

**JOINT COMMITTEE REPORT ON THE MATTER RELATED TO M/S.  
JUBILANT LIFE SCIENCES LTD. NIRA, DIST. PUNE, MAHARASHTRA**

(In compliance of order dated 28<sup>th</sup> July, 2020 of Hon'ble National Green Tribunal (NGT),  
Principal Bench, New Delhi in Original Application No. 07/2014 (THC) (WZ) Janardan  
Kundalikrao Pharande & Ors. vs. Ministry of Environment & Forest & Ors.)

**Jointly Prepared By:**



**CENTRAL POLLUTION CONTROL BOARD**



**MAHARASHTRA POLLUTION CONTROL BOARD**

For submission to  
**HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW  
DELHI**

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## 1. INTRODUCTION

The matter OA 07 of 2014 between Janardan Kundalikrao Pharande & Ors. Vs Ministry of Environment & Forests & Ors. is related with the pollution caused by the industry presently known as Jubilant Life Science Ltd (JLS). In this matter, the Hon'ble National Green Tribunal (NGT) passed several orders, amongst which the major previous judgements/directions and related actions are summarised below:

- **Judgement dated 16.05.2014:** Hon'ble NGT constituted a committee comprising of Additional Collector, Regional Officer MPCB, Nominee from the Krishi Mahavidhyalaya Pune and nominee from CGWB Pune to evaluate possible loss caused to the agriculturists, if any, due to discharge of industrial effluents into River 'Nira'. This assessment was to be based on soil testing, examination of past revenue assessment and other relevant factors within 2 km radius of Buasaheb Nala and Saloba Nala. Also, MPCB to monitor whether recommendations given by NEERI and CGWB are complied by the JLS. The JLS was asked to deposit Rs. 25,00,000/- in the Collector's Office for the purpose of disbursement to be made by the collector, Pune on basis of report of the aforesaid committee. The committee submitted its report the Hon'ble NGT after carrying out the assessment. Subsequently, a detailed action plan for remediation was prepared by the JLS, reviewed by the CGWB, NEERI and IIT Delhi and a time bound action plan incorporating recommendations was submitted to Hon'ble NGT.
- **Order of Hon'ble NGT dated 10.08.2017:** The Hon'ble NGT directed the JLS to adhere to the time bond action plan and directed MPCB to monitor the work of remediation. Moreover, NGT directed NEERI Nagpur to carry out various pilot studies for utilization of the excavated contaminated soil as soil amendment in agriculture, as fuel substitute in brick manufacturing and as soil conditioner after bio composting with press mud. Based on the order JLS has initiated work for various studies and work.
- **Order of Hon'ble NGT dated 20.02.2019:** Hon'ble NGT constituted a monitoring committee comprising of members from CPCB, MoEF&CC and IIT Bombay and assigned various task. The committee, after carrying out detailed study of the area, assessed a environmental compensation of Rs. 5,47,50,000/- along with a methodology for calculation of agricultural production loss of farmers and related compensation. The environmental compensation was based on the non-compliances observed during visit other than the execution of work plan as per order dated 10.08.2017. Subsequently, JLS filed objections to the monitoring committee report before the Hon'ble NGT.
- **Order of Hon'ble NGT dated 19.09.2019:** Hon'ble NGT directed the monitoring committee to examine the objections filed on behalf of the JLS and submit recommendations. Accordingly the monitoring committee has submitted the recommendations in the form of report to Hon'ble NGT. In addition to that, Hon'ble NGT has constituted a committee comprising of CPCB and MPCB to assess the level of pollution of River Nira and efficacy of pollution control devices installed by the JLS. Based on the order, the joint committee carried out the study and submitted a report to Hon'ble NGT.

- **Order dated 04.02.2020:** Hon'ble NGT directed the JLS to pay the environmental compensation assessed by the monitoring committee. The monitoring committee constituted as per order dated 20.02.2019 was directed to calculate the further liability. Accordingly, the monitoring committee calculated the further liability of amount Rs. 79,20,000/- and submitted the report to Hon'ble NGT. In the order, CPCB and MPCB was directed to inspect the JLS for compliance status as on 30.04.2020.

However, government imposed lockdown and related restrictions emerged due to COVID-19 pandemic, CPCB requested for extension of time for submission of report to Hon'ble NGT. Hon'ble NGT considered the request and vide its order dated 28.07.2020, directed that:

*".....In view of the above, we grant time sought by the CPCB and accept the assessment of additional compensation as further liability. It will be open to the State PCB/CPCB to recover the assessed compensation by using coercive measures, including closure and also to take steps for ensuring compliance of environmental norms. The recovered compensation may be spent for restoration of the environment by preparing an action plan by a joint Committee of CPC, MPCB and the area District Magistrate, with nodal agency being the State PCB. The plan be got executed either in such manner and through such agency as found appropriate by the said Committee. The plan be for work other than the work which is to be executed by the industrial unit itself.*

*Further status report in the matter as on 31.10.2020 be filed....."*

In compliance of the order, the joint committee comprising representative from CPCB, MPCB and Dist. Magistrate convened a meeting dated 19.10.2020 through video conferencing to discuss the matter in detail along with preparation of action plan and status report based on visit on 31.10.2020. Accordingly visit of the industry by joint committee of CPCB and MPCB for compliance status and meeting of joint committee with representative of dist. Magistrate for the preparation of action plan was scheduled on 31.10.2020. However, due to heavy rain and flood like situation in the area and a request from the District Collector's office to MPCB, the committee carried out the field visit of the JLS and area on 02.11.2020. The action plan prepared by the joint committee is enclosed as **Annexure I**.

Following officials from CPCB and MPCB carried out joint inspection, sampling and monitoring on 02.11.2020 to assess the compliance status.

- Shri Amit R. Thakkar, Scientist 'D', CPCB, RD(W)
- Shri Saket Kumar, Scientist B, CPCB
- Dr. Anantha NS, SSA, CPCB
- Dr. J. B. Sangewar, Regional Officer, Pune, MPCB
- Shri Pratap Jagtap, SRO, Pune-I, MPCB
- Shri Suryakant Shinde, Field Officer, SRO Pune-I, MPCB

During visit, Shri Satish Bhat, Vice President, JLS Nira site and other officials of JLS were present and provided the information.

## **2. INSPECTION METHODOLOGY ADOPTED BY THE JOINT COMMITTEE**

The joint committee carried out inspection of JLS and visited nearby areas on 02.11.2020. The compliance status was assessed based on the monitoring and inspection activities carried out by the joint committee under following heads:

### **I. Monitoring of Wastewater treatment facilities provided by M/s Jubilant Life Sciences, Nira:**

CPCB and MPCB carried out the monitoring of the wastewater treatment facilities provided by the JLS. Grab samples of wastewater were collected to determine the compliance status.

### **II. Inspection of the spent wash management facilities and Bio-compost Yard:**

The storage lagoons, bio-compost yard, contaminated sites (22 acres and 8 acres) were visited and groundwater samples of piezowells and dug-well located in the premises of Bio-compost yard and 22 acres contaminated site were collected from same locations (as per previous reports)

### **III. Observations in reference to the detailed action plan submitted by JLS:**

Inspection and monitoring of facilities developed as per the time bound detailed action plan submitted by JLS to Hon'ble NGT was also carried out. Records pertaining to the disposal and utilization of sludge removed from contaminated sites, details of treatment system provided as per action plan etc. were collected.

The wastewater samples and ground water were collected, preserved and sealed following proper procedure. Parallel sealed samples were provided to JLS upon their request. The analysis of wastewater samples and ground water samples were carried out at CPCB laboratory at Regional Directorate (West), Vadodara.

The joint committee referred to previous committee reports (during Nov'19 and May'19), detailed action plan submitted by the JLS, notified standards and norms prescribed in the CCA to the JLS, guidelines for composting prepared by CPCB etc. The analysis results for wastewater samples were interpreted based on the CCA conditions and the analysis results of the groundwater were compared with the results reported in the previous committee reports to draw the inferences.

## **3. INTRODUCTION TO M/S JLS AND ITS WASTEWATER TREATMENT**

M/s Polychem Ltd. in Nira village was engaged in various manufacturing activities including distillery and other auxiliary chemicals since 1963. The company was taken over by M/s VAM Organics Ltd. in 07/05/1999 and later its name was changed to Jubilant Organosys Ltd. on 23/11/2001. After subsequent expansion, M/s Jubilant Organosys Ltd. further changed its name to M/s Jubilant Life Sciences Ltd. (JLS) on 01/10/2010.

JLS obtained a consolidated consent and authorization (CCA) dated 06.12.2017 from Maharashtra Pollution Control Board for 13 different products valid till 30.08.2022. As informed, out of the 13 products presently the unit manufactures following 05 products;

1. Ethyl Alcohol (94%) Rectified spirit
2. Ethyl Alcohol (99.8%) Anhydrous alcohol
3. Ethyl Acetate
4. Acetic Anhydride
5. Liquid CO<sub>2</sub>

The JLS has undertaken amendments in the CCA for modification in permission under different categories and also got separate Consent to Operate (CTO) for various processes time to time as mentioned below:

- CTO dated 17.06.2019 for operation of ETP and RO (CETP-CTBD) for treating chemical wastewater from Acetic Anhydride and Ethyl Acetate plants.
- Amendment dated 10.07.2019 to change product mix by increasing production of Acetic Anhydride from 177 MTPD to 210 MTPD and corresponding reduction in Ethyl Acetate from 367 MTPD to 334 MTPD with “no increase in pollution load” condition.
- Amendment dated 10.07.2019 to operate distillery during monsoon period with quantity of 40 KLD, generation of 420 KLD spent wash through bio-composting under covered shed.
- Amendment dated 16.07.2019 to operate 22.5 MTPH coal fired Boiler with 110 MTPD distillery biocompost/ agro waste as supplementary fuel and 20 KLD trade effluent to generated treated with Zero Liquid Discharge Scheme.
- Amendment dated 16.08.2019 for inclusion of 4 MTPD elemental sulphur as by-product from Distillery and increase of quantity of product Fusel Oil.
- CTO dated 26.02.2020 for RO plant of capacity 330 KLD for treatment of dugwell and borewell water, MEE-ATFD plant of capacity 200 KLD to treat reject of RO to achieve ZLD and Community STP of 600 KLD.
- Amendment dated 02.12.2020 in CTO for 100 KLD distillery with increase in working days through bio-composting under shed of 12.5 acre.

### **Water Management**

The main source of water is from River Nira. The JLS has an agreement with Pune Irrigation Division, Water Resources Department, Govt. of Maharashtra for industrial use of 1.09 Million Cubic meter per year fresh water from Nira river for a period of 6 years from 31.05.2018. As per the records submitted from Nov-19 to Oct-20 (12 months), the JLS consumed 0.973 Million cubic meter of freshwater for the period.

Wastewater generated from the various manufacturing process in the premises of JLS can be classified into three streams, i.e., spent wash from the distillery, chemical wastewater

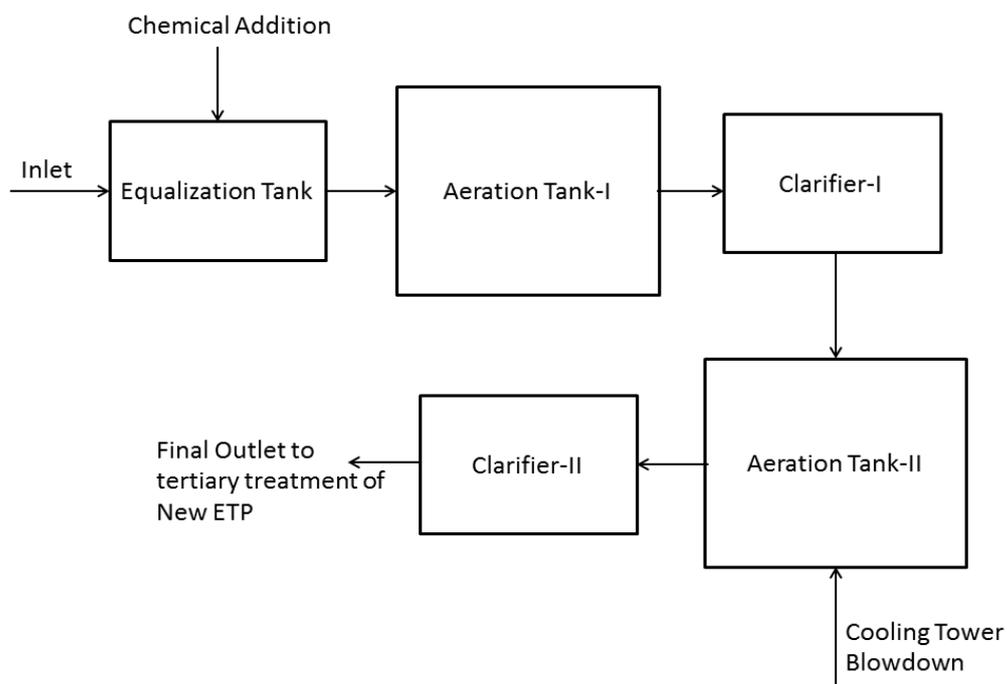
from the chemical manufacturing processes and wastewater from other auxiliary & utilities operation. JLS provided separate wastewater Management for spent wash and wastewater generated from Chemical & other operations.

**Chemical Wastewater Management**

JLS has provided two effluent treatment plants described as ‘Old ETP’ of capacity 406 CMD and ‘New ETP’ of capacity 500 CMD for treatment of wastewater generated from the acetic anhydride plant and ethyl acetate plant respectively. Both the ETPs were operational during visit. Wastewater after treatment from ETP is further transferred to CETP-CTBD RO. Permeate generated from RO Plant is mixed with the fresh water (Raw Water) storage tank.

**The Old ETP comprises of:**

Collection cum Neutralization Tank → Aeration Tank-I → Clarifier-I → Aeration Tank- II → Clarifier-II → Storage Tank



*Figure 1: Process flow diagram of Old ETP*

It was informed that, part of blow down from all cooling towers added in the Aeration Tank-II of old ETP. The treated wastewater from Old ETP is fed for tertiary treatment provided for New ETP.

**The New ETP comprises of:**

Equalisation Tank → Primary Chemical Treatment Tank (Flash Mixture) → Primary Clarifier-B → Bio-Reactor-I → Secondary Clarifier-A → Bio-reactor II → Secondary Clarifier-B →

Tertiary Clarifier → Filter Feed Tank → Pressure Sand Filter → Activated Carbon Filter → Storage Tank

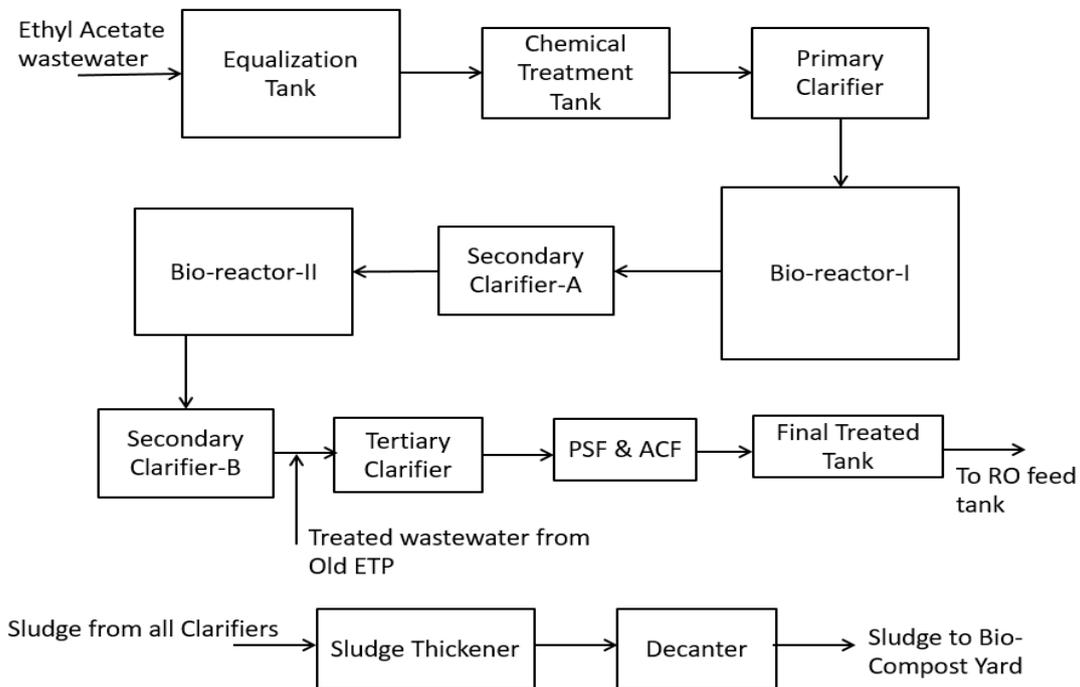


Figure 2: Process flow diagram of New ETP

The treated wastewater from the Old ETP is mixed with the outlet of Secondary Clarifier-B of the New ETP and the mixed wastewater is then fed to tertiary treatment consisting of Pressure Sand Filter and Activated Carbon Filter. The outlet of from the filters is stored in the RO feed tank for further feeding into the Reverse Osmosis Plant (CETP-CTBD). The JLS has provided decanters for dewatering of ETP sludge from both the ETP. As per CCA, the ETP sludge is used as filler material for bio-composting.

As informed during visit, the RO (CETP-CTBD) provided by the JLS receives treated wastewater from ETP and remaining Blow Down from Cooling Towers.

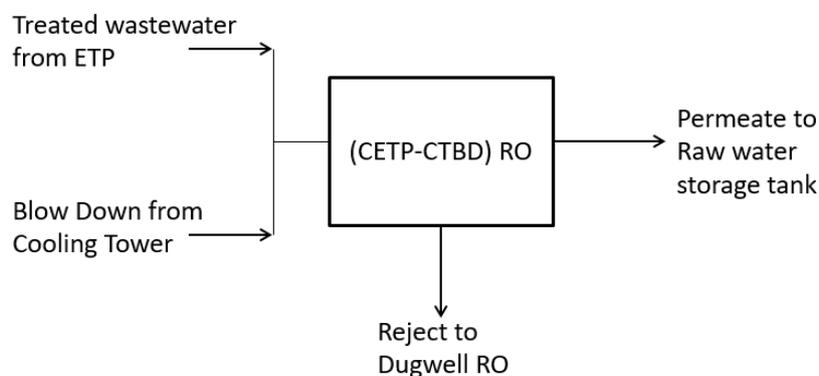


Figure 3: Process flow diagram of (CETP-CTBD) Reverse Osmosis Plant

The (CETP-CTBD) RO permeate is transferred to the same Raw Water tank provided for storage of fresh water from River Nira. The water from the storage tank is supplied for various processes in the JLS. The reject from the RO (CETP-CTBD) is transferred and mixed at the inlet of Dugwell-RO (which is provided for treatment of contaminated groundwater as per the Detailed Action Plan).

### **Spent Wash Management**

As per the CCA dated 02.12.2017, JLS is permitted for production of 100 CMD Ethyl Alcohol from the distillery and generate 1270 CMD spent wash. The JLS has amended the CCA (dated 10.07.2019) to operate distillery in Monsoon period also, producing 40 CMD ethyl alcohol and 420 CMD spent wash in monsoon.

The JLS has provided a Zero Liquid Discharge (ZLD) scheme for spent wash generated from distillery operation. It is gathered from the information submitted by the JLS that from Nov-19 to Oct-20 the total ethyl alcohol production is 6,938 CM and total spent wash generation is 72,035 CM (average spent wash generation is about 200 CMD). The ratio of generation of spent wash to ethyl alcohol production as per records found to be 10.38.

JLS provided following ZLD scheme for spent wash management:

Bio-digesters (2 Nos., 650 CMD and 710 CMD) → Parallel Plate Separator → RO Plant → Permeate from RO used for molasses dilution and reject to MEE (600 CMD) → The condensate generated from the MEE is used for cooling tower makeup while the concentrate is stored in a lined lagoon of capacity 25,000 m<sup>3</sup> and is eventually used for bio composting.

The JLS has provided total 22 acres of land for the bio-compost yard divided into plots numbered 1 (2.9 acres), 2 (2.25 acres), 2A (1.6 acres), 3 (2.83 acres), 4 (3.82 acres), 5 (4 acres), 6 (2.3 acres) and 7 (2.3 acres). As informed, covered shed is provided for 17.5 acres of area in the biocompost yard and the remaining open space is used for storage of the final compost and raw materials. Area used for composting under covered shed is 12.5 acres. It was informed that the remaining 5 acres will be used for storage of final compost.

The main raw material required for composting is press mud from nearby sugar JLS. The JLS reportedly also uses yeast sludge /sulphur containing sludge generated from bio-methanation/ chemical ETP sludge/ sludge from contaminated site as filler material in the composting process. Aerotillers (Nos. 3, Model: Enviro 1500, with Effluent Tank of storage capacity 5 m<sup>3</sup>) are used for turning the windrows during the composting process. The JLS reportedly uses a 90 day composting cycle following the 1:1.6 norms for ratio of press mud to concentrated spent wash.

#### 4. MONITORING OF CHEMICAL WASTEWATER TREATMENT

The joint committee carried out monitoring of Old ETP, New ETP and Reverse Osmosis Plant (CETP-CTBD). Following wastewater samples were collected from these units:

- A. Old ETP: Samples collected from inlet and final outlet for analysis of various parameters along with samples from the aerobic reactors for MLSS/MLVSS.
- B. New ETP: Samples collected from inlet and final outlet for analysis of various parameters along with samples from the aerobic reactors for MLSS/MLVSS.
- C. RO (CETP+CTBD) Plant: Samples collected from permeate and reject of RO.

Table 1: Analysis Results of samples collected from Old ETP and New ETP

Parameters	Inlet of Old ETP	Outlet of Old ETP	Inlet of New ETP	Outlet of New ETP	Reject of (CETP-CTBD)RO	Permeate of (CETP-CTBD)RO
pH	3.52	5.11	3.67	7.54	6.15	6.21
TSS	8.5	58	11.3	20	33	3.8
TDS	2536	1105	48	214	3393	559
COD	23475	122	10039	40	226	13
BOD	14430	16.4	6383	6.3	66	3.8
NH <sub>3</sub> -N	767	4.0	2.71	2.9	4.0	1.14
NO <sub>3</sub> -N	--	88.9	--	48.71	98.46	49.05
PHENOLS	BDL	BDL	BDL	0.011	BDL	BDL
CHLORIDE	--	103	--	58	723	103

\*Note: All parameters are in mg/l except pH.

Parameter	Aeration Tank-01 of Old ETP	Aeration Tank-02 of Old ETP	Bioreactor-I of New ETP	Bioreactor-II of New ETP
MLSS	5743 mg/l	3806 mg/l	3220 mg/l	1680 mg/l
MLVSS	2157 mg/l	1939 mg/l	780 mg/l	380 mg/l
Ratio of MLVSS/MLSS	0.376	0.509	0.242	0.226

#### Observations:

##### Old ETP:

- The ETP was operational during visit and was receiving wastewater from acetic anhydride plant at the inlet and blow down from cooling towers in Aeration Tank-II.
- As per records from Nov-19 to Oct-20, on an average the Old ETP received and treated 79.6 CMD wastewater from the Acetic Anhydride plant against the capacity of 406 CMD. The average quantity of wastewater received was only 19.6% of the capacity of Old ETP. Furthermore, 58.8 CMD (i.e. about 74% of wastewater received) of the Cooling Tower Blow down (CTBD) is added in the Aerobic reactor-II of the 'Old ETP'. The treated wastewater from the Old ETP is mixed with wastewater from Secondary Clarifier-B of 'New ETP' and passed through tertiary treatment.

- The analysis of the grab sample collected from inlet of Old ETP reveals that the inlet concentration of COD & BOD is high as compared to the design norms. However it was informed that the as ETP is operated at very low hydraulic capacity it increases the retention time for treatment and hence able to treat the wastewater.
- The ratio of MLVSS/MLSS at OLD ETP also found less as compared to the theoretical recommended value (0.7 to 0.8) for secondary treatment system. However, decrease in concentration of measured parameters found at the final outlet of old ETP may be attributed due to less hydraulic load, more retention time and dilution from addition of cooling tower blowdown. The treated wastewater from old ETP is further transferred for tertiary treatment at New ETP.

#### **New ETP:**

- The New ETP was operational during visit and received wastewater from Ethyl Acetate plant. As per the records, during Nov-19 to Oct-20 the New ETP received on an average 276 CMD wastewater from the Ethyl Acetate plant against its capacity of 500 CMD, i.e. 55.2% of its capacity.
- The treated wastewater from Old ETP is mixed with wastewater from New ETP after Clarifier-B (after Secondary Treatment). The mixed wastewater is passed through tertiary treatment and collected in final treated tank.
- The ratio of MLVSS/MLSS at New ETP also found less as compared to the theoretical recommended value (0.7 to 0.8) for secondary treatment system. However, overall reduction more than 99% was found in the concentration of COD, BOD after tertiary treatment (final outlet from New ETP) as compared to the inlet.
- Part of Treated water from New ETP was earlier reportedly used for irrigation. However now the entire quantity of treated water from New ETP is further subjected to CETP-CTBD Reverse Osmosis plant.

#### **Chemical ETP Sludge Management**

- The JLS has provided decanters for dewatering of sludge generated from old and new ETP. During visit, the decanter was operational. ETP sludge is used in composting. ETP sludge is categorized under Hazardous Waste as per Schedule I (35.3) of Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016. However as per CCA, the JLS is permitted to dispose ETP sludge by the way of bio-composting. Proper records for usage of ETP sludge in Bio-composting yard were not maintained.

#### **RO (CETP+CTBD)**

- The RO(CETP+CTBD) was operational during visit. As informed during visit, it receives final treated wastewater from 'New ETP', Cooling Tower Blow Down from Acetic Anhydride plant and recycled reject of Spiral RO at inlet. As per the information provided by the JLS, the RO received 420 CMD wastewater as

feed during Nov-19 and Oct-20, out of which about 21 CMD (i.e. 5 %) was Cooling Tower Blow Down.

- The RO generates 325 CMD quantity of permeate from 420 CMD feed (i.e. 77.3%). Permeate generated from the RO is subjected to polishing RO (Spiral RO) and transferred to common Raw Water storage tank of the JLS and further re-used in the process.



*Figure 4: Aerobic Reactors of Old ETP*



*Figure 5: Aerobic Reactors of New ETP*

## **5. COMPLIANCE MONITORING OF THE SPENT WASH MANAGEMENT AND BIO-COMPOST YARD AT M/S JUBILANT LIFE SCIENCES**

The spent wash after bio-methanation is fed to Spent Wash RO plant (after parallel plate separator) and reject of the RO is fed to Distillery MEE. The basic characteristics of the spent wash have already been determined by the previous Monitoring committee report. As per the report, the raw spent wash was acidic (pH=3.89) and with very high concentration of COD (1,15,730 mg/l), while the bio-methanated spent wash had basic pH (7.53) and reduced but high concentration of COD (32,163 mg/l).

The Distillery along with the MEE was operational during visit. However, the Spent Wash RO was non-operational during visit due to periodic cleaning. The RO permeate and the MEE

condensates are re-used in the process. A sample of MEE condensate was collected for analysis.

Samples of ground water were collected from the same 04 nos. locations of the Bio-compost Yard, as done in the previous committee report. The specific observations based on the spent wash management during visit, analysis of samples collected and information received from the JLS about ZLD scheme are as follows:

### **Distillery MEE and Spent Wash RO**

- During visit, distillery plant was operational, as informed and records of production submitted the distillery was operated at low capacity from Nov'19 to Oct'20 (average 35.2 KLD) to utilize the stored MEE concentrate, spentwash RO Reject stored in the storage lagoons by the way of composting.
- JLS has provided three lined lagoons for storing the spent wash at various concentration stages (capacity: 45,000 KL, 65,000 KL and 25,000 KL). The storage capacity exceeds the permitted storage capacity of 30 days as per CCA. During visit, the industry informed that the wastewater/effluent from the 02 lagoons (capacity 45,000 KL and 65,000 KL) for spent wash RO reject were emptied in May 2020 and inlet/outlet pipeline were isolated. Removal of bottom sludge was not yet started and reportedly was kept for drying inside the lagoons. However, due to heavy rainfall in the area, rainwater mixed with the bottom sludge accumulated in the lagoon. During visit lagoons were observed partially filled. The estimated stored quantity of contaminated rainwater and sludge in the lagoons as informed by the industry is mentioned below:

*Table 2: Analysis Results of samples collected from Old ETP and New ETP*

<b>Storage accumulated in 45K &amp; 65K Lagoons (M<sup>3</sup>) As on 31-10-2020</b>		
<b>Particular</b>	<b>65K Lagoon</b>	<b>45K Lagoon</b>
Contaminated Rain water	11,700	13,500
Estimated Sludge	26,000	7,000
Total	37,700	20,500

JLS need to treat the present accumulation and empty the lagoons for dismantling. JLS need to identify one such lagoon with restricted capacity as per CCA and submit action plan for dismantling remaining lagoons to MPCB.

- During visit, distillery RO was non-operational due to periodic cleaning. As per the data submitted by JLS, the daily average RO feed between Nov-19 and Oct-20 is 275 CMD, permeate generated for recycling is 146 CMD and reject is 84.85 CMD. The reject generated from Distillery RO is concentrated in Distillery MEE.
- The distillery MEE was operational during visit. As per the data submitted by the JLS, the daily average feed between Nov-19 and Oct-20 to MEE is 263.36 CMD, average MEE concentrate generation is 169.24 CMD and condensate generation is 85.32

CMD. The condensate of the MEE is re-used in the cooling tower of MEE while the concentrate spent wash is used in biocomposting.

- Grab sample of MEE condensate was collected during visit. The analysis result is mentioned below:

*Table 3: Analysis result of Distillery MEE Condensate*

pH	TSS	TDS	COD	BOD	NH <sub>3</sub> -N	NO <sub>3</sub> -N	PHENOLS	Cl
7.57	2.5	18	1222	569	372	BDL	44.96	3

It is worth to mention here that specific conditions for the use of condensate are not prescribed in the CCA. However, use of condensate directly in cooling towers having high concentration of measured parameters COD, BOD, ammonia, phenol etc. may not be appropriate. Therefore, condensate may need to be treated before use.

### **Bio-compost Yard**

- JLS has provided total 22 acres area for composting and other related activities. During visit, bio-composting was under operation. The shaded area presently considered for composting by JLS is 12.5 acres and MPCB has amended the CCA for operation of 100 KLD distillery in 12.5 acres of biocompost yard.
- As per the previous committee report, the area reported for bio-compost yard is less considering the quantum of spent wash mentioned in the CCA (1270 KLD Spent wash generation i.e. 12.7 KL/KL of production). However, the industry has submitted a calculation justifying the area provided considering the present actual generation of the spent wash (1050 KLD spent wash generation i.e 10.5 KL/KL of production). As per records of production and spent wash generation, the industry is generating the spent wash at the ratio of 10.38 KL/KL of production. Amendment in the quantity of spent wash generation may also require in the CCA to consider the area of 12.5 acres for composting.
- It was observed that huge stockpile of final compost were stored on platform in the open area for sun-drying. Leachate was also observed from the stored final compost. This may be due to recent rain and excess spraying of concentrate spent wash after completion of compost cycle which has resulted in poor housekeeping in the bio-compost area. JLS need to provide proper covered shed to store the final compost. It was informed that the remaining area of 5 acres of shedded area will be use for final compost storage in future.
- Spillage in the composting area was observed during visit. It seems that JLS is using more quantity of concentrate for composting. As submitted by JLS, ratio of utilization of MEE concentrate is 1.6 m<sup>3</sup> per MT of Pressmud. However, as per records of actual utilization average ratio of MEE concentrate to Pressmud is found to be 2.3 m<sup>3</sup> per MT. Excess spraying of concentrate may increase the organic content and may also require more days for proper composting. Hence, spillages of MEE concentrate across the bio-compost yard outside the shed may be corroborated to the overuse of MEE concentrate.



Figure 6: Spillages observed in Bio-compost Yard

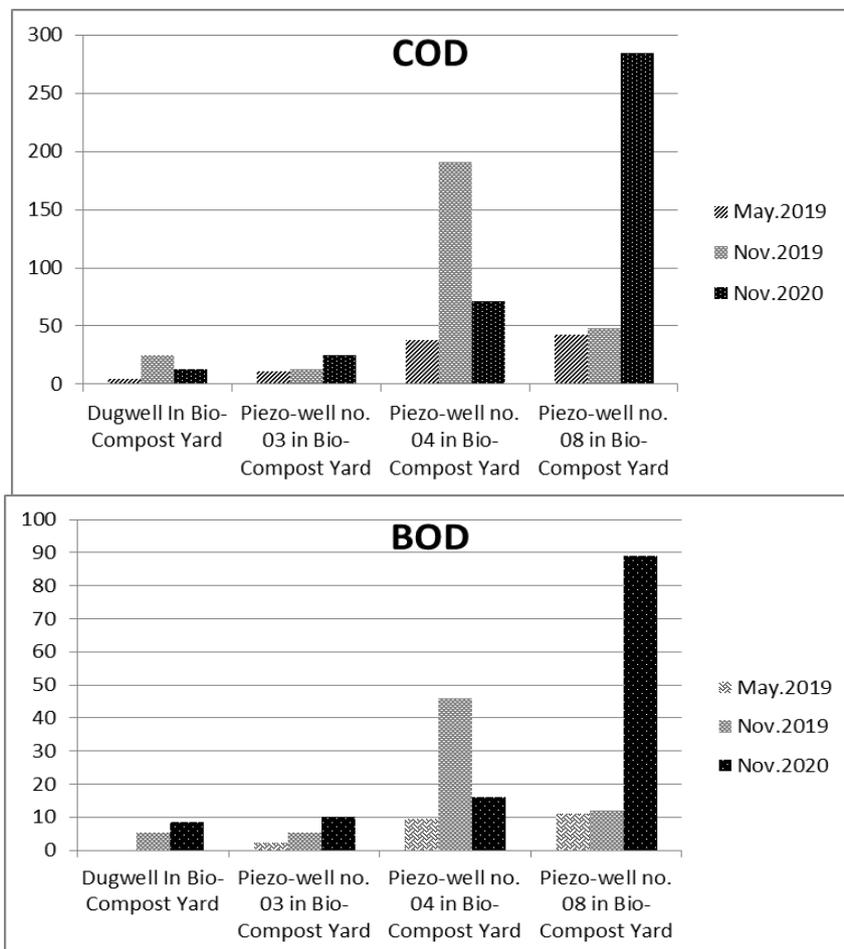
- In order to analyse the status of groundwater in the Biocompost Yard, the committee carried out sampling of ground water from dugwell and piezowells in the Bio-compost Yard in reference to the previous committee reports. The analysis results are:

Table 4: Analysis Results of samples of Ground water collected from Bio-compost Yard

Parameters	Dugwell at Bio-compost Yard	Piezowell (Pz-3) of Bio-compost Yard	Piezowell (Pz-8) of Biocompost Yard	Piezowell (Pz-4) of Biocompost Yard
pH	7.52	7.81	7.37	7.36
TSS	13.8	7.5	17.5	8.8
TDS	1794	1170	4056	1759
COD	13	25	284	71
BOD	8.5	10.2	89	16
NH <sub>3</sub> -N	2.31	1.0	5.4	1.4
NO <sub>3</sub> -N	13.18	4.12	109.91	1.63
PHENOLS	BDL	BDL	BDL	BDL
CHLORIDE	188	216	891	574
COLOUR	BDL	10	1875	100
CONDUCTIVITY	2156	1537	5999	3159
TOTAL SOLIDS	1812	1183	4082	1646
TOTAL HARDNESS	428	322	938	457
CALCIUM HARDNESS	261	175	367	200
MAGNESIUM HARDNESS	167	147	571	257
TOTAL ALKALINITY	579	375	1061	220

\*Note: All parameters are in mg/l except pH, Colour in Hazen units & Conductivity in  $\mu$ mhos/cm.

- Comparison of present analysis results of groundwater samples collected from Piezowell No. 08 from the Bio-compost Yard to results reported in previous committee visits it is observed that except pH and TSS concentration of all measured parameters shows increasing trend. This may be because of the location of piezowell 08 is on the unlined ground and further downstream of the compost plant, spillages from the lined portion of the compost yard may find its way in the unlined portion and gets percolated and has resulted in higher concentration.
- The remaining locations also show variation in concentration of major parameters such as BOD, COD, NH3-N, Colour etc. However, overall increasing trend in all the locations was observed. JLS need to take immediate steps to provide proper lining of the entire area, improve housekeeping and proper check for the usage of concentrate spent wash for composting.



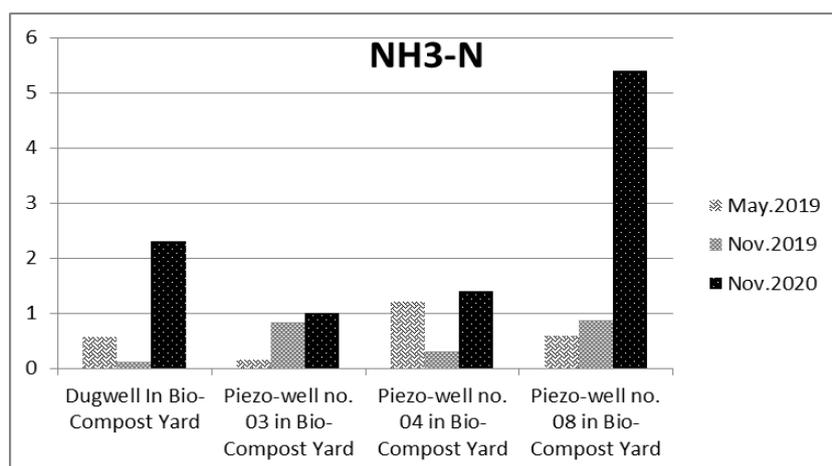


Figure 7: Graphs showing comparison of ground water at 04 locations during various monitoring

## 6. OBSERVATIONS WITH RESPECT TO DETAILED ACTION PLAN SUBMITTED BY THE JLS

The JLS has submitted Detailed Action Plan titled “Remediation of Ground Water Aquifer at M/s Jubilant Life Sciences Ltd., Nira, Maharashtra” to Hon’ble NGT in 2017 for taking measures against the stored sludge on 22 acre and 8 acre site and ground water pollution occurred due to leachate generated from these sites. JLS has carried out various study and submitted reports to Hon’ble NGT. The committee inspected the contaminated site, collected data regarding sludge removal and carried out monitoring of the treatment units for groundwater and sewage. The observations and analysis results are mentioned below:

### Utilization of excavated material as soil amendment in agriculture:

The committee visited the contaminated 22 acre and 8 acre site, it was informed and observed that almost all area were excavated and the sludge reportedly disposed through three ways:

- Selling to Farmers for soil amendment in their fields as per the report of CSIR-NEERI.
- Selling to Brick Kilns for bricks manufacture.
- Utilizing the old sludge with pressmud for bio-composting.

As per the records submitted by JLS total 71,893 MT of old sludge has been disposed from start of Nov-19 to end of Oct-20, the details of excavated sludge disposal are depicted below:

Table 5: Disposal pathway of Excavated sludge from contaminated sites

S.No.	Excavated Sludge Disposal Pathway	Quantity disposed during Nov-19 to Oct-20 (MT)
1	Selling to Farmers for soil amendment in their fields as per the report of CSIR-NEERI	29,569
2	Selling to Brick Kilns for bricks manufacture	28,548

3	Utilizing the old sludge with pressmud for bio-composting	13,763
	Total	<b>71,880</b>

JLS has carried out study for the various options for the utilization of excavated sludge by CSIR-NEERI. As per the records, during Nov-19 to Oct-20, the average quantity of excavated sludge provided to each farmer per area of land is 16.00 MT/acre. JLS may submit a report on field scale application of excavated sludge as soil conditioner on change in soil and ground water quality as recommended in the CSIR-NEERI Report.

During visit the sludge from 22 acres and 8 acres area was found excavated and portion of empty area found filled with coloured water as informed due to heavy rain.



*Figure 8: Excavated 22 acre and 8 acre sites with accumulated water due to rain*

**Provision for Sewage Treatment Plant (STP) to treat sewage from Nira village:**

JLS has commissioned the 600 KLD STP for treating sewage from village Nira passing through underground sewer line across the JLS. The estimated quantity of sewage from the Nira-Nimbut village was 1200 KLD as per the detail action plan. Part of sewage is pumped from sewer pipeline to the STP. The treated water from the STP is discharged back into the outfall of same sewer pipeline which meets into the Buasaheb Nalla and with River Nira in further downstream.

The treatment units of the STP are depicted below:

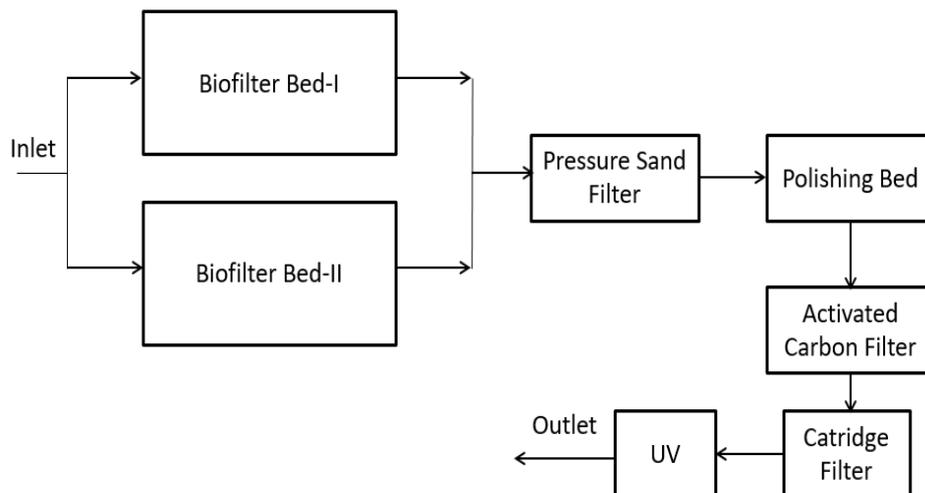


Figure 9: Process flow diagram of STP

Samples from inlet and outlet of the STP were collected and analysed for various parameters. The analysis results are shown below:

Table 6: Analysis results of samples taken from STP

Parameters	Inlet	Outlet
<b>pH</b>	6.63	7.15
<b>TSS</b>	38	24
<b>TDS</b>	996	968
<b>COD</b>	484	357
<b>BOD</b>	205	179
<b>NH<sub>3</sub>-N</b>	16	8.6
<b>NO<sub>3</sub>-N</b>	BDL	8.24
<b>PHENOLS</b>	0.168	0.028
<b>CHLORIDE</b>	178	178

*\*Note: All parameters are in mg/l except pH*

The analysis result shows that the STP presently is not performing as per the design criteria as very less reduction in the concentration of monitored parameters from inlet and outlet was observed. JLS need to take steps for proper treatment of sewage and should explore the possibility for the reuse of treated sewage.



Figure 10: Biofilter Beds of STP



Figure 11: Polishing bed, PSF and ACF of the STP

**Pump and treat system for ground water from contaminated aquifer:**

The ground water in the aquifer below the 22 acre site and 8 acres is contaminated as per the various committee reports. As per detail action plan, JLS has conducted detailed hydrogeology study and provide a pump and treat system. The flow diagram of the treatment system is shown below:

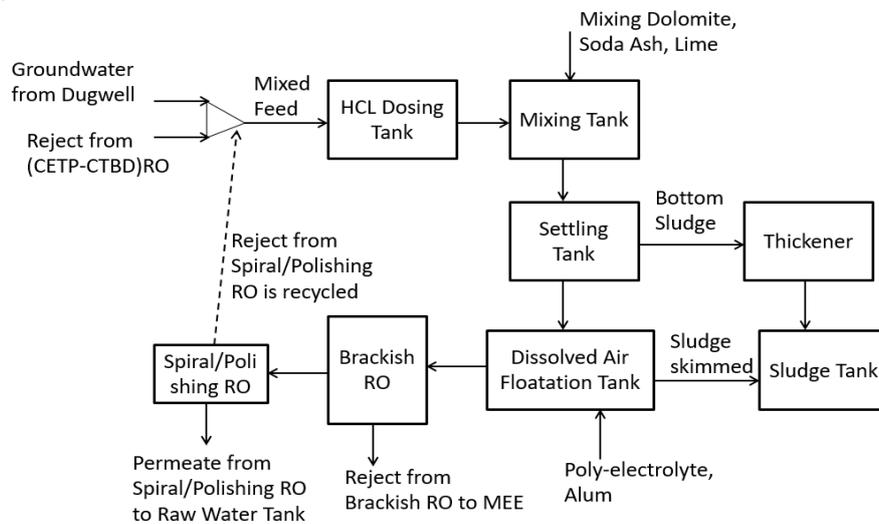


Figure 12: Process flow diagram for Dugwell RO

The Dugwell RO consists of two stages: Brackish RO followed by Spiral RO. The mixed feed is directly fed to the Brackish RO. The reject from the Brackish RO is sent to MEE-ATFD for further solid/salt separation through evaporation. Permeate from the Brackish RO is fed to Spiral RO or Polishing RO. Permeate from the spiral/polishing RO is transferred to the common Raw Water storage Tank, while the reject is again recycled back in the process by mixing with mixed feed inlet.

During visit, the MEE-ATFD was operational. The MEE-ATFD plant provided for the reject of Brackish RO is depicted in the figure below:

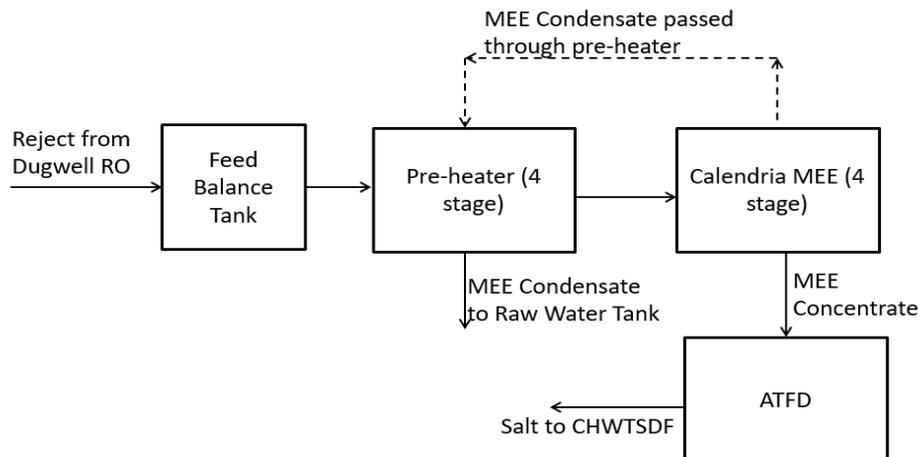


Figure 13: Process flow diagram of MEE+ATFD system for dugwell groundwater

The MEE condensate is transferred to the common Raw Water storage Tank while the concentrate is fed to Agitated Thin Film Dryer (ATFD). The salt generated from the ATFD is disposed to CHWTSDF site MEPL Ranjangaon.

The joint committee has collected following grab samples of wastewater:

- Groundwater from dugwell from 22 acre site
- Mixed feed to Dugwell RO
- Permeate from Dugwell RO
- Condensate from MEE

The analysis results are mentioned in the table below:

Table 7: Analysis Results of samples from Pump and treat system

Parameters	Groundwater from Dugwell in 22 acre site	Mixed feed to Dugwell RO	Permeate from Dugwell RO to Raw Water tank	Condensate from MEE to Raw Water tank
pH	7.22	7.43	6.91	7.86
TSS	126	78	6.3	5.0
TDS	7630	5600	53	141
COD	2250	1488	15	12
BOD	820	646	4.7	8.3
NH <sub>3</sub> -N	28.7	29.4	1.0	33.4
NO <sub>3</sub> -N	33.54	51.08	2.59	2.02
PHENOLS	0.198	0.105	0.207	BDL

Parameters	Groundwater from Dugwell in 22 acre site	Mixed feed to Dugwell RO	Permeate from Dugwell RO to Raw Water tank	Condensate from MEE to Raw Water tank
CHLORIDE	2969	2128	4.0	13
COLOUR	17500	7500	BDL	BDL
CONDUCTIVITY	10877	8039	80	459
TOTAL SOLIDS	7761	5682	60.7	151
TOTAL HARDNESS	2346	2040	20	98
CALCIUM HARDNESS	1428	1224	12.2	53
MAGNESIUM HARDNESS	918	816	7.8	45
TOTAL ALKALINITY	1789	1126	31.1	176

*\*Note: All parameters are in mg/l except pH, Colour in Hazen units & Conductivity in  $\mu$ mhos/cm.*

Online system to monitor the performance of RO is provided by JLS. The analysis results of feed and permeate samples reveals that the RO Plant is performing within the boundaries of design conditions. As per the records, the operation of Dugwell RO was started in Dec-19. 55,325 m<sup>3</sup> groundwater from Dugwell in 22 acre site is treated in the above system till Oct'20. Permeate from RO Plant and condensate from MEE is mixed in the raw water (freshwater) storage tank. As informed, 39,033 m<sup>3</sup> of freshwater is used to recharge dug well in said period. JLS has disposed 161.32 MT of Salt generated from ATFD to CHWTSDF and submitted records for the same.

#### 7. COMPLIANCE STATUS OF DIRECTIONS ISSUED BY MPCB

- MPCB issued proposed direction dated 09.12.2019 to JLS, point wise compliance status of the directions issued are given in table below:

*Table 8: Status of compliance of directions issued by MPCB*

Direction	Status
You have not provided any treatment facility for RO Reject	RO reject generated from CETP-CTBD RO is now mixed with the feed of Dugwell RO system followed by MEE and ATDF.
Leachate from 22 acres contaminated site which further meets to Buvasaheb nallah	During visit the sludge from 22 acres area was found excavated and empty area found filled with coloured water as informed due to heavy rain. However no ingress of leachate from the 22 acres to Kakde Nallah which further meets buvasaheb nallah was observed during visit.

You have dumped some quantity of ETP sludge on 8 acres contaminated site	During visit, 8 acres site was found empty. As informed, the ETP sludge was disposed by the way of biocomposting as per CCA.
--------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------

- MPCB has issued directions dated 07.12.2020 under Section 33 A of the Water (Prevention & Control of Pollution) Act, 1974 and Section 31A of the Air (Prevention & Control of Pollution) Act, 1981 to JLS to deposit the compensation of Rs. 5,47,50,000/- and Rs. 79,20,000/- within 07 days. In compliance of direction, JLS has submitted DD of Rs 20,00,000/- only to MPCB along with letter dated 11.12.2020. Copy of letter is enclosed as **Annexure II**.

## 8. CONCLUSION

Hon'ble NGT constituted a joint committee comprising of officials from CPCB and MPCB to inspect the status of compliance as on 31.10.2020 for the various deficiencies noticed in various reports including the notice issued by MPCB. In addition a joint committee was constituted to prepare an action plan for the restoration of environment. The joint committee visited the industry M/s Jubilant Life Science Ltd. (JLS) on 02.11.2020.

During the site visit, the joint committee collected grab samples of wastewater from both the ETPs provided for wastewater generated from Chemical manufacturing section, MEE condensate provided for bio-methanted spent wash from distillery section, dugwell RO, STP, ground water from biocompost yard etc. Based on the physical observations and discussions during the visit, records submitted by JLS and MPCB, monitoring results of samples and ZLD approach provided by JLS, the joint committee arrived at the following conclusions.

It was found that the Old ETP (presently used for treating wastewater from Acetic Anhydride Section) and operated at about 20% of hydraulic design capacity has shown drastic reduction in all measured parameters from inlet to outlet in spite of high concentration of organic at the inlet and low ratio of MLVSS to MLSS in the aeration tank. Therefore, reduction may be attributed to dilution by means of addition of cooling tower blow down in the aeration tank. The concentration of COD and BOD in the final outlet of old ETP was found 122 and 16.4 mg/l respectively. Treated wastewater from old ETP is fed for further tertiary treatment in New ETP.

The New ETP is presently used for treating wastewater from ethyl acetate section. The concentration of COD and BOD in the final outlet was found 40 and 6.3 mg/l respectively. Earlier JLS was using part of treated water for irrigation purpose. Now treated wastewater from both Old and New ETP is now taken for CETP-CTBD RO. Permeate from the CETP-CTBD RO is mixed with the raw water (fresh water from River Nira) storage tank. Reject from the CETP-CTBD RO is now transferred to the feed of Dugwell RO. Sludge generated from both the ETPs are dewatered and disposed as per CCA by the way of bio-composting.

During visit Distillery section and spentwash MEE was operational. It was informed that the condensate generated from MEE is used in the cooling tower and concentrate is used in bio-composting for spraying on press-mud. The area presently considered for composting by JLS is 12.5 acres and MPCB has amended the CCA for the same. The industry has submitted calculation for the area required for bio-composting considering spent wash generation ratio of 10.5 (KL/KL of production) which is lesser than generation ratio of 12.7 (KL/KL of production) as per CCA. As per records of production and spent wash generation, the industry is generating the spent wash at the ratio of 10.38 KL/KL of production. Amendment in the quantity of spent wash generation may also require in the CCA to consider the shaded area of 12.5 acres for composting. During visit the final compost was found stored on the compost yard without covered shed. JLS informed that out of total 17.5 acres covered shed the remaining of 5 acres covered shed will be provided for final compost storage in future.

During visit, poor housekeeping in view of spillage in the biocompost area was observed. In the compost yard within JLS premises, increase in concentration of major parameters of groundwater was observed compared with the previous monitoring results at all 04 locations. JLS need to take immediate steps to provide proper lining of the entire area, improve housekeeping and proper check on the usage of concentrate spent wash for composting.

JLS has provided three lined lagoons for storing the spent wash at various concentration stages. The storage capacity exceeds the permitted storage capacity of 30 days as per CCA. During visit, the industry informed that the wastewater/effluent from the 02 lagoons for spent wash RO reject were emptied in May 2020 and inlet/outlet pipeline were isolated. During visit lagoons were observed partially filled. It was informed that removal of bottom sludge was not yet started and reportedly was kept for drying inside the lagoons. However, due to heavy rainfall in the area, rainwater mixed with the bottom sludge was accumulated in the lagoons. JLS need to treat the present accumulation and empty the lagoons for dismantling. JLS need to identify one lagoon with restricted capacity as per CCA and submit action plan for dismantling remaining lagoons to MPCB.

JLS now excavated and disposed sludge from 22 acres and 8 acres contaminated site. The excavated sludge was disposed by three means viz. as soil amendment, in brick klins and as filler material for bio-composting. JLS may submit a report on field scale application of excavated sludge as soil conditioner on change in soil and ground water quality as recommended in the CSIR-NEERI Report.

JLS has now provided pump and treat system for dugwell RO followed by MEE and ATFD. The system provided was found operational. JLS has started recharging dugwell at 22 acres site with freshwater. JLS has also provided STP for treatment of sewage from Nira-Nimbut Village. STP is presently not performing as per design criteria. JLS need to take measures for proper treatment and usage of treated sewage.

After intervention of Hon'ble NGT and work carried out as per detailed action plan JLS has shown improvement in view of providing facilities for wastewater management. However, JLS need to provide more focus on proper operation and management of biocompost yard as increase in concentration of measured parameters in the ground water samples of biocompost yard compare to earlier reports were observed. JLS also need to regularly operate and monitor the performance of all treatment systems and further required to carry out work as mentioned in the report.

In compliance of submission of Environmental compensation, MPCB has issued direction to JLS dated 07.12.2020 and JLS has submitted only Rs 20,00,000 vide letter dated 11.12.2020 against the Environmental compensation of Rs. 6,26,70,000 as directed by Hon'ble NGT to MPCB. JLS need to submit the remaining amount to MPCB so that the action plan prepared by the joint committee may be executed.

\*\*\*\*\*



SRO, Pune-1, MPCB  
(Pratap Jagtap)



Scientist D  
(Amit R. Thakkar)

**ACTION PLAN IN COMPLIANCE ORDER OF HON'BLE NGT IN THE MATTER MA 369 OF 2017  
IN OA 07 OF 2014 BETWEEN JANARDAN KUNDALIKRAO PHARANDE & ORS. VS MINISTRY  
OF ENVIRONMENT & FORESTS & ORS.**

**BACKGROUND:**

The matter MA 369 of 2017 in OA 07 of 2014 between Janardan Kundalikrao Pharande & Ors. Vs Ministry of Environment & Forests & Ors. is related with the pollution caused by the industry presently known as Jubilant Life Science Ltd (JLS). In the matter, as per order dated 28.07.2020, the Hon'ble NGT directed that the environment compensation, which was charged to M/s Jubilant Life Sciences Nira via previous Expert Committee report in the matter, may be spent for restoration of environment by preparation of an action plan.

*As per order of Hon'ble NGT, "...the recovered compensation may be spent for restoration of the environment by preparing an action plan by a joint Committee of CPC, MPCB and the area District Magistrate, with nodal agency being the State PCB. The plan be got executed either in such manner and through such agency as found appropriate by the said Committee. The plan be for work other than the work which is to be executed by the industrial unit itself..."*

In this regard a joint committee comprising of following officials had meeting followed by visit of area on 02.11.2020.

- Shri Amit R. Thakkar, Scientist D  
Central Pollution Control Board  
Regional Directorate (W), Vadodara
- Shri J.B Sangewar, Regional Officer  
MPCB, Regional office, Pune
- Shri Pratap Jagtap, Sub Regional Officer, Pune-1  
Regional Office, MPCB Pune.
- Shri Vijay Ganpatrao Patil, Tehsildar, Baramati  
Representative from District Magistrate

During meeting, brief about the matter was discussed. Based on the non-compliances, environmental compensation of total amount of Rs. 6.267 Crore (5.47 Crore plus addition Environmental compensation of 0.729 Crore) till 04.02.2020 was calculated by the expert committee constituted by Hon'ble NGT comprising members from MoEF & CC, CPCB and IIT Bombay. It was gathered that neither CPCB nor MPCB has received the said EC amount till date from M/s Jubilant Life Science Ltd. (JLS), Nira. During meeting various options were discussed for preparation of action plan in compliance of order dated 28.07.2020 of Hon'ble NGT in the matter. After discussion the committee also visited the area surrounding the industry. Based on the findings of monitoring committee report, discussion during meeting and area survey following action plan is proposed.

#### **PROPOSED ACTION PLAN:**

Based on the issue of ground water pollution, pollution in River Nira in the stretch, action already initiated by the industry after intervention of Hon'ble NGT in the matter following action plan to utilize the environmental compensation is proposed:

- Bio mining of legacy waste dumped near River Nira reported by the Monitoring committee constituted by Hon'ble NGT in the matter.
- Development of Solid Waste Management facility for the villages surrounding the industry.
- Development of Sewage Treatment plant for sewage and agriculture runoff for Buasaheb Nallah.
- Rain water harvesting in the area surrounding the industry.
- Awareness drives to save environment.
- Tree Plantation drive.

The concept is to develop adequate facility for the Environment Management in terms of Sewage treatment & reuse, segregation, treatment and disposal of solid waste etc. Though it was informed that the water availability in the area is good, however some farmers have reportedly having issues for irrigation water therefore the treated sewage can be used by such farmers for irrigation purposes. Proper management of solid waste in the area will help to eliminate dumping of solid waste and leachate runoff from the dumpsite in the river.

Brief plan about the identified action are mentioned in subsequent paragraphs.

- **Bio mining of legacy waste dumped near River Nira.**

It was identified by the monitoring committee that solid waste was found dumped near the river banks. It is proposed that the present practice of dumping of solid waste near the bank of river need to be stopped. In this regard, cleaning of river banks where solid waste is dumped and proper disposal of present legacy waste dumped near banks of the area can be the first step towards the betterment of the environment.

The bio mining and disposal of presently dumped solid waste in the area need to be carried out. The work of disposal of legacy waste may be taken up by the concerned authority (Gram Panchayat, PHE, Jila Parishad, Block Office etc.) by identifying the agency following the procedure of the state administration.

In addition to above locations for providing road side net screen on the crossing/bridge/culverts on the river Nira may be identified, if such locations have potential of throwing garbage/dumping waste into the river during public movement.

The technical support may be taken from MPCB or any other suitable agency/expert. The activity should be taken up with well-defined deliverables and measurable indicators for review of implementation status.

- **Development of Solid Waste Management facility for the villages surrounding the industry.**

Presently it is understood that there is no identified solid waste management facility in the area. In this regard it is proposed that, Gram Panchayat wise de-centralized solid waste management plant may be develop. The solid waste management plan shall include the segregation, treatment and disposal of wet waste and proper disposal of dry waste. In this regard, detail about the present generation and management plan for solid waste need to be prepared by concerned authority (Gram Panchayat, PHE, Jila Parishad, Block Office etc.). Proposal for proper solid waste management may be taken up by the concerned authority by identifying the agency following the procedure of the state administration. The technical support may be taken from MPCB or any other suitable agency/expert. The activity should

be taken up with well-defined deliverables and measurable indicators for review of implementation status.

- **Development of Sewage Treatment plant for sewage and agriculture runoff for buasaheb Nallah.**

There are three Natural drains (nallah) viz. Kakde Nallah, Buasaheb Nallah and Nira Sewage. The Kakde Nallah meets Buasaheb Nallah and flows downstream from the backside of the JLS. There is one more Nallah carrying Nira Sewage also meets the Buasaheb Nallah. The Buasaheb Nallah meets River Nira further downstream. All the three identified Nallah carrying sewage, surface runoff from agriculture fields from the upstream villages/area. The Buasaheb Nallah water after passing from the boundary contaminated sites of the industry becomes colored. The industry has provided slope wall along the side of the industry and collection tank to collect the colored water. As per detailed action plan submitted by the JLS to Hon'ble NGT, has taken steps to remove the sludge dumped to eliminate the source, pump and treat system for treatment for contaminated ground water, treatment system for leachate generated from the contaminated site, providing STP for Nira Sewage etc.

As mentioned in above plan, a sewage treatment plant of 600 KLD is provided for Nira Sewage by JLS. The industry pumped about 600 KLD of sewage from the Nira Sewage Line and discharge treated sewage from the STP back to the same pipeline. Out of total Nira sewage, 600 KLD gets treated and remaining untreated gets mixed with the Buasaheb Nallah. In this regard, it is proposed that the industry should reuse the treated sewage water which will help in less consumption of fresh Nira River Water.

Presently untreated sewage from Buasaheb Nallah finds its way and enters the River Nira. In this regard it is proposed that treatment plant of the sewage from the Buasaheb Nallah can be up taken by the concerned authority (Irrigation department, Gram Panchayat, Jila Parishad, Block Office etc.) The treatment plant shall have the adequate capacity to treat the sewage and treated sewage can be used for irrigation water supply to the farmers in the nearby area. Provision for treated water supply can also be a part of such plan. The technical support may be taken from MPCB or any other suitable agency/expert. The activity should

be taken up with well-defined deliverables and measurable indicators for review of implementation status.

- **Rain water harvesting in the area surrounding the industry.**

Provision for providing rainwater harvesting in the area need to be carried out as contamination of ground water in the area is also reported. In this regard it is proposed that local authority may identify and select few locations like school building, panchyat administration office, community hall, temple etc. for providing rain water harvesting and recharge well.

Proposal for rainwater harvesting may be taken up by the concerned authority (Irrigation, Gram Panchayat, PHE, Jila Parishad, Block Office etc.)by identifying the agency following the procedure of the state administration. The technical support may be taken from MPCB or any other suitable agency/expert. The activity should be taken up with well-defined deliverables and measurable indicators for review of implementation status.

- **Awareness drives to save environment and Tree Plantation drive.**

Awareness drives to save environment, save River, importance of segregation of solid waste and its proper disposal, stop dumping of solid waste etc. need to be a part of action plan to motivate and create awareness among the villagers. In this regard awareness campaigning, providing awareness posters etc. need to be planed.

Tree plantation drive along the sides of river bank, roads etc. may be initiated. More locations for tree plantation may also be identified besides selection of species in consultation with Forest Department/experts. The activity should be taken up with well-defined deliverables and measurable indicators for review of implementation status. Awareness and tree plantation can be taken up by MPCB, Gram Panchyat, Irrigation department, Zila Parishad etc.

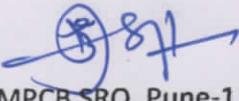
#### **EXECUTION OF ACTION PLAN:**

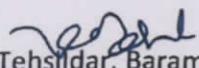
During meeting and visit it was informed that JLS has not yet submitted the environmental compensation. Later MPCB has issued directions dated 07.12.2020 under Section 33 A of the Water (Prevention & Control of Pollution) Act, 1974 and Section 31A of the Air

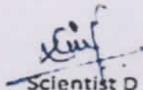
(Prevention & Control of Pollution) Act, 1981 to JLS to deposit the compensation of Rs. 5,47,50,000/- and Rs. 79,20,000/- within 07 days. In compliance of direction, JLS has submitted DD of Rs 20,00,000/- only to MPCB along with letter dated 11.12.2020. The District administrator may seek detail proposals from respective authorities (PHE/Irrigation/Gram Panchayat/Forest/agriculture/Zila Parishad/Block Office etc.) as per the proposed action plan. MPCB may provide all technical inputs in the proposed plan being a local authority. It is also important to frame a time line for the execution of action plan and regular monitoring. In this regard, it is proposed that

- The Detail Proposal shall be collected from respective authorities within one month.
- The evaluation and allotment of the various work proposal following administrative procedures as per the prevailing rules of the state government within three months.
- The implementation of action plan shall be started as early as possible.
- Budgetary requirement for execution of action plan shall be distributed as may found suitable by the district Magistrate. The gaps if any from the total amount of EC fund calculated may be adjusted accordingly by district administrator.
- The deliverables shall be monitored on quarterly basis by MPCB.
- Implementation of Action plan shall be completed within 2 years.
- The O&M of STP and Solid Waste Management Plant for at least 5 years after commissioning may be included in the budgetary provision of action plan. Thereafter local authority may like to decide further plan and budgetary provision for O&M of the same.

The above action plan has been proposed by the committee in compliance of order of Hon'ble NGT in the matter for utilization of Environmental compensation amount levied to JLS. However, the District Magistrate being the administrative authority of the area may have liberty to decide and take decisions as found appropriate for the execution of action plan.

  
MPCB SRO, Pune-1  
(Pratap Jagtap)

  
Tehsildar, Baramati  
(Vijay Ganpatrao Patil)

  
Scientist D  
(Amit Thakkar)



N:EHS/49/20

December 11, 2020

To:  
**The Regional Officer**  
**Maharashtra Pollution Control Board**  
**Pune, Maharashtra**

Subject: Additional submissions to MPCB direction Vide # MPCB/RO/201207-FTS-0122 dated 07/12/2020

- Ref: (1) Implementation of Ground Water Aquifer Remediation plan directed by the NGT Vide Order Dt.10/08/2017 in OA No. OA No. 07/2014 (THC) (WZ).  
 (2) Hon'ble NGT Order Dt. 28/07/2020  
 (3) Our 2 letters # N:EHS:37:20 Dt. 21/09/2020 submitted to MPCB.  
 (4) Our Email dated 03/10/2020 with which an updated NGT Action Plan Compliance status for Q-2 (20-21), as on 30/09/2020, was submitted to MPCB.  
 (5) Your letter No. MPCB/RO/201207-FTS-0122 dated 07/12/2020.  
 (6) Our letter # N:EHS:48:20 Dt. 09/12/2020 submitted to the MPCB.

Dear Sir,

This is further to our letter # N:EHS:48:20 Dt. 09/12/2020 submitted to the MPCB with reference to the above subject.

We would like to make the following additional submissions for your kind consideration:

1. We have been duly complying with the directions of the MPCB, and the Compliance status of the Action Plan for Q-2 (20-21), as on 30/09/2020, is already submitted to the MPCB.
2. Due to Covid-19 pandemic, we are adversely affected and are our operations are severely impacted. Despite these severe challenges, we have continued to employ all workers and paid salaries for the period of the lockdown and continuing pandemic.
3. For the Aquifer remediation program under implementation, we have made capital investment in excess of Rs. 55 Crores and additionally spending annually above Rs. 3.5 Crore towards operations for aquifer remediation over the next 5 years. The latest Progress Report on the implementation of Action Plan submitted clearly substantiate

Received on Dt. 11/12/2020  
 R. O. M. P. C. B. Pune  
 Clerk

A Jubilant Bhartia Company

OUR VALUES



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 CIN : L24116UP1978PLC004624

the sincere efforts and substantial sums of money already spent on the remediation by us.

4. Our Review Application (RA No.02/2020 in OA No.07/2017) filed before the Hon'ble NGT is still pending, copy of the Application is enclosed for your reference as Annexure-1.
5. Without prejudice to the above submissions, we herewith deposit **under protest** an amount of Rs. 20 Lakhs vide Demand Draft No. ०३७९२१ of ICICI Bank Payable at Mumbai in favour of MPCB, over and above to Rs. 25 Lakhs (already deposited with the District Collector, Pune for use for remediation), on returnable basis, as interim compliance to the Direction, until the matter is finally disposed. The total amount deposited is Rs. 45 Lakhs, which is over and above the Rs. 55 Crores already spent by the Nira-Unit on the remediation.
6. Until a final decision is taken, we your good office to grant us a personal hearing to make a detailed presentation on the matter.
7. We assure the MPCB of our commitment for compliance of MPCB' directives all the times.

In view of the above, we would request your good office to please consider the our requests dated 21/09/2020 and allow the amount already spent be considered against Environment Compensation imposed, and allow us not to deposit any more amount beyond the operation expense that the Nira-Unit is already committed to spend.

We will be highly obliged that your above Directions are accordingly recalled.

Further, we look forward to any advise and further guidance to improve the ongoing aquifer remediation program.

Thanking You

Yours faithfully,

For **Jubilant Life Sciences Limited**



(Authorized Signatory)

Satish Bhat

VP-Operations & Site Head, Nira-Unit