. *All domestic waste water generated from plant and colony should be accounted for and should be sent to STP and metering at STP inlet is to be done.*
5. *The unit shall obtain NOC: from CGWA for withdrawal of groundwater at earliest as the CC."1/. NOCs have already been expired on 04.04.2019.*
6. *Considering the ground water quality of Gajraula, CGWA shall assess the renewal applications of all the plants of M/s Jubilant Industries Ltd., Gajraula-complex and shall decide whether the unit shall be allowed to abstract the ground water or not. CGWA shall decide in accordance to the Hon'ble NGT.*
7. *Fresh water consumption in cooling towers is around 50% of total fresh water consumption. It is recommended to take measures for further reduction of fresh water consumption in Cooling Tower through increase in recycling of waste water/condensate after proper treatment e.g.-*
8. *Attempt should be made to reduce the quantity of makeup water to each Cooling Tower by increasing Cycle of Concentration (COC);*
 - a. *Continuous efforts to be made for reduction in steam consumption and effluent generation thereby reducing fresh water consumption;*
 - b. *It is recommended to provide Rain Water Harvesting system in non-process areas for water conservation.*

18.2 Captive Power Plant

1. *The plant failed to meet the emission norms with respect to NO, (459.9 mg/Nm³ against the norms of 300mg/Nm³), hence the unit shall maintain and operate Air Pollution Control Systems ESP on the boilers regularly and ensure that emissions of all the stacks are within the prescribed norms.*
2. *The unit shall submit the ambient air quality report and stack report of all the air pollution sources from MOEF&CC authorized laboratory on quarterly basis, as mentioned in the consent.*
3. *The unit is having agreement with M/s. Shree Cement Ltd. to supply entire quantity of fly ash (8500-9000 MT per month) generated by its captive power/boiler plant at Bhartiagram Gajraula to SCL, however as per the fly ash disposal data of 2019 provided by the unit, only 5200 MT (average) was sent to SCL. The same may be increased as per the agreement to avoid additional ash disposal on ash pond. This will reduce the water consumption also.*
4. *The unit shall keep and maintain Ash generation as well as disposal record.*

18.3 Distillery Plant

1. *The unit shall obtain NOC from CGWA for withdrawal of groundwater in distillery plant at earliest as the CGWA NOC have already been expired on 04.04.2019.*
2. *The distillery plant should take measures to reduce the spent wash generation from 10.69 to 6-8 KL/KL alcohol production.*
3. *The unit made partition in the lagoon by filling it with soil and made two lagoons i.e., Lagoon 'A' and Lagoon 'B'. However, the unit shall make the filled up area lined, by using concrete.*
4. *The unit shall dismantle/fill/level the additional storage capacity of the lagoon in time bound manner.*
5. *The unit shall restrict the use of excess spent wash in bio-composting so that the situation of generation of diluted spent wash does not arise.*
6. *The entire covered compost area was found full of wind rows of press mud with high moisture content, hence further composting for utilization of spent wash could not be carried out.*
7. *The unit shall stop storage of lagoon sludge in open area to avoid further dilution with rain water and shall use the sludge directly for bio-composting.*
8. *As per the Standard Operating Procedure for Bio-composting operation of molasses based distillery, the distillery plant shall provide covered shed having platform for ready compc4 which was not available at compost yard.*

9. *As per the Standard Operating Procedure for Bio-composting operation of molasses based distillery, the entrance of the bio-compost yard should be paved all-weather road for approach of vehicles to bio-compost yard. Accordingly the unit shall take the immediate actions to implement the same.*
10. *The distillery plant shall not be allowed: operate until the stored spent wash in lagoon 'B' (Approx. volume 16000 m³) get consumed through slop boiler after concentrating through MEE.*
11. *As per the Standard Operating Procedure for Bio-composting operation of molasses based distillery, Bio-compost shall be analyzed for parameters as per the Fertilizer Control order with latest amendments and shall be packed as per the customer requirement. Also, the ready compost must be weighed and record the same shall be maintained. However, no document was available regarding the sell of ready compost.*

18.4 Chemical Unit-I

- *The effluent from Chemical unit-I sent to CETP. The treated effluent from CETP is sent to CTRO.*
- *Reject of CTRO is used for spray on coal stock and ash for dust suppression. This effluent cannot be used for ash quenching which should be stopped immediately.*

18.5 Chemical Effluent Treatment Plant (CETP)

1. *The industrial effluent generated from Chemical unit-I and Polymer plant is treated commonly in CETP for which the unit is having MoU.*
2. *The unit should stop discharge of effluent for horticulture and entire effluent should be recycled/reused in process and or cooling tower.*

18.6 Common Cooling Tower Reverse Osmosis Plant (CTRO)

1. *CTRO reject has characteristics BOD-1294 mg/I, COD-3189 mg/I, TDS-6032 mg/I and Colour-147 hazen. This effluent can be used for spray on coal yard only and not for ash quenching. The unit should install a dedicated pipeline along with metering arrangement for carrying CTRO reject upto coal yard and spray arrangement exclusively using this effluent.*

18.7 Stack Emission Monitoring Results

1. As per the analysis result of stack at Sulphuric Acid plant, it was found non-complying w.r.t **SO₂-2572 mg/Nm³ against** prescribed standard limit of 1370 mg/Nm³, which indicates violation of norms w.r.to SO₂ emission. Hence, the unit shall maintain the wet scrubber periodically to restrict SO₂ emission within the prescribed norms.

To evaluate the performance of the wet scrubber, the unit shall carry out monitoring of the relevant stack(s) through EPA recognized laboratory quarterly.

2. As per the analysis result of stack at Captive Power Plant (90 TPH), Boiler, it was found non-complying w.r.t **NO₂-459.99 mg/Nm³** against the standards limit of 300 mg/Nm³, which indicates violation of norms w.r.to NO₂ emission.

To restrict the NO_x emission proper bed height & proper fuel to air ratio should be maintained, and shall carry out monitoring of the relevant stack(s) through EPA recognized laboratory quarterly.

18.8 Ambient Air Quality Monitoring Results

1. As per the analysis result of ambient air quality monitoring (Refer Table 17) near CDF plant, near ETP area and near terrace of Admin building, PM₁₀ was found **101.2 pg/m³, 132.1 pg/m³ and 120.6 pg/m³** respectively against notified standard limit of 100 pg/m³. This indicates the polluting ambient air near CDF plant, near ETP area and near terrace of Admin building in terms of PM₁₀.

2. Since, the stack emission monitoring results are complying with the norms of PM₁₀ the increased level of PM₁₀ in ambient air quality may be contributed by the other sources like due to crushing and handling of the coal, fly ash handling, vehicular movement in factory premises and heavy vehicular traffic on NH-24 near the factory premises.

3. The unit shall comply with all the consent conditions mentioned in the valid consent related to air pollution including submission of the ambient air quality report of all the air pollution sources from MOEF&CC authorized laboratory on quarterly basis.

18.9 Hazardous waste

1. The unit shall sell caustic lye along with other hazardous waste generated by the unit only to the

authorized utilizer/recycler; and shall maintain records and manifest document as required under Rule 19 of the HOWM Rules, 2016.

2. *The unit shall install automatic water sprinkling arrangements, fire alarming systems, flame arresters, smoke /heat detectors, fire extinguishers and other necessary provisions as stipulated under the Guidelines for storage of incinerable hazardous wastes;*
 3. *The unit shall maintain date wise record of quantity and category of hazardous waste disposed in the captive SLF.*
 4. *The unit shall maintain date wise record of leachate generated from captive SLF.*
 5. *The unit shall install display board outside the factory gate displaying details of hazardous wastes being handled by the unit.*
 6. *The unit shall install automatic water sprinkling arrangements, fire alarming systems, flame arresters, smoke/heat detectors, fire extinguishers and other necessary provisions which are required in the hazardous waste storage area as stipulated under the Guidelines for storage of incinerable hazardous wastes.*
 7. *The unit shall maintain record of waste disposed at SLF and leachate generation from SLF.”*
8. The above observations and recommendations establish violation of environmental norms which can be summed up as follows:
- i. None of the units of Jubilant group of Industries in Gajraula Industrial Complex has requisite permission for ground water extraction but such extraction is continuing in violation of law.
 - ii. Captive power plant is not complying with respect to NO₂ standards.
 - iii. The distillery plant as per the adequacy report of the Joint Committee indicates that the RO and MEE plants are not installed as per the requirements. Further, the compost yard is

not maintained as per the guidelines of CPCB and also the compost quality is not ascertained before providing to the farmers.

iv. The effluents of chemical unit 1 and the polymer unit are collectively treated in a chemical effluent treatment plant and both the units have been consented as Zero Liquid Discharge. The treated effluents from the chemical effluent treatment plant should operate on ZLD system and this effluent may not be consented for utilization for horticulture purpose.

v. The 400 KLD of sewage after treatment is utilized for horticulture/agriculture. The treated sewage is not meeting with respect to faecal coliform. After treatment, it can be better utilized for industrial use so to reduce consumption of ground water.

9. We have also observed that there have been several inspections carried out in the past with regard to all the industries and the actions required to be taken are well known. UPPCB has not taken any action to ensure compliance nor imposed environment compensation so far. As regulatory body, entrusted with statutory functions, has thus failed in its duty so far.

10. Though we have yet not issued notice to the units in question which is to be considered in the light of action of the statutory authorities, Shri Sanjay Upadhyay , Advocate sought to appear for the industrial units to submit that once applications are filed for permission to extract groundwater, extraction of groundwater cannot held to be illegal. We are unable to accept this submission. As held by this Tribunal on several occasions, extraction of groundwater in semi

critical, critical and over exploited areas is required to be regulated in view of judgment of the Hon'ble Supreme Court in M.C Mehta Vs. Union of India (1997) 11 SCC 312. The report notes that the area in question has deteriorated from semi critical to over exploited. In such a situation, while extraction of groundwater for drinking purposes may stand on different footing, there is no absolute right for such extraction for industrial purposes. Such extraction may lead to further deterioration of limited groundwater resource depriving the inhabitants of access to drinking water. The contention is thus rejected. We refrain from dealing with the merits of further remedial action which is yet to be taken by the statutory authorities after giving opportunities to the units in question in accordance with law except that in the light of facts found further action needs to be taken and report furnished to this Tribunal.

11. Thus, remedial action has to be taken for complying with the mandate of law if the units are to continue to function consistent with 'Sustainable Development' and 'Precautionary' principles. Action has also to be taken for the past violations by way of prosecution as well as recovery of environmental compensation on 'Polluter Pays' principle. The activities of the unit may need to be suitably regulated/stopped/restricted. Further action taken report may be filed by the joint Committee of the CPCB and the Uttar Pradesh State PCB within two months by email at judicial-ngt@gov.in.

A copy of this order be sent to the CPCB and the Uttar Pradesh State PCB for compliance.

List for further consideration on 05.02.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

K. Ramakrishnan, JM

Dr. Satyawan Singh Garbyal, EM

Saibal Dasgupta, EM

November01, 2019
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