OFFICE OF THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in
Original Application no. OA No.606 of 2018
**(Official Address: Tower No.5, 4th Floor, Forest Complex,
Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: cecswm606@gmail.com**

To

The Registrar,
Hon'ble National Green Tribunal,
Faridkot House, Copernicus Marg,
Near India Gate,
New Delhi, Delhi 110001

No.CMC/2020/1567
Dated: 15.2.2021

Subject: **Report of the Monitoring Committee before the Hon'ble National Green Tribunal in OA No. 101 of 2020 in the matter of 'Suhail Dhurani V/s State of Punjab' and OA No. 164 of 2020 in the matter of 'Satinder Mohan Singh Grover & Ors. V/s Central Pollution Control Board &Ors.**

It is submitted that the Hon'ble National Green Tribunal vide its order dated 28.2.2019 in the matter of Sobha Singh and Ors vs State of Punjab and Ors and 1.10.2019 in OA No 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Ghaggar river and Yogendera Kumar has constituted a Monitoring Committee to monitor the various activities w.r.t control of pollution in river Sutlej and Beas and management of solid waste in the State of Punjab.

The Monitoring Committee has submitted five reports each in the matter of Sobha Singh and Ors vs State of Punjab and Ors and OA No 606 of 2018 in the matter of compliance of Solid waste Management, rules, 2016.

Now the Hon'ble National Green Tribunal vide its order dated 8.7.2020 in OA No. 101 of 2020 in the matter of Suhail Dhurani Vs. State of Punjab has passed the detailed order, the operating paras of which are reproduced as under.

> "2 ***We consider it to appropriate to require a factual and action taken report in the matter from a joint Committee of the Punjab State Pollution Control Board and the Central Pollution Control Board. The Committee may visit the site, take the samples and furnish a factual report along with the recommendation for remedial action within two months by email at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The nodal agency for compliance and coordination will be the State PCB.***
>
> 3. ***In view of above, the applicants may furnish a set of papers to the CPCB and the State PCB so that the joint Committee can look into the averments in this application also. The joint Committee may in its report include status of compliance of industries, CEPI of the area, water quality of drain/Choe in the vicinity, ground water status in terms of permission for extraction and quality, ambient air quality and action plan for mitigation of the area with relevant details.***

Similarly, another complaint made by Sh. Satinder Mohan Singh Grover &Ors. V/s Central Pollution Control Board & Ors. before the Hon'ble National Green Tribunal and the same was considered by the Hon'ble National Green Tribunal in OA No. 164 of 2020 and accordingly, after considering the matter, the Hon'ble Tribunal has passed detailed order on 17.8.2020, the operating para of which is reproduced as under:

> ***"2. We note that another matter raising somewhat identical issues being OA 101/2020, Suhail Dhurani v. State of Punjab came up for hearing on 08.07.2020. The Tribunal directed a joint Committee comprising Punjab State PCB and the CPCB to visit the site, take the samples and furnish a factual report along with the recommendation for remedial action within two months. It was also directed that copy of the report be sent to the Committee headed by Justice Jasbir Singh, former Judge of the Punjab and Haryana High Court constituted vide order dated 01.10.2019 who may oversee the remedial action and give an independent report before the next date. The matter is now listed for hearing on 19.10.2020."***
>
> **Now the next date of hearing in the said cases is on 25.2.2021.**

Therefore, in compliance of order dated 8.7.2020 of Hon'ble National Green Tribunal, report is being sent through email at *judicial-ngt@gov.in in the form of searchable PDF/ OCR Support PDF* for consideration of the Hon'ble Tribunal.

(Justice Jasbir Singh)
Former Judge,
Punjab & Haryana High Court
now as Chairman of the
Monitoring Committee
constituted by the
Hon'ble National Green Tribunal

Report

of the

Monitoring Committee

before the

Hon'ble National Green Tribunal

in OA No. 101 of 2020

in the matter of
Suhail Dhurani V/s State of Punjab

&

in OA No. 164 of 2020

in the matter of

Satinder Mohan Singh Grover & Ors. V/s Central Pollution Control Board &Ors.

Submitted on:

15th February, 2021

Contents

Point No.	Description	Page No.
1.0	Background	1
2.0	Report of the Monitoring committee	2-4
2.1	M/s. SBL Specialty Coating Private Ltd., Haibatpur Road, Dera Bassi, Distt. SAS Nagar.	4
2.1.1	Recommendations of the Monitoring Committee based on the observations raised by the Joint Committee.	4-5
2.2	M/s KDDL Limited, Haibatpur Road, Dera Bassi, SAS Nagar.	5
2.2.1	Recommendations of the Monitoring Committee w.r.t remedial measures to be taken by the industrybased on the observations raised by the Joint Committee.	5-6
2.3	M/s Crop Care Pesticides (India) Pvt. Ltd., Haibatpur Road, Dera Bassi, SAS Nagar.	6-7
2.3.1	Recommendations of the Monitoring Committee based on the observations of the Joint Committee.	7
2.4	M/s Hansa Tubes Pvt. Ltd., Haibatpur Road, Dera Bassi.	7-8
2.4.1	Recommendations w.r.t remedial measures to be taken by the industry based on the observations of the Joint Committee	8
2.5	M/s Samrat Plywood Ltd., Haibatpur Road, Dera Bassi.	9
2.5.1	Recommendationsw.r.t remedial measures to be taken by the industry based on the observations of the Joint Committee.	9
2.6	M/s Contour Automotive Products Ltd., Village Bhankarpur, Mubarikpur Road, Dera Bassi.	9-10
2.6.1	Recommendations of the Monitoring Committee based on the observations of the Joint team.	10
2.7	M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.	11-13
2.7.1	Recommendations of the Monitoring Committee based on the observations of the Joint Committee.	13-14
2.8	M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.	15-16
2.8.1	Recommendations w.r.t remedial measures to be taken by the industry based on the observations of the Joint Committee	16-17
2.9	M/s Punjab Chemicals &Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi.	17-18
2.9.1	Recommendations of the Monitoring Committee based on observations of the Joint Committee.	18-19
2.10	M/s. Rajasthan liquors limited (Distillery Division), Vill. Haripur.	19-20
2.10.1	Recommendations of the Monitoring Committee based on observations of the Joint Committee.	20-21
3.0	Submission of report by the Joint Committee on 9 points raised by the Monitoring Committee (mentioned on page 3 of the report) and comments of the Monitoring Committee.	21
3.1	Comments of the Monitoring Committee on the report dated 8.1.2021 (Annexure L) of Joint Committee of CPCB and PPCB.	22
3.1.1	Comprehensive environmental pollution index (CEPI) of Dera Bassi Area.	22
3.1.2	Collection of stack emission samples w.r.t parameters VOC, SO_2, HC, wherever, applicable.	22
3.1.3	Water quality of the drain/ choe.	22-23
3.1.4	Groundwater quality monitoring	23

3.1.5	Quality of Soil	23
3.1.6	Hazardous waste generation and its disposal by the industries	24
3.1.7	Disposal of solid waste including rice husk ash and its management	24-25
3.1.8	Ambient air quality of Dera Bassi area	25
3.1.9	Action plan for mitigation of pollution in the area with relevant details	25
4.0	Action taken against the 04 violating industries as reported by the Joint Committeeas mentioned by PPCB in its note dated 25.12.2020 (Annexure L).	26
4.1	M/s Nectar Life Sciences Ltd., (Unit-I), Vill. Saidpura, Tehsil Dera Bassi, SAS Nagar.	26
4.1.1	Major violations observed by the Joint Committee.	26
4.1.2	Action taken by PPCB	26
4.2	M/s Nectar Life Sciences Ltd., (Unit-II), Vill. Saidpura, Tehsil Dera Bassi, SAS Nagar.	26
4.2.1	Major violations observed by the Joint Committee.	26
4.2.2	Action taken by PPCB	26-27
4.3	M/s Punjab Chemical and Crop Protection Ltd., (Agro Division), Vill. Bhankarpur, Dera Bassi, SAS Nagar	27
4.3.1	Major violations observed by the Joint Committee.	27
4.3.2	Action taken by PPCB	27
4.4	M/s Hansa Tubes (P) Ltd., Habitpur Road, Dera Bassi, SAS Nagar	27
4.4.1	Major violations observed by the Joint Committee.	27
4.4.2	Action taken by PPCB	28
5.0	Visit to the industries of Dera Bassi area by the Monitoring Committee on 28.01.2021	28
5.1	KDDL Limited, Vill. Haibatpur, Haibatpur Road, Dera Bassi	28
5.1.1	About the industry	28
5.1.2	Effluent Treatment Plant and its performance	29
5.1.2.1	Discussion of the analysis results	29-30
5.1.3	Air pollution and its control	30
5.1.4	Collection of the soil sample from plantation area	30
5.1.5	Observations and recommendations	30-31
5.2	M/s Punjab Chemicals &Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi	31
5.2.1	About the industry	31
5.2.2	Effluent Treatment Plant and its performance	32
5.2.2.1	Discussion of the analysis results	32
5.2.3	Air pollution and its control	33
5.2.3.1	Discussion of the analysis results	33
5.2.4	Observations and recommendations	33-35

5.3	M/s Hansa Tubes (P) Ltd., Habitpur Road, Dera Bassi, SAS Nagar	35
5.3.1	About the industry	35
5.3.2	Effluent Treatment Plant and its performance	35-36
5.3.2.1	Discussion of the analysis results	36
5.3.3	Collection of soil sample and discussion on the analysis results	36
5.3.4	Recommendations of the Monitoring Committee	36-37
6.0	Overall recommendations of the Monitoring Committee.	37-40

Sr.No.	**List of Annexures**	**Page No.**
1	Annexure-A	41-44
2	Annexure-B	45-49
3	Annexure-C	50-53
4	Annexure-D	54-58
5	Annexure-E	59-62
6	Annexure-F	63-66
7	Annexure-G	67-80
8	Annexure-H	81-89
9	Annexure-I	90-103
10	Annexure-J	104-109
11	Annexure-K	110-111
12	Annexure-L	112-119
13	Annexure-M	120-122
14	Annexure-N	123-125
15	Annexure-O	126-128
16	Annexure-P	129-131
17	Annexure-Q	132-134

Report of the Monitoring Committee before the Hon'ble National Green Tribunal in OA No. 101 of 2020 in the matter of 'Suhail Dhurani V/s State of Punjab' and OA No. 164 of 2020 in the matter of 'Satinder Mohan Singh Grover & Ors. V/s Central Pollution Control Board &Ors.

1.0 Background

The Hon'ble National Green Tribunal vide its order dated 28.2.2019 in the matter of Sobha Singh and Ors vs State of Punjab and Ors and 1.10.2019 in OA No 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Ghaggar river and Yogendera Kumar has constituted a Monitoring Committee to monitor the various activities w.r.t control of pollution in river Sutlej and Beas and management of solid waste in the State of Punjab.

The Monitoring Committee has submitted five reports each in the matter of Sobha Singh and Ors vs State of Punjab and Ors and OA No 606 of 2018 in the matter of compliance of Solid waste Management, rules, 2016.

Now the Hon'ble National Green Tribunal vide its order dated 8.7.2020 in OA No. 101 of 2020 in the matter of Suhail Dhurani Vs. State of Punjab has passed the detailed order, the operating paras of which are reproduced as under.

> "2 ***We consider it to appropriate to require a factual and action taken report in the matter from a joint Committee of the Punjab State Pollution Control Board and the Central Pollution Control Board. The Committee may visit the site, take the samples and furnish a factual report along with the recommendation for remedial action within two months by email at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The nodal agency for compliance and coordination will be the State PCB.***
>
> 3. ***In view of above, the applicants may furnish a set of papers to the CPCB and the State PCB so that the joint Committee can look into the averments in this application also. The joint Committee may in its report include status of compliance of industries, CEPI of the area, water quality of drain/Choe in the vicinity, ground water status in terms of permission for extraction and quality, ambient air quality and action plan for mitigation of the area with relevant details.***

Similarly, another complaint made by Sh. Satinder Mohan Singh Grover &Ors. V/s Central Pollution Control Board & Ors. before the Hon'ble National Green Tribunal and the same was considered by the Hon'ble National Green Tribunal in OA No. 164 of 2020 and accordingly, after considering the matter, the Hon'ble Tribunal has passed detailed order on 17.8.2020, the operating para of which is reproduced as under:

> "2. ***We note that another matter raising somewhat identical issues being OA 101/2020, Suhail Dhurani v. State of Punjab came up for hearing on 08.07.2020. The Tribunal directed a joint Committee comprising Punjab State PCB and the CPCB to visit the site, take the samples and furnish a***

factual report along with the recommendation for remedial action within two months. It was also directed that copy of the report be sent to the Committee headed by Justice Jasbir Singh, former Judge of the Punjab and Haryana High Court constituted vide order dated 01.10.2019 who may oversee the remedial action and give an independent report before the next date. The matter is now listed for hearing on 19.10.2020."

Now the next date of hearing in the said cases is on 25.2.2021.

2.0 Report of the Monitoring committee

In compliance to the directions of the Hon'ble NGT in its order dated 17.8.2020, the Monitoring Committee has considered the report jointly prepared by Punjab Pollution Control Board and Central Pollution Control Board and observed as under.

In Dera Bassi, which is known for its industrial hub, various types of industries like Pharmaceutical, Chemicals, Dyeing, Electroplating, Slaughter Houses, Paper Mills, Stone Crushers, Screening-cum-Washing Plants, Refractories, Casting Units, Brick Kilns, Rice Shellers, Bottling Plants etc. are situated. Besides, other projects like residential colony/townships/ area development projects / restaurants / hotels / malls etc. also exist due to its proximity from Chandigarh and Ambala. The industrial units mainly generate particulate matter (PM_{10}), hydrocarbon(HC), sulphur dioxide (SO_2), oxides of nitrogen (NOx), Volatile Organic Compounds (VOCs) and acid mist.

A Joint Committee, comprising of officersofCentralPollution Control Board and Punjab Pollution Control Board,visited the industrial units of Dera Bassi area existing within 1 km radiusfrom the proximity of residence of the complainants. The list of these industries is as under.

1. M/s. SBL Specialty Coating Private Ltd., Haibatpur Road, Dera Bassi, Distt. SAS Nagar.
2. M/s KDDL Limited, Haibatpur Road, Dera Bassi, Distt. SAS Nagar.
3. M/s Crop Care Pesticides (India) Pvt. Ltd.,Haibatpur Road,
4. M/s Hansa Tubes Pvt.Ltd., Haibatpur Road, Dera Bassi, Distt. SAS Nagar.
5. M/s Samrat Plywood Ltd., Haibatpur Road, Dera Bassi, Distt. SAS Nagar.
6. M/s Contour Automotive Products Ltd., Village Bhankarpur, Mubarikpur Road, Dera Bassi, Distt. SAS Nagar.
7. M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.
8. M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.
9. Punjab Chemicals &Crop Protection Ltd. (Agro-Division), Village Bhankharpur, Dera Bassi, Distt. SAS
10. M/s Rajasthan liquors limited (Distillery Division),Vill. Haripur Hinduan, Barwala Road, Dera Bassi, SAS Nagar.

Joint Committee has pointed out that out of these 10 industries, 04 industries have been found non- complying and 06 industries are complying with the provisions of Water Act, 1974 and Air Act, 1981. The detailed reports w.r.t compliance/non-compliance of these 10 industries are annexed as per **Annexures A to J.**

The Monitoring Committee has examined the detailed reports of the industries as mentioned in **Annexures A to J** and observed that in the report, the status of the industries regarding pollution control measures taken by them to control water and air pollution, consent status of the industries under Water Act, 1974 and Air Act, 1981 and the past compliance made by the industries, have been mentioned. In the cases of some of the industries, effluent and stack emissions samples, which have been collected by PPCB in the past, have been mentioned in the report and no fresh sampling of the industries has been carried out.

In most of the industries, parameter of particular matter has been analyzed, whereas, no other parameters like VOC, sulphur dioxide, hydrocarbon etc. have been analyzed.

The Monitoring Committee, during its field visit to Bhadson and Patiala area on 2.12.2020 w.r.t in-situ remediation technology installed along Sirhind Choe in Bhadson area and solid waste dumping site at Patiala, held its meeting with Member Secretary and other officers of Punjab Pollution Control Board, wherein, the officers were apprised that in the report, the following issues have not been addressed.

1. Comprehensive environmental pollution index (CEPI) of Dera Bassi area.
2. Collection of stack emissions samples w.r.t parameters VOC, SO_2, HC, where ever, applicable.
3. Water quality of the drain/choe in the vicinity.
4. Ground water status in terms of permission for extraction of ground water, quality of ground water.
5. Quality of soil.
6. Hazardous waste generation and its disposal by the industries
7. Disposal of solid waste including rice hush ash and its management
8. Ambient air quality of Dera Bassi area.
9. Action plan for mitigation of pollution in the area with relevant details.

The Member Secretary, Punjab Pollution Control Board had committed to submit the report on the above points within 21 days. He was also requested vide Monitoring Committee letter no. CEC/2020/1296 dated 4.12.2020 to submit the detailed report on the above points within 21 days. Punjab Pollution Control Board was also requested vide Monitoring Committee letter No. CEC/2020/1308 dated 14.12.2020 to submit the action taken report against the following 04 violating industries as pointed by the Joint Committee.

1. M/s Hansa Tubes Pvt. Ltd., Haibatpur Road, Dera Bassi.
2. M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.
3. M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.

4. M/s Punjab Chemicals & Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi.

Based on the report and data prepared jointly by PPCB and CPCB, the Monitoring Committee has prepared its interim report w.r.t pollution control measures taken by each industry, which are briefly mentioned as under.

2.1. M/s. SBL Specialty Coating Private Ltd., Haibatpur Road, Dera Bassi, Distt. SAS Nagar.

The report/data prepared by the Joint Committee w.r.t to the industry is summarized as under.

The industry is a small scale red category and is manufacturing lacquers and paint resins by using resin and monomers, solvent and pigments and additives. The industry is operating with valid consent to operate under the provisions of Water Act, 1974 and Air Act, 1981 both are valid upto 30.6.2021. The consumption of water has been mentioned as 14 m^3/day. No wastewater is generated by the industry as manufacturing of a particular product mix is carried out with solvents and the spent solvents are used as raw material while manufacturing of the same products.

The industry has installed 02 no. HSD fired DG sets of capacity 125 kVA and 400 kVA which are equipped with canopy and stack of adequate height. It has provided HSD fired thermo- pack of heat value 2 lakh kcal/ hour and the same is equipped with stack. It is a small thermopack and stack of adequate height has been provided. However, in spray paint process, volatile organic compound (VOC) may be generated and the industry is required to install scrubbing system to control VOC parameter. During open handling of raw material and finished products, VOC emissions are generated, which are the source of obnoxious odour.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.1.1. Recommendations of the Monitoring Committee based on the observations raised by the Joint Committee.

i. **The industry should provide proper scrubbing system to control VOC parameter in the spray paint sectionwithin 3 months so as to meet with the prescribed norms.**
ii. **The industry should adopt adequate mechanism to control VOC emission generated during open handling of raw material and finished products within 03 months.**
iii. **The transfer systems of solvents from the storage tank to the mixing tank and further transfer of the product to the final storage tanks should be done in closed loop so as to control fugitive emissions.**
iv. **The industry shall provide green belt along its boundary to attenuate air pollution.**

v. **The industry shall regularly operate and maintain its sewage treatment plant to ensure that the treated effluent conforms to the standards laid down by the Board for such type of industrial discharges.**

vi. **The industry shall not generate any trade effluent and domestic effluent shall be discharged onto land for plantation after adequate treatment.**

vii. **The industry will maintain its plantation area in scientific manner so as to ensure that no stagnation occurs at any time due to the discharge of treated domestic effluent in the said area.**

2.2 M/s KDDL Limited, Haibatpur Road, Dera Bassi, SAS Nagar.

The summary of report/data prepared by the Joint Committee w.r.t to the industry is mentioned as under.

The industry is a large scale red category and is manufacturing Watch Dials @ 6000000 Number/Year using various chemicals like Potassium Cyanide, Sodium Cyanide, Gold Potasium Cynide, Silver Potasium Cynide, Nickel Sulphate, Acetone Cyclohexnone, Xylene, Butyl Acetate, Brass Metal, Lacquers, Printing Ink, Packing Paper, Boric Acid, Ammoniumn Chloride, Potassium Bromide, Ammonium Sulphate, Zinc Sulphate etc. The processes involved are blanking,punching, feet sticking, electroplating, lacquering, printing and packing. The industry is operating with valid consent to operate under the provisions of Water Act,1974 and Air Act, 1981 and both are valid upto 31.3.2024.

In the report, it has been mentioned that the industry generates trade effluent from the processes of nickel, silver and gold plating for which industry has installed an ETP based on physico-chemical treatment. For measurement of flow, it has provided electro-magnetic flow meter. The industry has installed STP for the treatment of domestic effluent. The treated wastewater from both STP and ETP is being used on to land for plantation developed within the premises. The industry has provided network of pipeline for proper distribution of treated wastewater. The industry is maintaining the record of consumption of water, chemicals used in the ETP, operation of the ETP and effluent discharged by the industry.

The industry has installed 02 nos. DG sets each of capacity 380 kVA which are equipped with canopies and stack of adequate height. The industry has buffing section and in order to control air emissions, it has provided bag filter house as air pollution control system. The industry has also lacquering section which has been attached with water scrubbing system as APCD.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.2.1 Recommendations of the Monitoring Committee w.r.t remedial measures to be taken by the industrybased on the observations raised by the Joint Committee.

i. **The industry has the processes of electroplating for shining and finishing of Watch Dials and uses Potassium Cyanide, Sodium Cyanide, Gold Potasium Cynide, Silver Potasium Cynide, Nickel Sulphate, which are very toxic**

chemicals. For the treatment of wastewater of the industry, it has installed an ETP based on physico-chemical treatment and the treated effluent is discharged onto land for plantation. The Monitoring Committee is of the view that mode of disposal of toxic effluent on to land for plantation for longer period is not advisable as effluent may leach and contaminate the ground water and soil of the area.

Therefore, the monitoring Committee recommends that the industry shall install ETP based on Zero Liquid Discharge (ZLD) Technology within 4 months and the recovered effluent (permeate) may be recycled in the processes of the industry and the hazardous sludge generated from ZLD system shall be properly dried on the impervious platform and dried sludge may be sent to TSDF for its scientific disposal.

ii. **The industry shall ensure that no wastewater from its industrial premises / plantation area or otherwise shall be discharged into storm water drains directly or indirectly under any circumstances.**

iii. **In order to control toxic emissions generated within the processes, the industry shall provide proper suction system and the sucked emissions may be treated through scrubbing system with suitable scrubbing media. The said liquid scrubbing system may be installed within 03 months.**

iv. **Punjab Pollution Control Board shall collect and analyse the stack emissions sample from lacquering section within 15 days.**

2.3 M/s Crop Care Pesticides (India) Pvt. Ltd., Haibatpur Road, Dera Bassi, SAS Nagar.

The data/report submitted by the Joint Team is summarized as under

The industry is a small scale unit engaged in the formulation of Pesticides/ Insecticides/ Fungicides/ Herbicides/ Weedicides using chemicals and manufactures Emulsol Concentrate Pesticides Formulation, Soluble Liquid Pesticides Formulation, Water Dispersible Powder. For liquid pesticide formulation, manufacturing processes involved are mixing of ingredients for uniformity in closed vessel, transfer in storage tank, filling in containers, capping and sealing. For powder pesticides formulation, the processes are premixing of inputs, grinding, filling and packing.

No trade effluent is generated from the process. The domestic effluent generated from the industry is discharged onto land for plantation after passing through septic tank.

In order to control process emissions from grinding of solid pesticides section, bag filter house has been installed with a stack of height of 10 m.

The industry has been granted consent to operate under the provision of Water Act, 1974 and Air Act, 1981 which were valid up to 30.9.2020. Now the industry is operating without valid consent to operate under Water Act, 1974 and Air Act, 1981.

The industry is storing its solvents in underground tanks installed in an earmarked area within its premises. The vent of the underground tanks has not been connected to any

scrubbing medium/ VOC absorption media to contain the VOC emissions emanating from the storage of these solvents.

The industry has not provided any specified storage area for the storage of its chemicals which were found lying in open area in HDPE drums.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.3.1 Recommendations of the Monitoring Committee based on the observations of the Joint Committee.

i. **In order to control fugitive emissions from underground solvent storage tanks, vents of these tanks may be connected with common duct and the fugitive emissions may be passed through scrubbing medium. The control mechanism with scrubbing system may be installed within 03 month.**

ii. **Punjab Pollution Control Board shall collect and analyse the stack emissions samples from the stack attached to pesticides grinding section within 15 days.**

iii. **The industry shall obtain renewal of consent under the provisions of Water Act, 1974 and Air Act, 1981 within 03 months.**

iv. **The industry shall earmark and provide dedicated storage space for storage of chemicals with full safety measures, which are presently lying packed in HDPE containers in an open area.**

2.4 M/s Hansa Tubes Pvt. Ltd., Haibatpur Road, Dera Bassi.

The data prepared by the Joint Committee is briefly mentioned as under.

The industry is small scale red category unit, engaged in manufacturing of CR tubes and strips using HR coil, HCl and Lime as raw material and chemicals. The industry is operating with valid consent to operate under Water Act, 1974 and Air act, 1981 and these consents are valid upto 30.6.2024. The consumption of water is $4m^3$/day and HSD is used as fuel in DG sets and annealing furnaces. The manufacturing processes of the industry are pickling, annealing,rolling and tube making. For annealing, it has 2 No. annealing furnaces of capacity 90 ton and 30 ton in which C-9 is used as fuel.

At the pickling section, it has provided scrubber system to scrub acidic fumes and the scrubbed effluent is recycled in the system. For the treatment of acidic effluent generated from HCl pickling section, the industry has provided an ETP based on physico-chemical treatment and treated effluent is discharged on to land for plantation. The analysis results of effluent sample collected by PPCB on 21.8.2020 indicate that the values of TDS, Chloride and Sulphate are higher than the permissible limits. Thus, the industry is violating the provisions of Water Act, 1974.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.4.1 Recommendations w.r.t remedial measures to be taken by the industry based on the observations of the Joint Committee.

i. **PPCB shall continue to make surprise inspection of the area around the industry to ensure that no treated/untreated effluent is discharged into any drain.**

ii. **The industry shall treat entire scrubbing effluent in Effluent Treatment Plant based on zero liquid discharge (ZLD) technology to be installed.**

iii. **The industry is discharging its physico-chemical treated effluent on to land for plantation and its continuous application containing metal contents, on to land is not advisable as the effluent may seep underground and contaminate the groundwater and soil and may also affect its fertility. Moreover, the parameters namely TDS, Chloride, Sulphate, Iron & Total Chromium, with their high values as mentioned in the report cannot be brought within the permissible limits by imparting physic-chemical treatment, therefore, the industry should install Zero liquid discharge technology (RO system followed by multi effect evaporator) within 4 months and the recovered water (permeate) may be recirculated back into the process and the hazardous sludge may be dried in dyer and after drying, the same may be sent to TSDF, Nimbuan.**

iv. **Since the values of TDS, chloride and sulphate in the analysis results of the effluent sample collected by PPCB in the month of August, 2020 are higher than the permissible limits, therefore, PPCB shall impose an environmental compensation of suitable amount for the damage caused to the environment and the same may be utilized for rejuvenation of quality of environment as per guidelines prescribed by Central Pollution Control Board.**

v. **Punjab Pollution Control Board shall collect the stack emission sample from the stack attached to air pollution control device of pickling section within 15 days.**

vi. **PPCB shall carry out groundwater sampling by getting install piezometers within the premises of the industry so as to assess ground water contamination due to continuous application of effluent on land for plantation.**

vii. **The industry shall remove the HSD fired hot water generated boiler which is lying redundant in its premises within 15 days and submitthe compliance to the Board within next 3 days.**

2.5 M/s Samrat Plywood Ltd., Haibatpur Road, Dera Bassi.

The summary of the report/data prepared by the Joint team is mentioned as under.

M/s Samrat Plywood Ltd., Haibatpur Road, Dera Bassi is a small scale red category unit engaged in plywood manufacturing and is operating with valid consent to operate under the provisions of Water Act, 1974 and Air Act, 1981 which are valid upto 30.6.2022.

As per report of the joint committee, small quantity of effluent(100 litres/month) is discharged and the same is evaporated in solar evaporation pan with additional heating arrangements to accelerate evaporation rate.

On the part of air pollution, it has been reported that the industry has installed two wood (4.4 TPD) fired thermic fluid heater having capacity 10 lac kcal/hr and 15 lac kcal/hr. The industry has provided wet scrubber as APCD to contain the concentration of particulate matter within the prescribed standards. In the stack emissions sample, collected in the month of September, 2020, the concentration of particulate matter was within the norms.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.5.1 Recommendationsw.r.t remedial measures to be taken by the industry based on the observations of the Joint Committee.

i. **PPCB shall keep watch on operation of air pollution control system installed by the industry so as to ensure that the stack emissions are always within the norms.**

ii. **The industry shall evaporate its effluent @100 litres/month in solar evaporation pan with additional heating arrangements and ensure that no effluent is discharged by the industry.**

2.6 M/s Contour Automotive Products Ltd., Village Bhankarpur, Mubarikpur Road, Dera Bassi.

The data/report of the Joint Committee is briefed as under.

M/s Contour Automotive Products Ltd., Village Bhankarpur, Mubarikpur Road, Dera Bassi is medium scale red category of industry, engaged in the manufacturing of Iron Casting using sand, irons crap, pig iron, Bentonite Powder, Ferro Alloys etc. as raw material. The manufacturing processes of the industry are preparation of Core & Mould, melting of Scrap, pouring in mould, cooling of castings, finishing of casting (shot blasting & fettling) and dip painting on casting.

The industry has 01 induction furnace of capacity 1 ton/ heat, which has been provided with air pollution control device and same was found in operation during the inspection of Joint team. However, the fugitive emissions were found generated during pouring of

molten metal into the mould, shaking of mould and cooling of castings and lot of dust emissions are generated during these processes.

Besides, the industry has 01 sand plant, which is connected to bag filter house as air pollution control device (APCD) along with stack of height about 15 m.

The industry has also 02 shot blasting machines equipped with separate bag filter house as APCD along with stack of height 3 m.

Punjab Pollution Control Board has already collected stack emissions samples of the industry after air pollution control devices installed on induction furnaces and sand blast machine. The analysis results indicate that concentration of particulate matter in stack emissions samples are within the prescribed norms. However, no stack sampling has been carried out from the stacks of shot blasting machines

The Joint team has reported that besides, point sources of air pollution i.e. induction furnace, sand regeneration plant and shot blasting machinesare also sources of generation of fugitive emissions at various stages i.e. pouring of molten metal, cooling and shaking. The industry should explore the Best Available Technology to capture the fugitive emissions from these sources and treat them before emanating it into the environment.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.6.1 Recommendations of the Monitoring Committee based on the observations of the Joint team.

i. **Punjab Pollution Control Board may conduct comprehensive study of air pollution control devices installed on induction furnace, sand regeneration plant and shot blasting machines for two days so as to assess the effectiveness of the air pollution control systems and necessary modifications/upgradation in the system shall be made by the industrywithin 03 months.**

ii. **Punjab Pollution Control Board shall conduct ambient air quality analysis within premises of the industry as well as 100m away from boundary wall of the industry on all the four sides within 15 days.**

iii. **For the control of fugitive emissions generated during pouring of molten metal, cooling, shake-out processes and other processes, the industry should engage the services of consultant of repute within 01 month to evolve best available technology and provide the same within 03 months. PPCB shall monitor the said activities of the industry on monthly basis.**

2.7 M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.

The summary of the data prepared by Joint team is as under.

The industry is a large scale drugs and pharmaceutical products manufacturing unit and produces various type of medicines as mentioned in **Annexure-G** by using various kind of chemicals as mentioned in the said Annexure. The consumption of water by the industry is 1015 m^3/day.

As a fuel, it uses HSD about 12.24 Kl/day and furnace oil 1.75 TPD. For 02 boilers each of steam generating capacity 40 TPH and 25 TPH, it uses rice husk 520 TPD.

The industry generates two type of effluents i.e effluents containing high TDS and low TDS. For the treatment of low TDS effluent, the industry has provided effluent treatment plant based on aerobic biological treatment system. In order to handle high TDS effluent, it has provided multi effect evaporator (MEE). Separate flow metres have been installed on MEE feed, MEE condensate, MEE concentrate and Outlet of ETP. The industry is maintaining the record of the said streams. The industry has developed plantation in about 24 acres of land for the utilization of treated effluent.

The industry has installed 02 boilers each of capacity 40 TPH which are attached with separate cogeneration power plant of capacity 6 MW each. The industry has installed separate electro static precipitators (ESPs) as APCD to contain the particulate matter from the stack of the boilers.

The industry has also installed boiler of capacity 25 TPH and cyclone followed by wet scrubber has been installed as APCD to contain the concentration of particulate matter.

The industry has also installed furnace oil fired boiler of capacity 1.5 TPH which was not in operation during the visit.

The industry generates process emissions (in form of Acid Mist, SOx, NOx) during various chemical reactions and has installed 10 nos. alkali scrubbers in the manufacturing area to contain the concentration of process emissions generated from various chemical reactions in the reactors of the process section.

The industry has installed 3 DG sets of capacity 1250 KVA. 1250 KVA and 1000 KVA, which are equipped with canopies and stacks.

The industry has recently installed a new ETP and MEE plant of enhanced capacity within its premises. The new ETP of capacity 250 KL (for LTDS effluent) consists of equalization tank,primary clarifier, pre-aeration tank, aeration-cum-clarifier tank-I, aeration-cum-clarifier tank-II, post equalization tank, post clarifier, tertiary treatment system (MGF & ACF), treated water collection tank as components and was found in operational condition. Trial run of the same was under progress.

The new MEE of capacity 150 KL having 4 calendrias (forced circulation type) was also found installed and in operational condition. Joint team was informed that new CETP will

cater to the effluent of both Unit-I & II and the existing ETP and MEE will be kept as stand-by arrangement. The industry has also proposal for installation of RO plant for further treatment of the treated wastewater from the ETP and its reject will be fed to MEE for treatment and permeate will be utilized in the plant/ process sections. However, the representative of the industry could not give any valid reason for the necessity for installation of the new ETP and MEE.

Joint Committee has further reported that presently, the industry is dumping its rice husk ash about 100 TPD (about 20% of rice husk used) generated from the boilers of capacity 40 TPH, 40 TPH and 25 TPH in the dumping yard adjoining the MEE plant and site where the industry is installing its new ETP.

There is a natural drain flowing adjoining rice husk ash dumping yard and it was still found covered with ash particles, which indicated the uninterrupted flow of ash in the adjoining drain with the rainwater. It was informed that the drain carries sewage of nearby villages and further meets to Haibatpura drain and ultimately lead to river Ghaggar. Also, the drain travels a distance of 300-500 m from the Haibatpura Road where the residences of complainants in both matters (OA No. 101 of 2020 & 164 of 2020) are located.

The representative of the industry informed to the joint team that the drain had been cleaned once by using JCBs, but the ash has again been accumulated over the time. Further, it was noted that the industry has not yet provided retaining wall/ structure along the boundary of the ash dumping yard along the drain, to prevent the flow of water mixed with fuel ash into the drain. Also, the industry has not provided permanent shed of size 1000 sq.m. for the storage of fly ash near the boiler area, as per condition of the 'consent to operate' earlier granted to it by the SPCB. The industry has levelled the dumping yard of ash and work regarding levelling of the yard with the help of two JCBs was under progress. The industry is using boiler blow-down for sprinkling on the ash heaps to prevent it from getting air-borne. It is further apprehended that the industry can sprinkle its treated/ untreated effluent on the ash in the dumping yard and industry may not be directly discharging its effluent into the nearby drain as no outlets from the industry were observed in to the said drain or Nallah. However, presence of rice husk ash along the banks and in the course of the drain, shows discharge of rainwater mixed with ash particles from the ash dumping yard to the drain. Therefore, the industry is required to provide retaining walls/ baffles/ some arrangement immediately to halt the free-flow of rainwater from the ash dumping area to the drain.

The industry has installed 03 solvent recovery sections for the recovery of spent solvent generated from its process. Central Pollution Control Board has issued Standard Operating Procedure (SOP) for the units engaged in recovery of spent solvents vide notification in August, 2019. As such, the SOP is applicable for units engaged utilization of spent solvent including captive utilization and the industry is required to comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install

minimum required facility as mentioned in the Standard Operating Procedure (SOP) issued by the CPCB for recovery of spent solvents.

It was observed that the industry was not fully complying with the guidelines mentioned in the SOP for recovery of spent solvent as the industry has not installed VOC absorption media connected to the vent of condenser, online analyzer for TOC at the vent outlet and had not made connection of vent of all the storage tanks with the condenser unit etc. As such, the industry has not made any progress regarding adoption of the SOP, as per the condition of the 'consent to operate' earlier granted to it by the PPCB.

It has been informed that PPCB has taken action against the industry separately.

Further, the industry has installed separate collection tank for the collection of effluent generated from these solvent recovery plants and the same is carried to the ETP for treatment. It was noted that although the industry has provided flow measuring devices at the inlet of ETP and the MEE, but no provisions for measurement of effluent from each source of effluent generation / manufacturing plant(s) have been made. The industry is required to install flow measuring devices for measurement of effluent flow from each section leading to the effluent treatment plant mentioning a clear record of the effluent generated and being treated in the treatment plant.

It has been mentioned that the industry was respondent in OA No. 30 of 2013 in the matter of Jai Singh & Ors vs U.O.I & Ors and OA No.33 of 2013 in the matter of Karnail Singh & Ors vs CPCB & Ors, which are pending before Hon'ble National Green Tribunal and these were listed for hearing on 20.11.2020.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.7.1 Recommendations of the Monitoring Committee based on the observations of the Joint Committee.

i. **Since there is problem of handling of rice husk ash and it flows into the nearby drain and cause obstructions to the flow of drain water, therefore, the industry shall construct a covering shed of 1000 m^2 within 01 month so that it may store the rice husk ash for the period till its disposal. The dumping yard may be provided quite away from the drain. Proper record of quantity of rice husk generated per day, quantity of rice husk lifted and balance quantity of rice husk at dumping site may be maintained by the industry.**

ii. **The industry shall construct a brick wall of adequate length and height not less than 3m towards the residential areas within 01 month so that no fly ash may blow towards residential areas.**

iii. The industry shall provide retaining wall/ structure along the drain towards the rice husk dumping yard to prevent the flow of fly ash into the drain, within 01 month.

iv. The industry shall collect accumulated rice husk ash/fly ash from the drain and the same may be disposed of in an environmentally sound manner within 01 month.

v. The industry shall ensure that the vehicles will be covered with the tarpaulin during transportation of ash and ash will be transported in wet conditions to prevent it becoming the same air borne during transportation.

vi. Treated/untreated effluent should not be discharged on rice husk dumping yard for quenching purposes.

vii. PPCB shall collect and analyse the ground water samples within the premises of the industryto check its quality within 21 days.

viii. The industry shall ensure that no wastewater from its industrial premises / plantation area or otherwise should be allowed to discharge into storm water drain directly or indirectly under any circumstances.

ix. The industry shall get the channels carrying wastewater within its premises to the ETP/ MEE lined with impervious material like FRC lining etc. and repair the eroded drains within 01 month.

x. The industry should install electromagnetic flow meters at all the effluent carrying streams/ pipelines originating from each process /section leading to ETP/ MEE installed within its premises within 03 months.

xi. The industry shall comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install minimum required facility as delineated in the Standard Operating Procedure issued by the CPCB for recovery of spent solvents, immediately.

xii. PPCB shall get conduct performance study of ETP of the industry from its Environment Protection squad within 15 days to assess as to whether the ETP is adequate and effective to treat wastewater from both the units of industry. The performance study may be conducted by collecting 4 hourly composite samples of Effluent Treatment Plant for 2 days. Thereafter further action in the matter shall be taken accordingly.

xiii. The industry shall provide temporary bridge/structure after getting approval from the concerned authorities so that plantation areas across the drain could also be inspected.

xiv. The industry shall submit its permission for abstraction of ground water from central ground water authority within 01 month.

2.8 M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar.

The data of the industry is briefly mentioned as under.

The industry is a large scale drugs and pharmaceuticals products manufacturing unit and produces various type of drugs, medicines and salts as mentioned in **Annexure H** by using various type of chemicals as mentioned in the said Annexure. The consumption of water of the industry is 175 m^3/day.

The industry generates two type of effluents i.e effluents containing high TDS and low TDS. For the collection of both these effluents, the industry has provided 3 collection tanks and the effluents of the industry is transferred to ETP and MEE provided by its sister concerned unit namely M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar. The industry has been granted consent to operate under the provisions of Water Act, 1974 and Air Act, 1981, which are valid upto 31.03.2021.

The industry has installed one no. DM plant for the sterile section and one for the remaining plant. The wastewater generated from regeneration of the DM plants is collected in an intermediate collection tank and is pumped to the overhead collection tank meant for collection of low TDS effluent. The industry has also installed R.O. plant in its sterile plant and the R.O reject is either being used for ash quenching or in the cooling tower as make-up water.

The industry has installed one rice husk fired boiler of capacity 8.0 TPH which is equipped with twin cyclone followed by bag filter house as APCD. PPCB has collected the stack emissions sample on 10.9.2020 and concentration of particulate matter (119mg/Nm^3) has been found within the prescribed norms (350mg/Nm^3).

The industry has also installed 02 boilers of steam generating capacity 5 TPH and 2.8 TPH and the same was not in operation. Both these boilers are furnace oil fired boilers and has common stack connected with the stack of boiler of capacity 8 TPH.

Rice husk ash generated from the operation of the boiler is also transferred to its sister concern i.e. M/s Nectar Lifesciences Ltd., Unit-2 through covered Tractor/ Trolleys.

03 no. DG sets of capacity 2 x 1000 KVA and 1 x 500 KVA have been equipped with canopies and stacks of adequate height.

The industry has installed solvent recovery section for the recovery of spent solvent generated from its process. Central Pollution Control Board has issued Standard Operating Procedure (SOP) for the units engaged in the recovery of spent solvents vide notification in August, 2019. As such, the SOP is applicable for units engaged utilization of spent solvent including captive utilization and the industry is required to comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install minimum request facility as delineated in the Standard Operating Procedure issued by the CPCB for recovery of spent solvents.

The industry is yet not fully complying with the guidelines mentioned in the Standard operating procedure for recovery of spent solvent as the industry has not installed VOC absorption media connected to the vent of condenser, online analyzer for TOC at the vent outlet and had not made connection of vent of all the storage tanks with the condenser unit etc.

No provisions have been made by the industry for measurement of effluent from each source of effluent generation/manufacturing units and further being collected in collection tank and quantity of effluent lifted and transported to its sister concerned unit No.2.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.8.1 Recommendations w.r.t remedial measures to be taken by the industry based on the observations of the Joint Committee

i. **The industry shall install flow measuring device for measurement of effluent from each section to the collection tanks meant for collection of high TDS and low TDS effluent within 03 months.**

ii. **The industry shall maintain proper record of the effluent streams (low TDS and High TDS streams) generated per day, collected in different collection tanks and transferred to its sister concern unit for treatment and electromagnetic flow meters at all these points should be installed within 03 months.**

iii. **For the managementof rejects of DM water and RO system, the industry shall install dryer of adequate capacity within 03 months for drying of rejects and dried sludge should be disposed of at TSDF, Nimbuan.**

iv. **Since the industry is disposing of its rice husk ash in its sister concern unit. Therefore, before sending rice husk ash to the other unit, its weighment should be made and proper record of rice husk ash generated per day, quantity of rice husk sent to other unit and balance quantity of rice husk left with the industry should be maintained. The industry should provide storage shed of adequate capacity to store rice husk ash within 01 month.**

v. **The industry shall ensure that the vehicles will be covered with the tarpaulin during transportation of ash and ash will be transported in wet conditions to prevent it becoming the same air borne during transportation.**

vi. **The industry shall comply with guidelines mentioned in the Standard operating procedure for recovery of spent solvent prescribed by CPCB and accordingly, the industry shall install VOC absorption media connected to the vent of condenser, online analyzer for TOC at the vent**

outlet and shall made connection of vent of all the storage tanks with the condenser unit etc. within 02 months.

vii. **The industry shall not operate the furnace oil fired boiler of capacity 5 TPH without obtaining consent to establish/ varied consent to operate under the provisions of the Air (Prevention & Control of Pollution) Act, 1981 for re-instating the furnace oil fired boiler of capacity 5 TPH which was earlier sealed by the PPCB.**

2.9 M/s Punjab Chemicals &Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi.

The data of the Joint Committee w.r.t industry is briefly mentioned as under.

M/s Punjab Chemicals and Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi is large scale red category industry is engaged in the manufacturing of pesticides using different type of chemicals. The water consumption in the industry is about 194 m^3/day.

In order to treat wastewater, all effluent streams of the industry are taken into common collection tanks, from which oil and grease is removed with the help of mechanical oil separator and O & G traps. The effluent, after settling into sedimentation tank and filtration bed, is collected into equalization tank and thereafter, the effluent is fed to the MEE installed by the industry for disposal. Joint Committee has observed that pre-treatment system is ineffective and it may affect the functioning of MEE. From the analysis results, the joint team has observed that the values of TDS and TSS in the effluent at the inlet of multi effect evaporator (MEE) have been found increased rather decreasing.

The industry has provided STP, based on MBBR Technology, for the treatment of domestic effluent and the treated wastewater was being discharged onto land for plantation purpose.

Joint team has also noted that the industry has no provisions for measurement of effluent from each source of effluent generation / manufacturing plant(s). The industry is required to install flow measuring devices for measurement of effluent flow from each section to the treatment plant.

The industry has installed an Agitated Thin Film Dryer (ATFD) for drying of concentrate generated from multi effect evaporator (MEE). The concentrate after MEE was being sent to the incinerator provided by the industry and the condensate was being sent to the cooling tower. The industry has installed electromagnetic flow (EMF) meter at the inlet and condensate of the MEE and maintaining its record.

The industry has also provided OCEMS at the condensate line of the MEE, showing the concentration of pH, TSS, BOD & COD. OCEMS has been connected with the server of the PPCB and CPCB.

The industry has installed dual chamber incinerator for incineration of the incinerable hazardous waste generated from its manufacturing/ treatment processes. The

incinerator ash, being generated, is stored in the hazardous waste storage room provided by the industry, which is further sent to the common TSDF. The industry has provided an alkali scrubber as APCD to control various pollutants in the permissible limits.

The industry has installed 03 rice husk fired boilers of 15 TPH, 7 TPH and 6 TPH steam generation capacity. During visit of the Joint team, the boilers of capacity 7 TPH and 6 TPH were in operation and are separately equipped with multi cyclone as APCD.

It has been reported that the industry is achieving zero discharge and MEE condensate is recirculated in the cooling towers. The treated domestic effluent is discharged on to land for plantation.

It has been mentioned that the industry was respondent in OA No. 30 of 2013in the matter of Jai Singh & Ors vs U.O.I &Ors and OA No.33 of 2013 in the matter of Karnail Singh &Ors vs CPCB &Ors, which are pending before Hon'ble National Green Tribunal and these were listed for hearing on 20.11.2020.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee and monitoring conducted by the Monitoring Committee on 28.1.2021, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.9.1 Recommendations of the Monitoring Committee based on observations of the Joint Committee.

i. **The industry may phase out all the existing storage cum collection tanks containing highly contaminate effluent with very high values of BOD, COD and TDS, within 6 months and shall construct an impervious storage tank having storage capacity not more than 03 days considering the exigency or any other unforeseen events. In order to show the seriousness by the industry to adhere the time schedule for phasing out old storage cum collection tanks and construction of new impervious tank or rehabilitation of one existing tank with proper imperviousness under the guidance of structure designer, the industry may be directed by Punjab Pollution Control Board to submit the bank guarantee of Rs. 25 lakh.**

ii. **Since, the industry has failed to achieve the standards w.r.t. BOD parameter at the outlet of STP (sample collected on 28.1.2021), Punjab Pollution Control Board may issue necessary directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 to impose environmental compensation of Rs. 5 lakh upon the industry and the said amount may be utilized for rejuvenation of quality of environment.**

iii. **For the treatment of effluent generated in the form of condensate from MEE, containing high values of BOD and COD, the industry may provide**

biological treatment system and the treated effluent conforming to the standards may be utilized for cooling tower or any other useful usage.

iv. **In order to assess the effect of ground water contamination, if any, due to storage of effluent in various storage tanks, piezometers at different locations may be setup within the premises of the industry and Punjab Pollution Control Board shall collect the groundwater samples from the piezometer from time to time.**

v. **The industry shall construct dedicated storage chamber for the storage of rice husk ash and the same shall be disposed of in an environmentally sound manner.**

vi. **The industry shall ensure that the vehicles will be covered with the tarpaulin during transportation of ash and ash will be transported in wet conditions to prevent it becoming the same air borne during transportation.**

vii. **The industry should install electromagnetic flow meters at each effluent streams/pipelines origination from each process/ section, inlet pipe leading to MEE and condensate line.**

viii. **The industry shall obtain authorization under the Hazardous Waste Management Rules, 2016.**

ix. **The industry shall immediately get its continuous online emissions monitoring system calibrated from the supplier of online system and also ensure its regular operation, maintenance and calibration so as to obtain reliable and accurate results continuously and shall also maintain record of operation & maintenance, calibration of online monitoring system as per SOP / guidelines.**

x. **The industry shall get permission from Central Ground Water Authority (CGWA) for abstraction of ground water.**

xi. **PPCB shall analyse the soil samples from its premises within 15 days.**

2.10 M/s. Rajasthan liquors limited (Distillery Division), Vill. Haripur.

The data/report of the Joint Committee is summarized as under.

M/s. Rajasthan liquors limited (Distillery Division),Vill. Haripur Hinduan, Barwala Road, Dera Bassi is a large scale distillery unit and is engaged in the manufacturing of Grain Extra Neutral Alcohol (GENA) @ 120 KLD by using Grain, Rice, Maize, Bajra @ 250 MTD as raw material The manufacturing processes of the industry are cleaning, milling lignifications, fermentation, distillation, decanting and evaporation.

The consumption of water in the process of the industry is about 900 m^3/day. The spent wash generated from the distillation section, is passed through decanters and the thin slop is treated in the Multi Effect Evaporator (MEE) followed by Agitated Thin Film Dryer (ATFD) and the thick slop alongwith the wet cakes from decanters are treated in dryers

to recover Distillers Dried Grains with Solubles (DDGS), from the spent wash, which is sold out in the market being by-product.

The condensate from MEE along with other streams of wastewater are treated in the ETP installed by the industry based on anaerobic biological treatment followed by the aerobic biological treatment system followed by filtration and R.O system. The components of the ETP are collection tank, dozing arrangement, buffer tank, digester, aeration tank (02 nos.), mixing tank, tube settler, pre filtration, dual media filter, ultra-filtration (three stage) and RO plant (triple stage).

The industry has installed online continuous effluent monitoring system (OCEMS) at the outlet of R.O. which has been connected with the server of Punjab Pollution Control Board and Central Pollution Control Board for real time monitoring of treated industrial wastewater.

The industry is utilizing the permeate water of the RO plant installed after ETP in the cooling towers as make-up water and the RO plant reject water onto land for irrigation purpose in the plantation area as per Karnal Technology in about 4 acres of land area as per Karnal Technology adjoining to the premises of its sister concern unit.

The industry has installed cogeneration power plant of capacity 3 MW alongwith the boiler of steam generation capacity of 36 TPH. Crushed coal and rice husk are used as fuel in the boiler. The industry has installed Electro Static Precipitator (ESP) as APCD to contain the particulate matter within the prescribed standards.

The industry has installed pulveriser for crushing of the coal and has installed multi-cyclone followed by bag filter house as APCD to contain the concentration of particulate matter within the prescribed standards. The industry has installed a silo of capacity 50 T for storage of boiler ash.

The blow down from the boiler is used in quenching of ash. The industry has installed 2 no. DG sets of capacity 1010 KVA and 500 KVA which are equipped with canopies and stacks of adequate height.

Based on the observations, recommendations and past compliances to be done by industry as pointed by the Joint Committee, the Monitoring Committee has framed its recommendations w.r.t remedial measures to be taken by the industry and the same are mentioned as under.

2.10.1 Recommendations of the Monitoring Committee based on observations of the Joint Committee.

i. **The industry shall reuse its entire treated effluent for industrial activities.**

ii. **Rejects from R.O system shall be dried in dryer of adequate capacity and dried residue shall be disposed of TSDF, Nimbuan. R.O rejects shall not be discharged onto land for plantation as its regular application on**

land may increase TDS level in groundwater and may cause infertility of land.

iii. **The industry shall ensure that no trade and domestic effluent (treated or untreated) shall find its way into choe/ drain/ storm water drain or any inland surface water at any time or any other unauthorized place by any unauthorized means.**

iv. **Punjab Pollution Control Board shall carry out the ground water monitoring from the piezometer wells installed by it within 15 days.**

v. **PPCB shall analyze the stack emissions of the stack attached with the coal pulverizing section, within 15 days and further action in the matter may be taken accordingly.**

vi. **The industry shall not consume any other fuel for burning purpose except HSD for D.G. Set & Coal/ Rice Husk for the 36 TPH boiler installed within its premises, without the prior written permission of the Board.**

vii. **The industry shall ensure that the vehicles will be covered with the tarpaulin during transportation of ash and ash will be transported in wet conditions to prevent it becoming the same air borne during transportation.**

viii. **The industry shall get permission for abstraction of groundwater from Central Ground Water Authority within 02 months.**

3.0 Submission of report by the Joint Committee on 9 points raised by the Monitoring Committee (mentioned on page 3 of the report) and comments of the Monitoring Committee.

Punjab Pollution Control Board vide its letter No.8465 dated 24.12,2020 **(Annexure K)** has informed that Joint committee consisting of officers of Central Pollution Control Board and Punjab Pollution Control Board has made field visit on 17.12.2020. During the visit, the samples from following sources were collected.

i. Surface water samples from upstream and downstream of the drains located in the vicinity i.e. Haibatpura drain and Dhabi drain.

ii. Ground water samples from 02 piezometers installed within the premises of M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar to assess the ground water quality.

iii. Soil samples have been collected on 21.12.2020 and have been sent for analysis to PPCB laboratory.

Now the Joint Committee of CPCB and PPCB, constituted by Hon'ble National Green Tribunal, has submitted its report dated 8.1.2021 on 9 points addressing the observations of the Monitoring Committee and same is annexed as per **Annexure-L. The comments of the Monitoring Committee on the report dated 8.1.2021 are submitted as under.**

3.1 Comments of the Monitoring Committee on the report dated 8.1.2021 (Annexure L) of Joint Committee of CPCB and PPCB.

3.1.1 Comprehensive environmental pollution index (CEPI) of Dera Bassi Area.

Joint Committee has informed that CEPI is calculated for the critically polluted area as well as severe critically polluted areas. However, Tehsil Dera Bassi does not fall under critically polluted area or severe critically polluted areas. The Monitoring Committee has observed as under.

Though, Dera Bassi area is not covered under critically polluted area or severally polluted area but for the awareness of the public, especially the residents of nearby colonies, about the air quality of the area, air quality index (AQI) is required to assessed by the Punjab Pollution Control Board.

Therefore, the Monitoring Committee recommends that the Punjab Pollution Control Board may conduct comprehensive monitoring of ambient air and calculate air quality index of Dera Bassi along with risks associated. The said air quality index data of the area may be provided within 2 months.

3.1.2 Collection of stack emission samples w.r.t parameters VOC, SO_2, HC, wherever, applicable.

As per the report of the Joint Committee, the stack emission samples were collected w.r.t parameters PM, SO_2, NOx, CO & HCL wherever applicable, and these analysis results have been incorporated in the report of Joint Committee filed before the Hon'ble NGT. The analysis results indicate that values of particular matter of the stacks attached to the furnaces of the boilers are within the norms.

The Monitoring Committee has observed that in order to calculate air quality index (AQI) of Dera Bassi, ambient air quality of the area needs to be analyzed continuously for at least 21 days in two seasons (winter and summer). Punjab Pollution Control Board may also install continuous ambient air quality monitoring system (CAAQMS) in Dera Bassi area to get real time data and Air Quality Index.The stack emissions samples of the industries located in Dera Bassi area within the radius of 2 Km from the residential colonies may be analyzed by reputed third agency. Based on the analysis results of the stack emissions, area may be selected, where ambient air quality may be analyzed and air quality index may be calculated.

3.1.3 Water quality of the drain/ choe.

The Joint Committee has mentioned in the report that there are 2 drains namely the Haibatpura Drain and Dhabi Drain, which flow in the region and join river Ghaggar. The Committee also collected the samples from the upstream and downstream of Haibatpura Drain and Dhabi Drain on 17.12.2020 and as per the analysis results, the concentration of BOD and COD has been found varied between 42 – 194 mg/l and 182 – 756 mg/l, respectively. The reasons for high value of BOD and COD may be due to the discharge of untreated wastewater from the villages/residential complex and the industries located on the drains.

The Monitoring Committee is of the view that there is need to carry out surprise inspections / raids on the industries located in the catchment area of Haibatpura Drain and Dhabi Drain by Punjab Pollution Control Board and in case the industries are found discharging untreated / partially treated wastewater, not conforming to the standards, suitable action under the provisions of Water Act, 1974 may be taken in a time bound manner.

Punjab Pollution Control Board may also identify the villages which have significant flow/discharge with high concentration of BOD and COD and department of Rural development & Panchayat be directed to provide treatment facilities to treat the wastewater of the villages in time bound manner so that water quality of the drains may be improved.

3.1.4 Groundwater quality monitoring

The groundwater samples, collected by the Punjab Pollution Control Board in the month of September and October, 2020, indicate that almost all the parameters are within the norms but the parameter namely F. Coli has not been analyzed, which may due to seepage of domestic wastewater of the industries which have provided septic tanks followed by soakage pits or soakage pits alone.

The Monitoring Committee recommends that Punjab Pollution Control Board may conduct ground water monitoring at 5 different locations for all the parameters as mentioned in IS 10500: 2012 including F.Coli. parameter within 1 month.

3.1.5 Quality of Soil

The Joint Committee has collected the soil samples from the plantation area of the industries and agricultural fields near Haibatpura Drain and it has been informed that the analysis results have not been received so far.

The Monitoring Committee has observed that soil samples from the plantation area and agricultural fields may also be analyzed for heavy metals because some of the industries discharge their wastewater after treatment onto land for plantation regularly and continuously and regular application of effluent on to land may cause percolation/seepage and may become the cause of contamination of soil w.r.t heavy metal and total dissolved solids (TDS).

The Monitoring Committee recommends that soil samples from plantation areas and agriculture fields, where, the effluent of the industries is utilized may be collected by Punjab Pollution Control Board within 1 month and be analyzed for the parameters organic, inorganic and heavy metals.

3.1.6 Hazardous waste generation and its disposal by the industries

The Joint committee has collected the data from industries from their record mentioning the categories and quantum of Hazardous waste generated by the industries and mode of disposal of such wastes.

The Monitoring Committee has observed that detailed survey of area along the drains has not been carried out to check as to whether there is any illegal disposal of Hazardous waste by the industries. Moreover, the information from the nearby residents is also required to be taken for any dumping of hazardous waste by any industry in the area because lot of Hazardous waste is generated by the industries.

3.1.7 Disposal of solid waste including rice husk ash and its management

With regard to generation of Rice husk ash in the industries from burning of rice husk as fuel in their boilers furnaces, it has been submitted by the Joint Committee that rice husk ash is supplied to the nearby farmers to use it as manure / brick kilns to use it in the preparation of brick earth and also dumped in low lying area in village Nimbuan, Dera Bassi.

The Monitoring Committee has observed that 3 industries namely Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi; Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi and Rajasthan Liquors Ltd. (Distillery Division), Village Haripur Hinduan, Tehsil Dera Bassi are big consumer of rice husk as a fuel resulting in generation of large quantity of rice husk ash, which is normally 15 – 20 % of rice husk consumption and is disposed of and dumped in low lying area. It is well known fact that rice husk ash is a big source of air pollution. Very few quantity of rice husk ash is used as a manure in the fields by the farmers for soil conditioning and there is hardly any practice to use rice husk ash by the brick kilns for the manufacturing of bricks using rice husk ash. The only mode of disposal of rice husk ash remains available with the industries is its dumping in low lying area or any othersuch places.

Therefore, the Monitoring Committee recommends as under.

1. **All the rice husk consuming industries should construct proper and effective storage system with high walls and covering sheds for the storage of rice husk ash generated by them.**

2. **The vehicles used for transportation of rice husk ash for its final disposal should be covered from all the sides and rice husk ash in wet form may be loaded in the vehicles and water spray system may be used at the places where it is unloaded. If the rice husk ash is dumped in low lying area then it should be disposed off in layered manner with mechanism of spreading of one layer of rice husk ash followed by layer of earth / soil and its full compaction and again second layer of rice husk ash and thereafter a layer of soil and so on. For this purpose, PPCB may prescribe Standard Operating Procedure (SOP) for the safe**

and environmentally sound management and handling of rice husk ash. At the end the system, proper compaction and development of plantation may be made or these can be converted into useful usages.

3. **Punjab Pollution Control Board shall constitute a Committee to visit the area, where the industries dispose of their rice husk ash and check as to whether proper mechanism is adopted for its compaction and covering with earth while dumping at low lying area and about end use of the closed sites.**

4. **The brick kiln owners may be motivated by Punjab Pollution Control Board to use rice husk ash in their brick kilns for the manufacturing of bricks.**

5. **All the 3 industries as mentioned above may get joint R & D studies from a reputed institute for best use of rice husk ash for its usage in other sectors or recovery of useful constituents.**

3.1.8 Ambient air quality of Dera Bassi area

It has been mentioned that 2 ambient air quality monitoring stations have been set up in Dera Bassi area and the analysis results indicate that the value of particulate matter (PM_{10}) vary between 90 – 118 ug/m^3. It has been further reported that the high value of particulate matter may be due to construction activities in the area and due to traffic congestion in the town. For the control of air pollution in Dera Bassi, Action Plan has been prepared and the progress w.r.t various activities mentioned in the Action Plan are reviewed at District level on the monthly basis.

The Monitoring Committee has observed that installation of two ambient quality monitoring stations in Dera Bassi area is not sufficient to depict the real air quality of ambient in Dera Bassi area. Atleast, 4 ambient air quality stations may be installed at different locations to monitor the ambient air quality. Moreover, for the calculation of air quality index of the area for information of the public of the area, monitoring of ambient air quality is required to be conducted for 7 days, which may also be helpful for taking steps by the concerned agencies to improve the air quality of the area in case it goes beyond the desired level.

3.1.9 Action plan for mitigation of pollution in the area with relevant details

The Joint Committee has mentioned in the report that Action Plan for mitigation for air pollution of Tehsil Dera Bassi has already been notified by the department of Environment, Punjab on 30.4.2019 and the progress w.r.t various activities mentioned in the Action Plan is reviewed on monthly basis at District level.

4.0 Action taken against the 04 violating industries as reported by the Joint Committeeas mentioned by PPCB in its note dated 25.12.2020 (Annexure L).

The Joint Committee had visited 10 industries in Dera Bassi area, out of which 04 industries were found non-compliant w.r.t various activities, which are mentioned as under.

4.1 M/s Nectar Life Sciences Ltd., (Unit-I), Vill. Saidpura, Tehsil Dera Bassi, SAS Nagar.

4.1.1 Major violations observed by the Joint Committee.

- Not fully complying with the SOPs prescribed by CPCB for Solvent Recovery Plants.
- No provisions for measurement of effluent from each source of effluent generation / manufacturing process have been made.The industry is required to provide flow measuring devices (EML) for measurement of effluent from each section to the treatment plant to summarize record of effluent generated / effluent treated.
- The industry needs to shift and install the old Multi Effect Evaporator (MEE) which has now become surplus after installation of new MEE from its sister concern M/s Nectar Lifesciences Ltd. (Unit-II) in their premises for treatment of LTDS and HTDS.

4.1.2 Action taken by PPCB

Show cause Notice for revocation of consent to operate granted under Water Act, 1974 and under Air Act, 1981, with an opportunity of personal hearing before Chairman of the Board has been issued to the industry vide no. 5939 dated 23/12/2020. Hearing has been fixed for 7/1/2021.

4.2 M/s Nectar Life Sciences Ltd., (Unit-II), Vill. Saidpura, Tehsil Dera Bassi, SAS Nagar.

4.2.1 Major violations observed by the Joint Committee.

- Ash from boilers is being dumped adjoining the natural drain. Drain was found covered with ash particle, indicating uninterrupted flow of ash in adjoining drain.
- Retaining wall has not been provided along the drain / ash dumping yard to prevent the flow of water mixed with fuel ash into the drain.
- Subsistence of ash along the banks and in the course of drain shows discharge of rain water mixed with ash particle from the ash dumping yard.
- The industry has failed to provide permanent shed for storage of fly ash near the boiler area.
- Not complying the SOPs prescribed by the CPCB for Solvent Recovery Plants.
- Flow measuring devices are required to be installed for measurement of effluent from each section to the treatment plant to summarize record of effluent generated / effluent treated.

4.2.2 Action taken by PPCB

- Show cause notice for refusal of consent to operate under Water Act, 1974 and Air Act, 1981 has been issued vide no. 3717 dated 29/9/2020.
- Notice to issue directions u/s 33-A of the Water Act, 1974 vide no. 3719 dated 29/9/2020 has been issued.

- Personal hearing held before the Chairman of the Board on 13/10/2020 and the progress was reviewed on 17/11/2020.
- Directions have been issued to the industry for compliance in time bound manner. Further action will be taken accordingly.

4.3 M/s Punjab Chemical and Crop Protection Ltd., (Agro Division), Vill. Bhankarpur, Dera Bassi, SAS Nagar

4.3.1 Major violations observed by the Joint Committee.

- No segregation of LTDS and HTDS steams and all trade effluent streams are fed to the MEE installed by the industry for disposal.
- Pre-treatment system before the MEE feed seems to be ineffective and the same is evident from the comparison of the analysis results of the raw effluent intake and the feed to MEE. The concentration of TSS and TDS in the effluent at the inlet of MEE has increased rather than decreasing. The whole pre-treatment system has been put-in place for removal of solids/ settleable material from the influent, to improve the working efficiency of the MEE, but the ineffective pre-treatment is reducing the working efficiency of the MEE.
- No provisions for measurement of effluent from each source of effluent generation / manufacturing plant(s). The industry is required to install flow measuring devices (EMFs) for measurement of effluent flow from each section to the treatment plant to summarize a clear record of the effluent generated/ treated.
- The adequacy and efficacy of the treatment system is required to be got checked from an institute of repute and implement the recommendations given by the institute at the earliest.
- Pre-treatment system is to be redesigned to support the working efficiency of the already installed MEE Plant.
- Required to treat the high volume of effluent retained in the equalization tank in a timely manner through the MEE plant and if required the treatment capacity of its MEE is to be enhanced.

4.3.2 Action taken by PPCB

Show Cause Notice for revocation of Consent to operate under Water Act, 1974 and Air Act, 1981, with an opportunity of personal hearing before Chairman of the Board issued to the industry vide no. 5941 dated 23/12/2020. Hearing has been fixed for 7/1/2021.

4.4 M/s Hansa Tubes (P) Ltd., Habitpur Road, Dera Bassi, SAS Nagar

4.4.1 Major violations observed by the Joint Committee.

- ETP was found fully defunct. ETP is required to be upgraded to achieve the prescribed discharge standards or to explore the possibility of achieving ZLD.
- The analysis results of effluent samples indicate the concentration of various parameters in trade effluent beyond limits.
- Water Consumption for rinsing in phosphating section needs to be minimized by providing cascading.

4.4.2 Action taken by PPCB

Show cause notice for revocation of consent to operate under Water Act, 1974 and Notice for issuing directions under the provisions of the Water Act 1974 with an opportunity of personal hearing before Chairman of the Board have been issued to the industry vide no. 5976-77 dated 24.12.2020. Personal hearing has been fixed for 7.1.2021.

5.0 Visit to the industries of Dera Bassi area by the Monitoring Committee on 28.01.2021

The Monitoring Committee has visited 03 industries of DerraBassi area on 28.1.2021.

The following were present during the visit:

a) Members of the Monitoring Committee

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1	Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court	Chairman
2.	Sh. S.C. Agrawal, IAS, Former Chief Secretary, Punjab	Senior Member
3.	SantBalbir Singh Seechewal	Member
4.	Dr. Babu Ram, Former Member Secretary, PPCB	Technical Expert

b) Officers of Punjab Pollution Control Board

1. Sh. Lavneet Kumar Dubey, Environmental Engineer
2. Sh. Rantej Sharma, Asstt. Environmental Engineer
3. Sh. MohitBist, Asstt. Environmental Engineer
4. Sh. Charan Singh, Junior Scientific Officer
5. Ms. ManveerKaur, Junior Scientific Assistant

The report on visit to the industries is submitted as under:

5.1 KDDL Limited, Vill. Haibatpur, Haibatpur Road, Dera Bassi

5.1.1. About the industry

The industry is a large scale red category and is manufacturing Watch Dials @ 6000000 Number/Year using various chemicals like Potassium Cyanide, Sodium Cyanide, Gold PotasiumCynide, Silver PotasiumCynide, Nickel Sulphate, Acetone Cyclohexnone, Xylene, Butyl Acetate, Brass Metal, Lacquers, Printing Ink, Packing Paper, Boric Acid, Ammoniumn Chloride, Potassium Bromide, Ammonium Sulphate, Zinc Sulphate etc. The processes involved are blanking, punching, feet sticking, electroplating, lacquering, printing and packing. The industry is operating with valid consent to operate under the provisions of Water Act,1974 and Air Act, 1981 both are valid upto31.3.2024.

5.1.2 Effluent Treatment Plant and its performance

The industry generates trade effluent from the processes of nickel, silver and gold plating for which industry has installed an ETP based on physico-chemical treatment. For measurement of flow, it has provided electro-magnetic flow meter. The industry has installed STP for the treatment of domestic effluent. The treated wastewater from both STP and ETP is being used on to land for plantation developed within the premises.

In order to monitor the performance of effluent treatment plant and sewage treatment plant installed by the industry, effluent samples from the various points were collection and were analyzed for the various parameters. The analysis results, as received from the Punjab Pollution Control Board laboratory, Patiala are mentioned as per **Table-1** given below and are annexed as per **Annexure-M**.

Table 1: Analysis results of effluent samples collected from ETP and STP.

Sr. No.	Parameters	Inlet tank of ETP	Outlet of Tube settler	Final Outlet after filtration	Prescribed standards as per EPA	Plantation area	Inlet of STP	Outlet of STP	Prescribed standards pas per EPA
1.	pH	6.7	7.2	7.4	6.0-9.0	8.0	8.0	7.6	6.5-9.0
2.	COD mg/l	365	314	247	--	320	164	116	--
3.	BOD mg/l	55	52	36	--	48	55	27	30
4.	TSS mg/l	41	38	29	100	37	48	41	100
5.	TDS mg/l	705	1610	1655	--	1580	986	1077	--
6.	Oil & Grease mg/l	--	--	--	10	BDL	BDL	BDL	--
7.	Sulphate mg/l	98	254	226	400	209	--	--	--
8.	Phosphate mg/l	0.1	0..2	0.1	5.0	BDL	--	--	--
9.	Nickle mg/l	6.47	1.31	1.07	3.0	1.01	--	--	--
10.	Zinc mg/l	1.34	0.52	0.33	5.0	027	--	--	--
11.	Silver mg/l	BDL	BDL	BDL	--	BDL	--	--	--
12.	Cyanide mg/l	BDL	BDL	BDL	--	BDL	--	--	--

5.1.2.1 Discussion of the analysis results

The analysis results of the effluent samples collected from collection tank, outlet of tube settler, final outlet after filtration and plantation area indicate that the values of pH, TSS, TDS, Sulphate, Phosphate, Nickle, Silver and Cyanide were found as 6.7, 41 mg/l, 705 mg/l, 98 mg/l, 0.1 mg/l, 6.47 mg/l, 1.34 mg/l, BDL & BDL; 7.2, 38 mg/l, 1610 mg/l, 254 mg/l, 0.2 mg/l, 1.31 mg/l, 0.52 mg/l, BDL & BDL; 7.4, 29 mg/l, 1655 mg/l, 226 mg/l, 0.1 mg/l, 1.07 mg/l, 0.33 mg/l, BDL & BDL and 8.0, 37 mg/l, 1580 mg/l, 209 mg/l, BDL, 1.01 mg/l, 0.27, BDL & BDL, respectively. The parameters namely BOD & COD have also been analyzed. The high value of COD indicates that the effluent with inorganic constituents is entering into the system. The values of all other parameters in the final treated effluent filtration are within the permissible limits.

Further, the effluent samples from inlet and outlet of STP have also been collected and their analysis results indicate that the values of BOD, COD, TSS, TDS and Oil & grease have been observed as 55 mg/l, 164 mg/l, 48 mg/l, 986 & BDL and 27mg/l, 116mg/l, 41 mg/l, 1077 mg/l & BDL, respectively. The analysis results are annexed as per **Annexure-M**. The performance of STP in terms of reduction of BOD, COD & TSS was observed as 51%, 29.2% & 14.5%, respectively and TDS has been increased at the outlet of STP, as compared to its value at inlet of STP. The treatment efficiency in terms of removal of BOD, COD & TSS is quite low as expected from such treatment system and in case the value of BOD increases to 100 mg/l, which is minimum in case of domestic wastewater, the present treatment system may not be able to bring BOD parameter within the norms.

Therefore, the Monitoring Committee recommends that the industry shall get the adequacy and efficacy study of effluent treatment plant and sewage treatment plant installed by it from reputed organization like IIT, Ropar; NIT, Jalandhar or IIT, Delhi, within one month and submit the report to the monitoring committee.

5.1.3 Air pollution and its control

The industry has lacquering section and buffing section for finishing of the product. It has provided two stacks for exhaust of emissions from buffing section and lacquering section. In order to control air emissions from buffing section, it has provided bag filter house as APCD and for treatment of air emission generated from lacquering system, it has provided wet scrubber as APCD. The stack emission samples from buffing section has already been collected by Punjab Pollution Control Board and no stack emission sample was collected from lacquering section. Therefore, the Monitoring Committee collected the stack emission samples from lacquering section on 28.01.2021 and its analysis results (analysis results of air emissions are annexed as per **Annexure-N**) indicate that the value of particulate matter was observed as 30 mg/Nm^3, which is within the permissible limits of 150 mg/Nm^3.

5.1.4 Collection of the soil sample from plantation area

Since, the industry is discharging its effluent onto land for plantation, therefore, in order to assess the effect of continuous application of effluent onto land for plantation, the quality of soil was analyzed and its analysis results indicate that the value of pH, electrical conductivity, iron, zinc, total chromium, chloride and total hardness were observed as 8.1, 100 µs/cm, 13.3 mg/gm, 0.03 mg/gm, 0.01 mg/l, 1.2 mg/gm and 0.96 mg/gm, respectively (analysis results are annexed as per **Annexure-O**).

5.1.5 Observations and recommendations

The industry has the processes of electroplating for shining and finishing of Watch Dials and uses Potassium Cyanide, Sodium Cyanide, Gold Potasium Cynide, Silver Potasium Cynide, Nickel Sulphate, which are very toxic chemicals. For the treatment of wastewater of the industry, it has installed an ETP based on physico- chemical treatment and the treated effluent is discharged onto land for plantation.

The Monitoring Committee is of the view that mode of disposal of toxic effluent, containing heavy metals, on to land for plantation for longer period with its continuous application is not advisable as effluent may leach and contaminate the ground water and soil of the area. Therefore, the monitoring Committee recommends as under:

The industry shall install ETP based on Zero Liquid Discharge (ZLD) Technology within 4 months and the recovered effluent (permeate) may be recycled in the processes of the industry and the hazardous sludge generated from ZLD system shall be properly dried on the impervious platform and dried sludge may be sent to TSDF for its scientific disposal.

Other recommendations as mentioned at II, III and IV as at page no. 6 are reiterated as under:

i. **The industry shall ensure that no wastewater from its industrial premises / plantation area or otherwise shall be discharged into storm water drains directly or indirectly under any circumstances.**
ii. **In order to control toxic emissions generated within the processes, the industry shall provide proper suction system and the sucked emissions may be treated through scrubbing system with suitable scrubbing media. The said liquid scrubbing system may be installed within 03 months.**
iii. **Punjab Pollution Control Board shall collect and analyse the stack emissions sample from lacquering section within 15 days.**

5.2 M/s Punjab Chemicals &Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi

5.2.1. About the industry

The industry is large scale red category unit and is engaged in the manufacturing of pesticides using different type of chemicals. The water consumption in the industry is about 194 m^3/day.

In order to treat wastewater, all effluent streams of the industry are collected into storage cum collection tanks, with a mechanism to remove oil & grease from one tank and effluent after settling and aeration is fed into multi effect evaporator (MEE)

The industry has provided STP, based on MBBR Technology, for the treatment of domestic effluent and the treated wastewater was being discharged onto land for plantation purpose. The concentrate after MEE is being sent to the incinerator provided by the industry and the condensate is sent to the cooling tower as claimed by the industry.

For incineration of the incinerable hazardous waste generated from its manufacturing/ treatment processes, it has provided incinerator. The incinerator ash, being generated, is stored in the hazardous waste storage room provided by the industry, which is further sent to the common TSDF.

5.2.2 Effluent Treatment Plant and its performance

In order to assess the performance of the treatment system, the Monitoring Committee has collected the effluent samples from the various points, the analysis results of which are mentioned as per **Table-2** given below and are annexed as per **Annexure-P**.

Table-2: Analysis results of effluent samples collected from various points of ETP and STP.

Sr. No.	Parameters	Lagoon	Aeration tank	MEE Condensate	Settling tank without Aeration	Inlet of STP	Outlet of STP	Prescribed standards pas per EPA
1.	pH	7.8	7.8	9.6	7.7	6.9	7.3	6.5-9.0
2.	COD, mg/l	59610	51930	12480	46810	743	144	--
3.	BOD, mg/l	14200	12500	2150	11600	225	36	30
4.	TSS, mg/l	380	1450	11	450	222	70	100
5.	TDS, mg/l	58500	66600	1309	49400	1470	1013	
6.	O&G,mg/l	--	--	--	--	--	BDL	--

5.2.2.1 Discussion of the analysis results

The analysis results of the effluent samples collected from the various points of treatment system indicate that the values of parameters as pH : 7.8 , COD: 59610 mg/l, BOD : 14200 mg/l, TSS : 380 mg/l & TDS : 58500 mg/l, whereas, in the aeration tank, these values were observed as 7.8, 51930 mg/l, 12500mg/l, 1450 mg/l and 66600 mg/l, respectively. There is very low reduction in the concentration of the parameters namely BOD and COD in the aeration tank as the reduction in these parameters has been observed as 12.8% and 11.9%, respectively, and TSS has been found increased from 380 mg/l to 1450 mg/l, which is absolutely not inconsonance with the treatment system.

The analysis results of effluent sample collected from condensate of multi effect evaporator indicate the values of parameters namely pH, COD, BOD, TSS and TDS were observed as 9.6, 12480 mg/l, 2150 mg/l, 11 mg/l and 1309 mg/l, respectively. It has been claimed that condensate from MEE is reused in cooling tower, whereas, technically it is not feasible to utilize effluent with high valued BOD, COD and TDS in the cooling tower as it may hamper its functioning. Further, there is insignificant reduction in the concentration of parameters COD, BOD, TSS and TDS in the settling tank provided by the industry as the concentration of these parameters have been found as 46810 mg/l, 11600 mg/l, 450 mg/l and 49400 mg/l, respectively.

The Monitoring Committee has also collected the effluent samples from the inlet and outlet of STP. The analysis results indicate that the values of parameters namely pH, COD, BOD, TSS & TDS at the inlet of STP were found as 6.9, 743 mg/l, 225 mg/l, 222 mg/l & 1470 mg/l, whereas, at the outlet of STP, these values of the parameters were observed as 7.3, 144 mg/l, 36 mg/l, 70 mg/l & 1013 mg/l, respectively. The value of oil & grease at the outlet of STP is below detection limit. The value of BOD (36 mg/l) is higher than the permissible limits of 30 mg/l.

5.2.3 Air pollution and its control

In order to meet with the requirement of steam by the industry, it has installed 03 rice husk fired boilers steam generating capacity of 15 TPH, 7 TPH and 6 TPH. During visit, the monitoring committee has collected the stack emission samples from the stacks which are as mentioned as under:

Point of sample collection	Parameter	Results	Prescribed standards	
			A Area upto 5 km from the periphery of class I and class II town	B Other than "A"
Port hole on stack of boiler furnace (7 TPH) after APCD	Particulate matter	271 mg/Nm^3 at 12% of CO_2	500 mg/Nm^3 at 12% of CO_2	1000 mg/Nm^3 at 12% of CO_2
Port hole on stack of boiler furnace (15 TPH) after APCD	Particulate matter	239 mg/Nm^3 at 12% of CO_2	350 mg/Nm^3 at 12% of CO_2	500 mg/Nm^3 at 12% of CO_2
Port hole on stack of incinerator after APCD	Particulate matter	37 mg/Nm^3 at 11% of O_2	50 mg/Nm^3 at 11% of O_2	
	SO_2	69 mg/Nm^3 at 11% of O_2	200 mg/Nm^3 at 11% of O_2	
	NOx	116 mg/Nm^3 at 11% of O_2	400 mg/Nm^3 at 11% of O_2	
	CO	19 mg/Nm^3 at 11% of O_2	100 mg/Nm^3 at 11% of O_2	

5.2.3.1 Discussion of the analysis results

The analysis results indicate that the value of particulate matter from the stack after air pollution control device attached to the boiler furnace of capacity 7 TPH, 15 TPH and incinerator were observed as 270 mg/Nm^3, 239 mg/Nm^3 and 37 mg/Nm^3, respectively, which are within the permissible limits of 500 mg/Nm^3, 350 mg/Nm^3 and 50 mg/Nm^3, respectively.

5.2.4 Observations and recommendations

The industry has provided number of storage cum collection tanks for collection of combined effluent containing high values of BOD, COD and TDS. The capacity of the multi effect evaporator and incinerator provided to evaporate and incinerate the effluent seems to very low as the effluent is lying stored in storage tank for number of days for even month together and may become the source of ground water contamination due to leaching because the storage tanks are old. Therefore, there is urgent need to phase out all these storage tanks in a time bound manner and it needs to keep only one storage tank of storage capacity not more than 3 days and multi effect evaporator and incinerator of higher capacity may be setup by the industry or capacity of existing MEE and incinerator may be enhanced.

For the treatment of MEE condensate containing high values of BOD and COD, the industry may provide biological treatment system to bring these parameters within the norms before its further utilization for any other usages. Further, the value of BOD at

the outlet of STP has been observed as 36 mg/l, which is more than the permissible limits of 30 mg/l.

In view of the above, the Monitoring Committee recommends as under:

i. **The industry may phase out all the existing storage cum collection tanks containing highly contaminated effluent with very high values of BOD, COD and TDS, within 6 months and shall construct an impervious storage tank having storage capacity not more than 03 days considering the exigency or any other unforeseen events. In order to show the seriousness by the industry to adhere the time schedule for phasing out old storage cum collection tanks and construction of new impervious tank or rehabilitation of one existing tank with proper impervious ness under the guidance of structure designer, the industry may be directed by Punjab Pollution Control Board to submit the bank guarantee of Rs. 25 lakh.**

ii. **Since, the industry has failed to achieve the standards w.r.t. BOD parameter at the outlet of STP, Punjab Pollution Control Board may issue necessary directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 to impose environmental compensation of Rs. 5 lakh upon the industry and the said amount may be utilized for rejuvenation of quality of environment.**

iii. **For the treatment of effluent generated in the form of condensate from MEE, containing high values of BOD and COD, the industry may provide biological treatment system and the treated effluent conforming to the standards may be utilized for cooling tower or any other useful usage.**

iv. **In order to assess the effect of ground water contamination, if any, due to storage of effluent in various storage tanks, piezometers at different locations may be setup within the premises of the industry and Punjab Pollution Control Board shall collect the groundwater samples from the piezometers from time to time.**

Further recommendations as mentioned at page No 18 of the report are reiterated as under:

v. **The industry shall construct dedicated storage chamber for the storage of rice husk ash and the same shall be disposed of in an environmentally sound manner.**

vi. **The industry shall ensure that the vehicles will be covered with the tarpaulin during transportation of ash and ash will be transported in wet conditions to prevent it becoming the same air borne during transportation.**

vii. **The industry should install electromagnetic flow meters at each effluent streams/pipelines origination from each process/ section, inlet pipe leading to MEE and condensate line.**

viii. **The industry shall obtain authorization under the Hazardous Waste Management Rules, 2016.**

ix. **The industry shall immediately get its continuous online emissions monitoring system calibrated from the supplier of online system and also ensure its regular operation, maintenance and calibration so as to obtain reliable and accurate results continuously and shall also maintain record of operation & maintenance, calibration of online monitoring system as per SOP / guidelines.**

x. **The industry shall get permission from Central Ground Water Authority (CGWA) for abstraction of ground water.**

xi. **PPCB shall analyse the soil samples from its premises within 15 days.**

5.3 M/s Hansa Tubes (P) Ltd., Habitpur Road, Dera Bassi, SAS Nagar

5.3.1. About the industry

The industry is small scale red category unit, engaged in manufacturing of CR tubes and strips using HR coil, HCl and Lime as raw material and chemicals. The industry is operating with valid consent to operate under Water Act, 1974 and Air act, 1981 and these consents are valid upto30.6.2024. The consumption of water is $4m^3$/day and HSD is used as fuel in DG sets and annealing furnaces. The manufacturing processes of the industry are pickling, annealing, rolling and tube making. For annealing, it has 2 No. annealing furnaces of capacity 90 ton and 30 ton in which C-9 is used as fuel. For the treatment of acidic effluent generated from HCl pickling section, the industry has provided an ETP based on physico-chemical treatment and treated effluent is discharged on to land for plantation.

5.3.2 Effluent Treatment Plant and its performance

The industry has provided effluent treatment plant based on physico chemical treatment. However, on the day of visit, effluent treatment plant was not operation due to batch treatment and intermittent discharge of the industry, as such, its effectives and performance could not assessed. However, the Monitoring Committee, collected the effluent sample from collection tank meant for collection of untreated wastewater and plantation area and the analysis results are mentioned as per **Table-3** given below and the same are annexed as per **Annexure-Q**.

Table-3: Analysis results of effluent samples collected from collection tank and plantation area.

Sr. No.	Parameters	Collection tank	Plantation area	Prescribed standards as per EPA
1.	pH	2.2	7.4	6.0-9.0
2.	COD, mg/l	330	138	--
3.	BOD, mg/l	70	25	--
4.	TSS, mg/l	21	36	100
5.	TDS, mg/l	20150	889	--
6.	Oil & Grease, mg/l	BDL	BDL	10
7.	Chloride, mg/l	8550	175	--

8.	Sulphate, mg/l	2900	112	400
9.	Iron, mg/l	1089	1.71	3.0
10.	Zinc, mg/l	0.99	0.18	5.0
11.	Total Chromium, mg/l	0.33	BDL	2.0

5.3.2.1 Discussion of the analysis results

The analysis results of the effluent samples, collected from the collection tank containing untreated wastewater, indicate that the values of pH, TDS, Oil & grease, Chloride, Sulphate, Iron, Zinc & Total Chromium were observed as 2.2, 20150 mg/l, BDL, 8550 mg/l, 2900 mg/l, 1089 mg/l, 0.99 mg/l & 0.33 mg/l, respectively. The effluent sample was also collected from plantation area, whose analysis results indicate that the values of these parameters were observed as 7.4, 889 mg/l, BDL, 175 mg/l, 112 mg/l, 1.71 mg/l, 0.18 mg/l & BDL, respectively. Though, the values of all the parameters of the effluent sample collected from plantation area are within the norms, but, these parameters can't be considered as results of the final treated effluent. Moreover, the effluent containing very high values of TDS (20150 mg/l), Chloride (8550 mg/l), Sulphate (2900 mg/l) and Iron (1089 mg/l) cannot be reduced to the permissible level with physico chemical treatment without providing tertiary treatment i.e RO system followed by multi effect evaporators.

5.3.3 Collection of soil sample and discussion on the analysis results

The Monitoring Committee collected the soil samples from the plantation area and its analysis results are mentioned as per **Table-4** given below.

Table-4: Analysis results of soil sample collected from plantation area.

Sr. No.	Parameters	Plantation area
1.	pH	8.3
2.	Electrical Conductivity µs/cm	150
3.	Iron mg/gm	24.2
4.	Zinc mg/gm	0.03
5.	Total Chromium mg/gm	0.03

The analysis results indicate that the values of pH, EC, Iron, Zinc and Total Chromium in the soil sample were observed as 8.3, 150 µs/cm, 24.2 mg/gm, 0.03 mg/gm and 0.03 mg/gm, respectively.

5.3.4. Recommendations of the Monitoring Committee

In view of the above, the mentoring committee recommends that:

1. **The industry is discharging its physico-chemical treated effluent on to land for plantation and its continuous application containing metal contents, on to land is not advisable as the effluent may seep underground and contaminate the groundwater and soil and may also affect its fertility. Moreover, the parameters namely TDS, Chloride, Sulphate, Iron & Total Chromium, with their high values**

as mentioned in the report cannot be brought within the permissible limits by imparting physicochemical treatment, therefore, the industry should install Zero liquid discharge technology (RO system followed by multi effect evaporator) within 4 months and the recovered water (permeate) may be recirculated back into the process and the hazardous sludge may be dried in dyer and after drying, the same may be sent to TSDF, Nimbuan.

2. The recommendation No. I, II, IV, V, VI and VII, mentioned at Page No. 8 of the report are reiterated.

i. PPCB shall continue to make surprise inspection of the area around the industry to ensure that no treated/untreated effluent is discharged into any drain.

ii. The industry shall treat entire scrubbing effluent in Effluent Treatment Plant based on zero liquid discharge (ZLD) technology to be installed.

iii. Since the values of TDS, chloride and sulphate in the analysis results of the effluent sample collected by PPCB in the month of August, 2020 are higher than the permissible limits, therefore, PPCB shall impose an environmental compensation of suitable amount for the damage caused to the environment and the same may be utilized for rejuvenation of quality of environment as per guidelines prescribed by Central Pollution Control Board.

iv. Punjab Pollution Control Board shall collect the stack emission sample from the stack attached to air pollution control device of pickling section within 15 days.

v. PPCB shall carry out groundwater sampling by getting install piezometers within the premises of the industry so as to assess ground water contamination due to continuous application of effluent on land for plantation.

vi. The industry shall remove the HSD fired hot water generated boiler which is lying redundant in its premises within 15 days and submit the compliance to the Board within next 3 days.

6.0 Overall recommendations of the Monitoring Committee.

i. 07 industries as mentioned at point No. 2.1, 2.3, 2.5, 2.6, 2.7, 2.8 and 2.10 visited by the Joint Committee, constituted by the Hon'ble National Green Tribunal, may implement the recommendations made by the Monitoring Committee w.r.t each industry as mentioned at points 2.1.1, 2.3.1, 2.5.1, 2.6.1, 2.7.1, 2.8.1 and 2.10.1 based on the report, observations and recommendations of the Joint Committee in a time bound manner.

ii. 03 industries as mentioned at point No. 2.2, 2.4, and 2,9 visited by the Joint Committee and Monitoring Committee, constituted by the Hon'ble National Green Tribunal, may implement the recommendations made by the Monitoring Committee w.r.t each industry as mentioned at points 2.2.1, 2.4.1 to 2.9.1 based on the report, observations and recommendations of the Joint Committee and Monitoring Committee in a time bound manner.

iii. Punjab Pollution Control Board shall take suitable action under the provisions of Water Act, 1974, and Air Act, 1981, against the industries, wherever since recommendations have been made by the Monitoring Committee.

iv. Punjab Pollution Control Board shall finalize the action against the 4 violating namely M/s Hansa Tubes Pvt. Ltd., Haibatpura Road, Dera Bassi; M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar; M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi, Distt. SAS Nagar and M/s Punjab Chemicals &Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi in a time bound manner.

v. Joint Committee may conduct comprehensive monitoring of ambient air and calculate air quality index of Dera Bassi area along with risks associated. The said air quality index data of the area may be provided within 2 months.

In order to calculate air quality index (AQI) of Dera Bassi area, ambient air quality of the area needs to be analyzed continuously for at least 21 days in two seasons (winter and summer). Punjab Pollution Control Board may also install continuous ambient air quality monitoring system (CAAQMS) in Dera Bassi area to get real time data and Air Quality Index. The stack emissions samples of the industries located in Dera Bassi area within the radius of 2 Km from the residential colonies may be analyzed by reputed third agency.

Installation of two ambient quality monitoring stations in Dera Bassi area is not sufficient to depict the real air quality of ambient in Dera Bassi area. Atleast, 4 ambient air quality stations may be installed at different locations to monitor the ambient air quality. Moreover, for the calculation of air quality index of the area for information of the public of the area, monitoring of ambient air quality is required to be conducted for 21 days which may also be helpful for taking steps by the concerned agencies to improve the air quality of the area.

vi. There is need to carry out surprise inspections / raids on the industries located in the catchment area of Haibatpura Drain and Dhabi Drain by Punjab Pollution Control Board and in case the industries are found discharging untreated / partially treated wastewater, not conforming to the standards, suitable action under the provisions of Water Act, 1974 may be taken in a time bound manner.

Punjab Pollution Control Board may also identify the villages which have significant flow/discharge with high concentration of BOD and COD and department of Rural development & Panchayat be directed to provide treatment facilities to treat the wastewater of the villages in time bound manner so that water quality of the drains may be improved.

vii. Punjab Pollution Control Board may conduct ground water monitoring of ground water sources at 5 different locations for all the parameters as mentioned in IS 10500: 2012 including F.Coli. parameter within 1 month.

viii. Soil samples from plantation areas and agriculture fields, where, the effluent of the industries is utilized may be collected by the Joint team within 1 month and be analyzed for the parameters organic, inorganic and heavy metals

ix. Joint team may conduct detailed survey of area along the drains to check as to whether there is any illegal disposal of Hazardous waste by the industries. The information from the nearby residents may also be taken for dumping of any hazardous waste by any industry in the area because lot of Hazardous waste is generated by the industries.

x. All the rice husk consuming industries should construct proper and effective storage system with high walls and covering sheds for the storage of rice husk ash generated by them.

xi. The vehicles used for transportation of rice husk ash for its final disposal should be covered from all the sides and rice husk ash in wet form may be loaded in the vehicles and water spray system may be used at the places where it is unloaded. If the rice husk ash is dumped in low lying area then it should be disposed off in layered manner with mechanism of spreading of one layer of rice husk ash followed by layer of earth / soil and its full compaction and again second layer of rice husk ash and thereafter a layer of soil and so on. For this purpose, PPCB may prescribed Standard Operating Procedure (SOP) for the safe and environmentally sound management and handling of rice husk ash. At the end the system, proper compaction and development of plantation may be made or these can be converted into useful usages.

xii. Punjab Pollution Control Board shall constitute a Committee to visit the area, where the industries dispose of their rice husk ash and check as to whether proper mechanism is adopted for its compaction and covering with earth while dumping at low lying area and about end use of the closed sites.

xiii. The brick kiln owners may be motivated by Punjab Pollution Control Board to use rice husk ash in their brick kilns for the manufacturing of bricks.

xiv. All the 3 industries(M/S Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil Dera Bassi; M/S Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil Dera Bassi and M/S Rajasthan Liquors Ltd. (Distillery Division), Village Haripur Hinduan, Tehsil Dera Bassi) may get joint R & D studies from a reputed institute for best use of rice husk ash for its usage in other sectors or recovery of useful constituents.

xv. The department of Environment, Govt. of Punjab has prepared an Action Plan for clear air inDera Bassi on 12.2.2019, which has been submitted by Punjab Pollution Control Board to Central Pollution Control Board. In the said Action Plan major sources of air pollution like vehicular emission, road dust, industrial emission, construction and demolition activities and other sources have been identified and contribution of main activities like industrial emissions, road dust and vehicular pollution has been mentioned as 35%, 25% and 20%, respectively. In the said Action Plan, various activities to

control vehicular emission, road dust, burning of garbage and biomass, industrial emissions, construction demolition activities and action to be taken by the various departments in case of severe Air Quality Index (AQI) (401 to 500), very poor AQI (301 to 400), poor AQI (201 to 300) and moderately polluted AQI (101 to 200) occur have been mentioned. The data mentioning the trends in air quality of Dera Bassi during the year 2014 to 2018 has also been reported in the Action Plan.

The Monitoring Committee recommends that all the departments shall implement the various activities mentioned in the Action Planfor mitigation of air pollution of Tehsil Dera Bassi in a time bound manner.

xvi. **The recommendations made by the monitoring committee w.r.t. 3 industries namely M/s KDDL Limited, Vill. Haibatpur, Haibatpur Road, Dera Bassi; M/s Punjab Chemicals & Crop Protection Ltd. (Agro Division), Village Bhankharpur, Dera Bassi and M/s Hansa Tubes (P) Ltd., Habitpur Road, Dera Bassi, SAS Nagar as mentioned at point no. 5 above may be implemented for which Punjab Pollution Control Board shall issue necessary directions to all the industries to comply with the such recommendations in a time bound manner.**

It is further submitted that the Monitoring Committee will submit its next report to the Hon'ble National Green Tribunal regarding compliance made on the recommendations made by the Monitoring Committee and Punjab Pollution Control Board by the concerned industries as per the further directions issued by the Hon'ble National Green Tribunal.

Dr Babu Ram 11.2.2024 Sant Balbir Singh Seechewal S.C Agrawal

Justice Jasbir Singh,
Former Judge Punjab and Haryana High Court and now as Chairman of the Monitoring Committee

Annexure-A

I.	Name & Address of the industry	M/s. SBL Specialty Coating Private Ltd., Haibatpur Road, DeraBassi, Distt. SAS Nagar.
II.	Category/ Scale	Red/ Small
III.	Type	Manufacturing of Lacquers and Paint Resins
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: PBIP/PPCB/2018/CTO(w) – 43 dated 19/03/2018 having validity upto 30/06/2021. Under the Air (Prevention & Control of Pollution) Act, 1981: PBIP/PPCB/20'l8/CTO(A) - 43 dated 19/03/2018 having validity upto 30/06/2021.
V.	Products Manufactured	Lacquer @ 9.00 KLD, Primer @ 1.50 KLD, Thinner, Putty and Paint Remover @ 4.50 KLD
VI.	Raw Material Used	Resin and Monomers @ 4.30 TPD, Solvent @ 10.50 TPD, Pigments @ 0.55 TPD, Extender and Additives @ 0.65 TPD.
VII.	Water Consumption	Tubewell @ 14 KLD
VIII.	Fuel Consumption	HSD (in 125 kVA DG Set 80-100 ltr/month, in 400 kVA DG Set @ 450-500 ltr/ month and in thermopack @ 1900- 2000 ltr/ month)
IX.	Brief Process Flow Chart	Raw material → Mixing → Online QC → Packing & labeling → SQA →Dispatch.

X.	**Observations**
	1. The industry was in operation. 2. The transport of solvents/ other raw materials from batch storage tanks within the processing shed to the mixer/ blending machines and the same is being done manually. Further, the transfer of product to the final storage tanks is also being done manually. 3. The emission of VOC due to open handling of raw materials and finished product was felt within operation area and outside the covered shed of operation. However, the industry has provided exhaust on the roof of the process shed for ventilation. This industrial ventilationcould emanate the VOCs into the vicinity, causing obnoxious smell.
XI.	**Effluent Treatment Status**
	The industry does not generate trade effluent from its process. The 'Cleaning In Place' (CIP) of the mixers, grinders & vessels after manufacturing of a particular product mix is carried out with solvents and the spent solvents are used as raw material whilst manufacturing of the same product.
XII.	**Emission Control Status**
	The industry has installed 02 no. HSD fired DG sets of capacity 125 kVA and 400 kVA which are equipped with canopy and stack of adequate height. Further, the industry has installed HSD fired thermopack of capacity 2 lakh kcal/ hour, which is equipped with stack of adequate height.
XIII.	**Discussion w.r.t. Analysis Results of Effluent/ Emissions**
	Emission sample was collected after APCD of the spray paint booth stackand thesample analysis revealed concentration of PM 25 mg/ Nm^3, which is within the stipulated limits. The HSD fired thermopack [1900- 2000 ltr/ month of fuel consumption] was not in operation during visit, therefore, stack emission sample of the same could not be collected.

XIV.	**Past Compliance and Legal Status**
	Past Compliance: The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions: 1. The industry has been approved by the Board from pollution angle and the industry shall obtain the statutory clearances/ permissions from all other concerned departments. 2. The industry shall neither install any new machinery for in-house manufacturing of resins nor increase the in-house manufacturing of resins beyond the existing consented quantity in any circumstances and shall procure additional quantity of resins for its expansion project from the market only. 3. The industry shall make adequate and appropriate arrangements for control of process emission, so as to ensure that there are no dust emissions/ nuisance to the workers in the process shed. 4. The industry shall maintain and operate its air pollution control devices in scientific manner so as to achieve the standards prescribed by the Punjab Pollution Control Board/ CPCB/ MoEF for all the times. 5. The industry shall not consume any other fuel except HSD for Thermopack and D.G. sets for burning purposes without the prior written permission of the Board. 6. The industry shall not generate any trade effluent and domestic effluent shall be discharged onto land for plantation after proper treatment. 7. The industry shall obtain necessary permission from CGWA for abstraction of ground water through existing tubewells

	and shall submit the same to this office. 8. The industry shall regularly operate and maintain its sewage treatment plant to ensure that the treated effluent conforms to the standards laid down by the Board for such type of industry discharges. 9. The industry will maintain its plantation area scientifically so as to ensure that no stagnation occurs at any time due to the discharge of treated trade effluent in the said area. ***Legal Status:*** As per the record of the SPCB,no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.
XV.	**Recommendations**
	1. The industry is to install closed system for the transfer of solvents from the storage tanks to the mixing/ blending vessels and further transfer of the product to the final storage tanks, to reduce the fugitive emissions letting to environment. 2. In order to mitigate the VOC emission generating and escaping the control mechanisms, an appropriately designed green belt needs to be developed. A scheme in consultation with ForestDepartment be developed and put in place by the industry.

Annexure-B

I.	Name & Address of the industry	M/s KDDL Limited, Haibatpur Road, Derabassi, SAS Nagar
II.	Category/ Scale	Red/ Large
III.	Type	Electroplating Operations
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2020/12206959 dated 21/04/2020 having validity upto 31/03/2024. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2020/12206857 dated 21/04/2020 having validity upto 31/03/2024.
V.	Products Manufactured	Watch Dials @ 6000000 Number/Year
VI.	Raw Material Used	KCN (Potasiumcynide), NaCN (Sodium Cynide), KAuCN (Gold PotasiumCynide), KAgCN (Silver PotasiumCynide), NiSO4 (Nickel Sulphate), Acetone Cyclohexnone, Mibk, Xylene, Butyl Acetate, Brass Metal, Lacquers, Printing Ink, Packing Paper, Boric Acid, Ammoniumn Chloride, Potassium Bromide, Ammonium Sulphate, Zinc Sulphate, Di-Sodium Hydrogen Ortho, Tri Sodium Orthoph, Ammonia Solution, Sodium Hydroxide (Caustic Soda), Fuel (Diesel)
VII.	Water Consumption	Tubewell @ 70 KLD

VIII.	Fuel Consumption	HSD (in 02 no. DG set of capacity 380KVA) @ 400 ltr/ day
IX.	Brief Process Flow Chart	Raw material → Blanking → Punching → Feet Sticking → Electroplating → Lacquering → Printing →Apllique Fixing → Packing.
X.	**Observations**	
	1. The industry was in operation and was engaged in the manufacturing of watch dials. 2. The industry generates trade effluent from the process of nickel, silver and gold plating for which industry has installed an ETP based on physio-chemical technology and the same was in operation at the time of visit. The ETP has from designed and put in place for operation having duly considered the requirement of handling chemicals like cyanide, heavy metals,phosphates and sulphates etc. and has also provides electro-magnetic flow (EMF) meter. 3. The industry has installed STP for the treatment of domestic effluent and the same was also in operation. The treated waste water from both STP and ETP was being used on to land for plantation developed within the premises. The industry has provided network of pipeline for proper distribution of treated waste water. 4. The industry is maintaining the record of consumption of water, chemicals used in the ETP, operation of the ETP and effluent discharged by the industry. 5. The industry has installed 02 nos. DG sets of capacities 380 kVA each which are equipped with canopies and stack of adequate heights.	
XI.	**Effluent Treatment Status**	
	The industry generates trade effluent from the process of nickel, silver and gold plating for which industry has installed ETP based on physio-chemical treatment and the same was in operation at the time of visit. Further, the industry has installed STP for the treatment of domestic effluent and the same was also in operation. The treated waste water from both STP and ETP was being used on	

	to land for plantation developed within the premises. The industry has provided network of pipeline for proper distribution of treated waste water.
XII.	**Emission Control Status**
	The industry has 02 no. process emission stack i.e. one in the buffing sections with which bag filter house (small) has been attached as APCD, and one with the lacquering section with which water scrubbing system has been provided as APCD.
XIII.	**Discussion w.r.t. Analysis Results of Effluents/ Emissions**
	Effluent Analysis: During visit, sample was collected from the outlet of ETP and got analyzed from SPCB laboratory. The analysis results are as under:

Sr. no.	Parameters	Outlet of ETP
1.	pH	8.5
2.	Chemical Oxygen Demand mg/l	212
3.	Total Suspended Solids mg/l	12
4.	Total Dissolved Solid mg/l	1555
5.	*Oil & Grease mg/l	BDL
6.	*Phosphate mg/l	BDL
7.	*Sulphate mg/l	198
8.	*Cyanide mg/l	BDL
9.	Nickel mg/l	0.48
10.	Zinc mg/l	BDL
11.	*Silver mg/l	BDL

The analytical results reveal that the concentration of prescribed parameters is found to be within the permissible limit for discharge onto land.

Emission Analysis:

During visit, one sample was collected from the stack attached to the APCD of the buffing section and got analyzed from SPCB

laboratory. The lacquering section was not in operation during visit, therefore, stack emission sample of the same could not be collected. The analysis results are as under:

Point of Sample Collection	Parameter	Results
Stack after APCD of Buffering Section	Particulate Matter	34 mg/NM^3

The analysis results reveal that the concentration of the particulate matter in the emissions is within the permissible limit.

XIV. **Past Compliance and Legal Status**

Past Compliance:

The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions:

1. The industry shall ensure that no wastewater from its industrial premises / plantation area or otherwise find its way into storm water drain(s) directly or indirectly under any circumstances.
2. . The industry shall comply with the guidelines issued by the CGWA from time to time.
3. The industry shall operate the ETP & STP effectively and maintain record regarding the operation of the ETP & STP on regular basis and make it available to the visiting officer to the Board during the conduct of visit.
4. The industry shall explore the possibility of adoption of 'Zero Liquid Discharge' (ZLD) methodology by reutilization of its effluent treated through the ETP in the plant/ processes.
5. The industry shall ensure that the sample collection facility attached with the stacks should be as per guidelines

	mentioned in EPR-3 norms prescribed by the CPCB. 6. The industry shall not consume any fuel for burning purpose except HSD for D.G. Set without the prior written permission of the Board. ***Legal Status:*** As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.
XV.	**Recommendations**
	1. The industry is to operate and maintain its ETP, STP and APCD diligently and maintain record regarding their operation on regular basis. Further, the industry is required to submit the same record to the SPCB on monthly basis. 2. The industry shouldadopt the 'Zero Liquid Discharge' (ZLD) methodology by reutilization of its effluent treated through the ETP in the plant/ processes and submit a detailed project report with time lines for conversion to ZLD methodology to the SPCB.

Annexure-C

I.	Name & Address of the industry	M/s Crop Care Pesticides (India) Pvt. Ltd., Haibatpur Road, Derabassi, SAS Nagar.
II.	Category/ Scale	Orange/ Small
III.	Type	Formulation of Pesticides/ Insecticides/ Fungicides/ Herbicides/ Weedicides using chemical/ Small
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2016/4584900 dated 10/11/2016 having validity upto 30/09/2020. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2016/4584873 dated 10/11/2016 having validity upto 30/09/2020.
V.	Products Manufactured (as per consent)	1. Emulsol Concentrate Pesticides Formulation @ 350 KL/Year 2. Soluble Liquid Pesticides Formulation @ 50 KL/Year 3. Water Dispersible Powder @200 MT/Year
VI.	Raw Material Used (as per consent)	1. Technical pesticides for Emulsol Concentrate formulation @ 175 MT/Year 2. Solvents @ 147 MT/Year 3. Emulsifiers (Anionic and non-anionic) @ 28 MT/Year 4. Technical pesticides for Soluble liquid formulations @ 25 MT/Year 5. Cyclohexanone @ 25 MT/Year 6. Isoproturon Technical @ 160 MT/Year 7. Dilutant @ 20 MT/Year 8. Surfactant @ 20 MT/Year

VII.	Water Consumption	Tubewell @ 1.5 KLD
VIII.	Fuel Consumption	HSD (in D.G. set of capacity 62 KVA) @ 10 ltr/day
IX.	Brief Process Flow Chart	**Liquid Pesticide Formulation** Raw material →Weighting of Ingredients → charging of ingredients for mixing in a closed Vessel equipped with agitator through transfer pump →Mixing of ingredients for uniformity in closed vessel → checking of parameter → transfer in storage tank → Filling of required size in containers through filling machine → capping and sealing → stamping → packing in corrugated box → Marketing. **Powder Pesticide Formulation** Raw material→ Premixing of inputs → Grinding → Post mixing of grinded material → weighting in filling machine → Packing → Marketing.
X.	**Observations**	
	1. The industry was in operation during visit. The industry was engaged in the formulation of pesticides. 2. The industry has installed two no. mixing tanks of capacity 2 Kl and 5 KL for mixing of soluble pesticides with emulsol concentrate and soluble liquid. The mixed liquid is then stored in a tank of 5 KLD capacity. The industry has provided one no. Automatic Filling Machine for the packing of the liquid pesticide. 3. The industry has also installed one mixing vessel of 2 KL capacity for the production of the weedicides. The industry has installed another Automatic Filling Machine for packing of weedicide liquid. The industry has also installed one no. surfactant (allied part of the weedicide) packing machine, from which 200 ml packets are produced. 4. The industry has also provided shrinking wrapping machine, two bend sealers and two induction sealers. 5. No trade effluent is generated from the process. Although, the domestic effluent generated from the industry is discharged onto land for plantation after passing through septic tank. 6. Apart from above, the industry has installed one ACM (Air	

57

	Clarifying Mill), which is used for grinding of the solid pesticides, which will be provided with bag filter house as APCD and a stack of height about 32 feet for the discharge of the emissions from the shed. 7. The industry has also provided two no. blenders for uniform mixing of powders of different chemicals. 8. The industry is storing its solvents in underground tanks installed in an earmarked area within its premises. The vent of the underground tanks has not been connected to any scrubbing medium/ VOC absorption media to contain the VOC emissions emanating from the storage of these solvents. 9. The industry has not provided any specified storage area for the storage of its chemicals which were found lying in open area in HDPE drums.
XI.	**Effluent Treatment Status**
	The industry does not generate trade effluent from its process. The CIP of the mixers, grinders & vessels after manufacturing of a particular product mix is carried out with solvents and the spent solvents are used as raw material whilst manufacturing of the same product.
XII.	**Emission Control Status**
	The industry has installed one ACM (Air Clarifying Mill), which is used for grinding of the solid pesticides, which has been equipped with bag filter house as APCD connected to a stack of height about 32 feet for the discharge of the emissions from the shed.
XIII.	**Discussion w.r.t. Analysis Results of Effluent/ Emissions**
	The ACM machine was not in operation during visit, therefore, the stack emission sample was not collected.
XIV.	**Past Compliance and Legal Status**
	Past Compliance: The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the one specific conditionsthat 'The industry shall not generate any trade effluent and shall not carry out any expansion without the

	prior permission of the Board.'. ***Legal Status:*** As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.
XV.	**Recommendations**
	1. The industry is required to connect the vents of the underground solvent storage tanks with scrubbing medium / VOC absorption media,to reduce the fugitive emissions VOCs into the atmosphere. 2. The industry shall provide separate storage space for the storage of its chemicals presently lying packed in HDPE drums in open area.

Annexure-D

I.	Name & Address of the industry	M/s Hansa Tubes Pvt. Ltd., Haibatpur Road, Derabassi.
II.	Category/ Scale	Red/ Small
III.	Type	Other
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2019/10867707 dated 30/12/2019 having validity upto30/06/2024. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2019/11562365 dated 30/12/2019 having validity upto30/06/2024.
V.	Products Manufactured	CR Tube @ 30 Metric Tonnes/Day CR strip @ 78 Metric Tonnes/Day
VI.	Raw Material Used	HR COIL @ 80 Metric Tonnes/Day HCL @ 2 Metric Tonnes/Day LIME @ .0010 Metric Tonnes/Day
VII.	Water Consumption	Tubewell @ 4.0 KLD
VIII.	Fuel Consumption	HSD (in D.G. set of capacity 750KVA) @ 70ltr/day C-9 (in Annealing furnace of capacity 90 TPD) @ 1.60 TPD C-9 (in Annealing furnace of capacity 30 TPD) @ 0.55 TPD
IX.	Brief Process Flow Chart	Raw Material → Pickling → Annealing/ Rolling →Slitting or tube making
X.	**Observations**	

	1. The industry was in operation during visit. 2. The industry is recirculating the purged scrubbing liquid of the wet scrubber provided with the pickling section in the acid tank of the pickling section, as and when it becomes acidic in nature. 3. The industry has developed plantation area as per karnal technology in an area of 0.25 acre, which is located adjustment to the ETP and at a distance of approx. 200-300 mtr. from the residential society M/s ATS Lifestyle Golf Meadows wherein the residence of the complainant Sh. Suhail Durani (in the matter of OA no. 101 of 2020) is located.
XI.	**Effluent Treatment Status**
	The industry has provided an ETP based on physico-chemical treatment for treatment of the trade effluent to be generated from HCl pickling plant. The same was in operation during visit. The industry is discharging its domestic effluent into MC sewer after passing through septic tank, which further leads to terminal STP operated and maintained by the MC authorities.
XII.	**Emission Control Status**
	1. The industry has installed 02 no. annealing furnaces of capacity 90 Ton and 30 ton, in which C-9 is being used as fuel and is having stacks of adequate heights. Out of these two furnaces, generally one furnace of capacity 90 ton is being operated, however, the other furnace of capacity 30 Ton is being kept as standby arrangements. 2. The industry has provided pickling unit, in which HCl is used for pickling of CR strip. The pickling unit is completely covered and the fumes are scrubbed in the scrubber. The fumes are scrubbed in the two wet scrubber installed for containing the concentration of various pollutants. 3. The industry has installed 01 no. of DG. Set of capacity 750

KVA, which is equipped with canopy and a stack of adequate height.

XIII. **Discussion w.r.t. Analysis Results of Effluent/ Emissions**

Effluent Analysis:

The SPCB had already collected sample from the outlet of ETP leading to plantation area on 21/08/2020 and got analyzed from SPCB laboratory. The analysis results are as under:

Sr. no.	Parameters	Outlet of ETP
1.	pH	8.8
2.	Chemical Oxygen Demand mg/l	62
3.	Bio-Chemical Oxygen Demand mg/l	15
4.	Total Suspended Solids mg/l	24
5.	Total Dissolved Solid mg/l	3990
6.	*Oil & Grease mg/l	BDL
7.	*Chloride mg/l	2050
8.	*Sulphate mg/l	590
9.	*Iron mg/l	1.88
10.	Zinc mg/l	BDL

The analysis results reveal that the concentration of the Total Dissolved Solids, Chloride and Sulphate parameters is on a higher side.

Further, on the date of visit the ETP was found fully defunct.

Emission Analysis:

Further, the SPCB had already collected samples of stack emission from the stacks attached to annealing furnaces & pickling section and got it analyzed from SPCB laboratory. The analysis results are as under:

Point of sample collection	Parameter	Results
From Port hole on	Particulate Matter	45 mg/Nm^3

56

	stack of annealing furnace 90 TPH		
	From Port hole on stack of annealing furnace 30 TPH	Particulate Matter	61 mg/Nm^3
	From Port hole on stack of pickling section after APCD	Acid mist (Hcl)	ND
	The analysis results reveal that the concentration of emission from the stackswas within the permissible limit for emanation into the atmosphere.		
XIV.	**Past Compliance and Legal Status**		
	Past Compliance: The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions: 1. The industry shall ensure that no waste water from its industrial premises/ plantation area or otherwise find its way into storm water drain(s)/ public sewer(s), directly or indirectly under any circumstances. 2. The industry shall comply with the guidelines issued by the CGWA from time to time. 3. The industry shall re-circulate the entire scrubbing water &shall not discharge the same anywhere and shall treat the same in the ETP installed within its premises. 4. The industry shall be bound to comply with the laws & bye-laws of the Master Plan prepared by the Department of Town and Country Planning, Punjab for DeraBassi. 5. The industry shall provide cascading between the rinsing water tanks in the phosphating section to minimize the consumption of water for rinsing purpose.		

	6. The industry shall ensure that the sample collection facility attached with the stacks should be as per guidelines mentioned in EPR-3 norms prescribed by the CPCB. 7. The industry shall get its stack emission sample of the pickling section analyzed from the Board lab, within one month from the stack attached to the APCD and thereafter shall submit the analysis report of the Board within 10 days. 8. The industry shall not consume any fuel for burning purpose except C-9 for the furnaces and HSD for DG set without the prior written permission of the Board. 9. The industry shall remove the HSD fired hot water generated boiler which is lying redundant in its premises, within 15 days and submitted compliance to the Board within 3 days, thereafter. ***Legal Status:*** As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.SPCB is to issue closure direction for the want of the ETP found nonfunctional and dismantled.
XV.	**Recommendations**
	1. The industry is required to upgrade its ETP to achieve the prescribed discharge standards or explore the possibility of achieving zero liquid discharge 'ZLD' from its premises. 2. The industry shall carry out the ground water monitoring of its premises and in the vicinity of its premises from a State Approved Laboratory, as the industry is not meeting the discharge norms.

Annexure-E

I.	Name & Address of the industry	M/s Samrat Plywood Ltd., Haibatpur Road, Derabassi.
II.	Category/ Scale	Red/ Small
III.	Type	Other
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2018/6752295 dated 09/01/2018 having validity upto 30/06/2022. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Fresh/SAS/2018/6752408 dated 09/01/2018 having validity upto 30/06/2022.
V.	Products Manufactured	Plywood @ 2973 sqm/day
VI.	Raw Material Used	Timer core Veneer @ 40 T/day, Formaldehyde @ 2.3 T/day, Phenol @ 1.1 T/day, Face Veneer @ 9500 Sqm/day
VII.	Water Consumption	Tubewell @ 3.0KLD
VIII.	Fuel Consumption	HSD in D.G. set of capacity 162 & 125 KVA @25ltr/day& 20 ltr/day respectively and wood waste @ 4.4 TPD in 02 no. thermic fluid heaters of capacity 15 Kcal/Hour.
IX.	Brief Process Flow Chart	Raw material → peeling → drying → pressing → assembly on table → pressing → cutting → sanding → finishing.
X.	**Observations**	
	The industry was not in operation during visit. The representative of the unit informed that the industry has not been operated since March, 2020 after the nationwide lockdown imposed amid the COVID-19	

	pandemic by the Govt. of India. However, the repair/maintenance of machines etc. was being carried out during visit.
XI.	**Effluent Treatment Status**
	The industry is generating about 100 liter/month of wastewater from washing of vessels used for manufacturing of resin and the industry has provided a tank made of MS having capacity 3.25'x2.5'x2.5' which is provided with steam line from the boiler and also two electrodes are inserted in this tank to enhance the evaporation rate, as such, the sampling of the trade effluent could not be carried out as the industry was not in operation.
XII.	**Emission Control Status**
	The industry has installed two nos. wood fired thermic fluid heater having capacity 10 lac kcal/hr and 15 lac kcal/hr. The industry has provided wet scrubber as APCD to contain the concentration of particulate matter within the prescribed standards. During visit, both the thermic fluid heaters were not in operation. The physical condition of the thermic fluid heater having capacity 10 lac kcal/hr indicated that the industry is not operating this heater.
XIII.	**Discussion w.r.t. Analysis Results of Effluent/ Emissions**
	Sampling could not be carried out as the industry was not in operation. Further, the SPCB had later collected samples of stack emission from the stacks on 26.09.2020 and got it analyzed from SPCB laboratory. The analysis results are as under:

Point of Sample Collection	**Parameter**	**Results**	**Prescribed Standards**
From Port Hole on stack after APCD	Particulate matter	302 mg/Nm^3 at 12% CO_2	800 mg/Nm^3 at 12% CO_2

The analysis results reveal that the concentration of emission from the stack was within the permissible limit for emanation into the atmosphere.

XIV.	**Past Compliance and Legal Status**
	Past Compliance:
	The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the specific conditions that:
	1. The industry shall ensure the provisions contained in the guidelines / criteria for abstraction of ground water, notified by the Central Ground Water Authority (CGWA) from time to time and shall obtain permission from authorities concerned in this regard within 6 months.
	2. Regarding use of rainwater harvesting system, the industry shall ensure the compliance of following conditions:
	a. Only roof top rainwater shall be discharged into rainwater harvesting system.
	b. No surface run off or any other rainwater flowing in lawns / garden be allowed to enter into the rain water harvesting system.
	c. All the pipes provided for the recharging system should be visible and properly coloured with light blue colour.
	3. The industry shall ensure the compliance of the Solid Waste Management Rules, 2016 as well as the Construction and Demolition Rules, 2016.
	4. The industry shall ensure that no water pollution problem / public nuisance / odour problem is created in the area due to discharge of effluent from its premises.
	5. The industry shall ensure the compliance of Bye Laws / Zoning Regulations of Master Plan of the area notified / to be notified by the authorities concerned.
	6. The industry shall ensure the compliance of the Solid Waste Management Rules, 2016 as well as the Construction and Demolition Rules, 2016.
	7. The industry shall ensure that no air pollution problem / public

	nuisance / odour problem is created in the area due to discharge of emissions from its premises. ***Legal Status:*** As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.
XV.	**Recommendations**
	The industry shall not start its operation without getting the environmental monitoring of its pollution control devices carried out by SPCB.

Annexure-F

I.	Name & Address of the industry	M/s Contour Automotive Products Ltd., Village Bhankarpur, Mubarikpur Road, Derabassi.
II.	Category/ Scale	Red/ Medium
III.	Type	1066-Ferrous and Non-ferrous metal extraction involving different furnaces through melting, refining, reprocessing, casting and alloy making-Secondary production of Ferrous and Non-ferrous metals more than 1 MT/hr production.
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2019/9448808 dated 12/08/2019 having validity upto 30/09/2020. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2019/9448771 dated 12/08/2019 having validity upto 30/09/2020.
V.	Products Manufactured	Iron Casting @ 14 MTD
VI.	Raw Material Used	Sand @ 5.5 MTD, Scrap @ 9 MTD, Pig Iron @ 4.8 MTD, Bentonite Powder @ 1.0 MTD, Ferro Alloys @ 0.3 MTD, P.F. Resin @ 0.080 MTD & Catalyst @ 0.040 MTD
VII.	Water Consumption	Tubewell @ 3.0 KLD
VIII.	Fuel Consumption	HSD (in D.G. set of capacity 500 KVA) @ 45 ltr/day.

IX.	Brief Process Flow Chart	Preparation of Core & Mould→ Melting of Scrap → Pouring in Mould → Cooling of Castings →Shake-Out →Finishing of Casting (Shot Blasting & Fettling) → Dip Painting on Casting → Dispatch.
X.	**Observations**	
	1. The industry was in operation during visit. 2. The induction furnace of capacity 1 Ton/ heat as well as the APCD (installed with it) was in operation. 3. There is generation of fugitive emissions whilst pouring of molten metal into the mould, shake-out of mould and ambient cooling of castingscausing a lot dust pollution.	
XI.	**Effluent Treatment Status**	
	The industry does not generate any trade effluent from its process. However, the domestic effluent from the premises is treated in a skid mounted STP of capacity 5 KLD based on MBBR technology. The treated domestic effluent is utilized in the sand modeling process (mould plant).	
XII.	**Emission Control Status**	
	1. The industry has installed one no. induction furnace of capacity 1 Ton/ Heat, which is equipped with venturi scrubber as APCD along with stack of approx. 15 m height. 2. Further, the industry has one stack attached to sand plant, which is connected to bag filter house as APCD along with stack of approx. 15 m height. 3. The industry has 2 no. shot blasting machines equipped with separate bag filter house as APCD with stack of height 3 mtr ARL.	
XIII.	**Discussion w.r.t. Analysis Results of Effluent/ Emissions**	
	<u>Emissions Sample:</u> Further, the SPCB had already collected samples of stack emission from the stacks attached to induction furnace & sand	

plant on 21.08.2020 and got it analyzed from SPCB laboratory. The analysis results are as under:

Point of Sample Collection	Parameter	Results
From Port hole on stack after APCD of the induction furnace	Particular Matter	51 mg/Nm^3
From Port hole on stack after APCD of the sand plant	Particular Matter	89 mg/Nm^3

The analysis results reveal that the concentration of emission from the stack was within the permissible limit for emanation into the atmosphere.

XIV. **Past Compliance and Legal Status**

Past Compliance:

The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions:

1. The industry shall operate only its existing one induction furnace of capacity 1 Ton/heat to produce iron castings @ 14 MT/day.
2. The industry shall not operate its second induction furnace of capacity 500 Kg/heat without obtaining the consent to establish and consent to operate of the Board.
3. The industry shall obtain the authorization of the Board as required under the provisions of Hazardous & other Waste (Management & Transboundary Movement) Rules, 2016.
4. The industry will not discharge its untreated/ treated effluents into any River/Drain/Choe etc., directly/ indirectly, in any circumstances.

Legal Compliance:

As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.

XV.	**Recommendations**
	Apart from the point sources of air pollution i.e. induction furnace, sand regeneration plant etc. in the industry; fugitive emissions are generated at various stages i.e. pouring of molten metal, cooling, shake-out etc. which could not be eradicated but minimized by adopting good practice measures. Further, the industry could explore the Best Available Technology to capture the fugitive emissions and treat them before emanating it into the atmosphere.

Annexure-G

I.	Name & Address of the industry	M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil DeraBassi, Distt. SAS Nagar.
II.	Category/ Scale	Red/ Large
III.	Type	Drugs and Pharmaceuticals
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2020/12567782 dated 27/10/2020having validity upto31.12.2020. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2020/12568040 dated 27.10.2020 having validity upto 31.12.2020
V.	Products Manufactured	1. Menthol Crystal @ 16.6 Metric Tonnes/Day 2. Generation of power (power plant) @ 6 Metric Tonnes/Day 3. Menthol Flakes@ 6.6 Metric Tonnes/Day 4. Menthol liquid/powder@ 16.6 Metric Tonnes/Day 5. CefiximeTrihydrate @ 1.76800 Metric Tonnes/Day 6. Cefuroxime Axetil (Amorphou s) @ 1.65000 Metric Tonnes/Day 7. CefpodoximeProxetil @ 0.00300 Metric Tonnes/Day 8. CefditorenPivoxil @ 0.00350 Metric Tonnes/Day 9. Cefdinir @ 0.03600 Metric Tonnes/Day 10. Ceftriaxone sodium @0.83700 Metric Tonnes/Day 11. Cefotaxime sodium @0.44200 Metric Tonnes/Day 12. Cefepime Injection @ 0.05770 Metric Tonnes/Day 13. Cefuroxime sodium@0. 01603Metric Tonnes/Day 14. Cephalothin sodium@0.02404Metric Tonnes/Day 15. Cefoxitin sodium@0.00005Metric Tonnes/Day 16. Cefazolin sodium@0.00321Metric Tonnes/Day 17. Cefprozil@0.00052Metric Tonnes/Day 18. Ceftiofur@0.00003Metric Tonnes/Day 19. Ceftaroline@0.00002Metric Tonnes/Day

		20. Metformin HCL@0.07000Metric Tonnes/Day 21. Cefcapine Pivoxil@0.00002Metric Tonnes/Day 22. Sodium Carbonate @ 0.00200 Metric Tonnes/Day 23. L- Arginine@ 0.00260 Metric Tonnes/Day 24. Cefuroxime Sodium @ 0.01603 Metric Tonnes/Day 25. CefcapinePivoxil @ 0.00002 Metric Tonnes/Day.
VI.	Raw Material Used	1. 7-ACA @ 0.00280 Metric Tonnes/Day 2. 7-APRA @ 0.00040 Metric Tonnes/Day 3. 7-ATCA @0.00210 Metric Tonnes/Day 4. 7-AVCA @0.90664 Metric Tonnes/Day 5. Acetic acid @ 0.04834 Metric Tonnes/Day 6. Acetone @ 0.39122 Metric Tonnes/Day 7. Activated carbon @ 0.00340 Metric Tonnes/Day 8. Ammonia @ 0.00187 Metric Tonnes/Day 9. Acetonitrile @ 0.06786 Metric Tonnes/Day 10. AEB @ 0.59400 Metric Tonnes/Day 11. Ammonium chloride @ 0.01764 Metric Tonnes/Day 12. Anisole @ 0.00008 Metric Tonnes/Day 13. BF3 @ 0.00167 Metric Tonnes/Day 14. Bislylacetamide @ 0.00003 Metric Tonnes/Day 15. Butyl acetate @ 0.09477 Metric Tonnes/Day 16. CAEM @ 0.3090 Metric Tonnes/Day 17. Cefazolin sodium NS @ 0.00357 Metric Tonnes/Day 18. Cefditoren sodium @ 0.00398 Metric Tonnes/Day 19. Cefepime HCL (NS) @ 0.06152 Metric Tonnes/Day 20. Cefotoxime acid @ 0.4429 Metric Tonnes/Day 21. Cefoxitin sodium NS @0.000006 Metric Tonnes/Day 22. Ceftaroline (NS) @ 0.00003 Metric Tonnes/Day 23. Ceftiofur sodium NS @ 0.00003 Metric Tonnes/Day 24. Ceftriaxone sodiumNS @1.10874 Metric Tonnes/Day 25. Cefuroxime acid @ 1.54457 Metric Tonnes/Day 26. Cefuroxime axeil crystalline @ 1.21500 Metric Tonnes/Day 27. Cefuroxime hydroxide @ 1.45000 Metric Tonnes/Day 28. cephalothin acid @ 0.02313 Metric Tonnes/Day 29. Chlora compound @ 0.00002 Metric Tonnes/Day 30. CPDA @ 0.0056 Metric Tonnes/Day 31. CSI @ 0.040602 Metric Tonnes/Day 32. CYCLOHEXANE @ 0.08250 Metric Tonnes/Day 33. D-7-ACA@ 0.57605 Metric Tonnes/Day 34. DCDA @ 0.03717 Metric Tonnes/Day 35. Dimethlyacetamide @ 0.17145 Metric Tonnes/Day

		36. Dimethyl amine @ 0.03675 Metric Tonnes/Day 37. DMF @ 0.08529 Metric Tonnes/Day 38. EDTA @ 0.01826 Metric Tonnes/Day 39. Enjyme @ 0.08775 Metric Tonnes/Day 40. Ethyl acetate @ 0.35124 Metric Tonnes/Day 41. Formaldehyde @ 0.33915 Metric Tonnes/Day 42. GCLE @ 2.43290 Metric Tonnes/Day 43. GVNE @ 1.99368 Metric Tonnes/Day 44. HYDRO@ 0.00004 Metric Tonnes/Day 45. MIBK @ 0.00952 Metric Tonnes/Day 46. MICA ester @ 0.99980 Metric Tonnes/Day 47. HCL @ 1.13450 Metric Tonnes/Day 48. Iodomethylpivalate @ 0.00119 Metric Tonnes/Day 49. IPA@ 0.00005 Metric Tonnes/Day 50. L-Arginine @ 0.00271 Metric Tonnes/Day 51. MAEM @ 0.00383 Metric Tonnes/Day 52. Methyl sulfonyl chloride @0.00001 Metric Tonnes/Day 53. Methanol@ 0.19472 Metric Tonnes/Day 54. MDC @ 0.44298 Metric Tonnes/Day 55. MSA@ 0.00028 Metric Tonnes/Day 56. Dane salt @ 0.00058 Metric Tonnes/Day 57. Phenol @ 0.09332 Metric Tonnes/Day 58. Phosphoric acid@ 0.00001 Metric Tonnes/Day 59. PCL5@ 0.55965 Metric Tonnes/Day 60. Pivaloyl chloride @ 0.00023 Metric Tonnes/Day 61. Sodium bromide@ 0.11447 Metric Tonnes/Day 62. Sodium carbonate @ 0.68276 Metric Tonnes/Day 63. Potassium acetate @ 0.05364 Metric Tonnes/Day 64. Potassium carbonate @ 0.02124 Metric Tonnes/Day 65. Sodium carbonate @ 0.68276 Metric Tonnes/Day 66. sodium bicarbonate @ 0.72704 Metric Tonnes/Day 67. Potassium hydrogen phosphate @0.00046 Metric Tonnes/Day 68. SMIA @ 0.49322 Metric Tonnes/Day 69. Sodium chloride @ 0.63006 Metric Tonnes/Day 70. Sodium hydroxide @ 0.79397 Metric Tonnes/Day, 71. Sodium iodide @ 0.00031 Metric Tonnes/Day 72. SMBS @ 0.05800 Metric Tonnes/Day 73. Stearic acid@ 0.00118 Metric Tonnes/Day 74. Sodium thiosulphate @ 0.00026 Metric Tonnes/Day 75. STS @ 0.00051 Metric Tonnes/Day 76. TBAB @ 0.00020 Metric Tonnes/Day

		77. TEA @ 0.48943 Metric Tonnes/Day 78. THF @ 0.00657 Metric Tonnes/Day 79. Toulene @ 0.00007 Metric Tonnes/Day 80. TPP@ 0.06640 Metric Tonnes/Day 81. TMG @ 0.00086 Metric Tonnes/Day
VII.	Water Consumption	1015.0 KLD through two no. tubewells within premises.
VIII.	Fuel Consumption	HSD - In D.G. set of capacity 1250 KVA @ 4200 ltr/day, 1000 KVA@ 3840 ltr/day & 1250 KVA @ 4200ltr/day. Furnace Oil - In Incinerator of capacity 4.2 TPH @ 1 TPD and in boiler of capacity 1.5 TPH @ 0.75 TPD. Rice Husk – In two no. boilers of capacity 40 TPH @ 210 TPD each, one boiler of capacity 25 TPH @ 100 TPD
IX.	Brief Process Flow Chart	Various Chemical Reactions.
X.	**Observations**	
	1. The industry was in operation and is engaged in the business of manufacturing of bulk drugs and intermediates. 2. The industry has installed ETP for treatment of lowtotal dissolved solid (LTDS)trade effluent and also installed MEE for the treatment of high total dissolved solid (HTDS) trade effluent. Further, the industry was receiving and treating the trade effluent (HTDS + LTDS) of its sister concern namely M/s Nectar Life Science Unit-I, village Saidpura, Tehsil DeraBassi, Distt. SAS Nagar, for which the Board has already granted the permission to receive and treat the effluent of its Unit-1 through underground pipeline. 3. The industry has installed EMF at MEE feed, MEE condensate, MEE concentrate and Outlet of ETP. The industry is maintaining the record of the said streams. 4. The industry has developed plantation area of about 24 acres in six pockets for the utilization of trade effluent. The plantation area needs improvement. 5. The industry has installed 02 boilers of capacity 40 TPH which are	

	attached with separate cogeneration power plant of capacity 6 MW each. The industry has installed ESPs with each boiler as APCD to contain the concentration of particulate matter within prescribed standards. The industry has also installed boiler of capacity 25 TPH and cyclone followed by wet scrubber has been installed as APCD to contain the concentration of particulate matter within the prescribed standards. In all these three boilers, rice husk is used as fuel and these boilers are attached with FBC furnaces. The industry has also installed FO fired boilers of capacity 1.5 TPH which was not in operation during the visit. 6. The industry generates process emissions (in form of Acid Mist, SO_x, NO_x) during various chemical reactions and has installed 10 nos. alkali scrubbers in the manufacturing area to contain the concentration of process emissions generated from various chemical reactions in the reactors of the process section, within the prescribed standards. 7. The industry has installed 3 nos. DG sets of capacity 02 of 1250 KVA each and 01 of 1000 KVA, which are equipped with canopies and stacks of adequate heights. 8. The industry has recently installed a new ETP & MEE plant of enhanced capacity within its premises. The new ETP of capacity 250 KL (for LTDS effluent) consists of EQ. Tank, Primary Clarifier, Pre-Aeration Tank, Aeration-cum-Clarifier Tank-I, Aeration-cum-Clarifier Tank-II, Post EQ. Tank, Post Clarifier, Tertiary Treatment System (MGF & ACF), Treated Water Collection Tank as components and was found in operational condition. Trial run of the same was under progress. 9. The new MEE of capacity 150 KL having 4 Calendrias (Forced Circulation Type) was also found installed and in operational condition. The representative of the industry informed the new CETP will cater to the effluent of both Unit-I & II and the existing ETP & MEE will be kept as Stand-By arrangement. The industry has also proposal for installation of RO plant for further treatment of the treated

	wastewater from the ETP & its reject will be fed to MEE for treatment & permeate will be utilized in the plant/ process sections.However, the representative of the industry could not give any valid reason for the necessity for installation of the new ETP & MEE. 10. The industry is currently dumping the ash generated from the boilers of capacity 40 TPH, 40 TPH & 25 TPH in the dumping yard adjoining the MEE plant and site where the industry is installing its new ETP. 11. There is a natural drain flowing adjoining this ash dumping yard and it was still found covered with ash particles, which indicated the uninterrupted flow of ash in the adjoining drain with the rainwater. It was informed that the drain carries sewage of nearby villages and connects to Haibatpura Drain which further leads to river Ghaggar. Also, this drain traverses at a distance of 300-500 m from the Haibatpura Road where the residences of complainants in both matters (OA No. 101 of 2020 & 164 of 2020) are located. The representative of the industry informed that the drain had been cleaned once by using JCBs, but the ash has again accumulated over time. Further, it was noted that the industry has not yet provided retaining wall/ structure along the boundary of the ash dumping yard along the drain, to prevent the flow of water mixed with fuel ash into the drain, as per condition of the 'consent to operate' earlier granted to it by the SPCB. Also, the industry has not provided permanent shed of size 1000 sq.m. for the storage of fly ash near the boiler area, as per condition of the 'consent to operate' earlier granted to it by the SPCB. 12. The industry has leveled the dumping yard with stacks of ash and work regarding leveling of the yard with the help of two JCBs was under progress. The industry is using boiler blow-down water for sprinkling on the ash heaps to prevent it from getting air-borne. It is further apprehended that the industry could be sprinkling its treated/ untreated effluent on the ash in the dumping yard and industry may not be directly discharging it effluent into the nearby drain as no

	outlet from the industry was observed in to the said drain or Nallah. However, the subsistence of ash along the banks & in the course of the drain, shows inadvertent discharge of rainwater mixed with ash particles from the ash dumping yard to the drain. Therefore, the industry is required to immediately provide retaining walls/ baffles/ some arrangement to halt the free-flow of rainwater from the ash dumping area to the drain. 13. The industry has installed three no. solvent recovery sections for the recovery of spent solvent generated from its process. It is worth to mention here that the Central Pollution Control Board has issued Standard Operating Procedure (SOP) for the units engaged in recovery of spent solvents vide notification in August, 2019. As such, the SOP is applicable for units engaged utilization of spent solvent including captive utilization and the industry is required to the comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install minimum request facility as delineated in the Standard Operating Procedure issued by the CPCB for recovery of spent solvents. In this regard, it was observed during visit that the industry was not fully complying with the guidelines mentioned in the SOP for recovery of spent solvent like the industry has not install VOC absorption media connected to the vent of condenser, online analyzer for TOC at the vent outlet and had not made connection of vent of all the storage tanks with the condenser unit etc. As such, the industry has not made any progress regarding adoption of the SOP, as per the condition of the 'consent to operate' earlier granted to it by the SPCB. Action against the unit already taken by SPCB in above regard. 14. Further, the industry has installed separate collection tank for the collection of effluent generated from these solvent recovery plants and the same is carried to the ETP for treatment. 15. It was noted that although the industry has provided flow measuring devices at the inlet of ETP and the MEE, but it has no provision for measurement of effluent from each source of effluent generation /

	manufacturing plant(s). The industry is required to install flow measuring devices for measurement of effluent flow from each section to the treatment plant to surmise a clear record of the effluent generated and being treated in the treatment plant.
XI.	**Effluent Treatment Status**
	The industry has installed ETP of capacity 200 KLD for treatment of trade effluent having low COD consisting of collection tank, flash mixer, clariflocculator, aeration-cum-clarifier-I, aeration-cum-clarifier-II, pre-filtration tank, sand filter, carbon filter, sludge drying beds. The HTDS effluent is disposed through MEE of capacity 90 KLD for the treatment of trade effluent of high COD having three calendria (two of falling film type and one is of forced type). The condensate of MEE is again collected in the collection tank of the ETP for further treatment. The concentrate of MEE is incinerated in the incinerator and ash so generated is sent to common TSDF. *It was observed that the industry was under process of installation of an additional ETP and MEE within its premises. The details are mentioned at point X. above.*
XII.	**Emission Control Status**

Sources of Fuel / Process Emissions	**Number**	**Steam Gen./ capacity**	**Type & Qty. of fuel to be consumed**	**Height of stack (m)**	**APCD**
Flue Gas Emissions	1	1.5 TPH	Furnace oil @ 0.75 TPH	35 m AGL	NR
	2	40 TPH (Power Plant)	Rice husk @ 210 TPH in each boiler in FBC furnaces	65 m AGL	ESP with each boiler

			1	25 TPH	Rice husk @ 100 TPH in FBC furnace	42 m AGL	Trima Cyclone followed by bag filter house
		Incinerator	1	4.2 TPH	Furnace oil @ 1 TPH	35 m AGL	Quencher followed by scrubber
		DG set	3	1250 KVA	HSD @ 4200 liter/day	7.5 m ARL	Canopy Provided
				1000 KVA	HSD @ 3840 liter/day	7.5 m ARL	Canopy Provided
				1250 KVA	HSD @ 3840 liter/day	7.5 m ARL	Canopy Provided
		Process Emissions	10	In 10 no. manufacturing Areas	--	3.5 m ARL	Separate Alkali scrubbers provided

XIII. **Discussion w.r.t. Analysis Results of Effluent/ Emissions**

Effluent Analysis:

During visit on 27.08.2020, samples were collected from the outlet of ETP and got analyzed from SPCB laboratory. The analysis results are as under:

Sr. no.	Parameters	Outlet of ETP
1.	pH	7.4
2.	Chemical Oxygen Demand	179

	mg/l	
3.	Bio-Chemical Oxygen Demand mg/l	25
4.	Total Suspended Solids mg/l	23
5.	*Oil & Grease mg/l	BDL
6.	*Phosphate mg/l	1.0
7.	*Sulphate mg/l	BDL
8.	Phenol mg/l	BDL
9.	*Cyanide mg/l	BDL
10.	Total Chrome mg/l	BDL
11.	*Lead as Pb mg/l	BDL
12.	*Mercury as Hg mg/l	BDL
13.	*Arsenic as As mg/l	BDL
14.	*Bioassay	100% Survival of Fish in 100% effluent after 96 hours

The analysis results reveal that the concentration of the various parameters is within the permissible limit for discharges onto land for plantation purpose.

Emission Analysis:

During visit on 27.08.2020, samples were collected from the stacks attached to various point sources of Air Pollution and got it analyzed from SPCB laboratory. The analysis results are as under:

Point of Sample Collection	Parameter	Results
Port hole on stack after APCD of 40 TPH boiler	Particulate Matter	63 mg/Nm^3 at 12% CO_2
Port hole on stack after APCD of 40 TPH boiler	Particulate Matter	66 mg/Nm^3 at 12% CO_2

	Port hole on stack of incinerator of Cap. 500 kg/hr after APCD	Particulate Matter	20 mg/ Nm^3 at 11% O_2
		Acid Mist as (HCI)	1.8 mg/ Nm^3 at 11% O_2
		SO_2	74.5 mg/ Nm^3 at 11% O_2
		NO_x	164.2 mg/ Nm^3 at 11% O_2
		CO	23 mg/ Nm^3 at 11% O_2
	OHSCB-2	Acid Mist as (HCI)	BDL
		SO_2	34.2 mg/m^3
		NO_x	16 mg/m^3
	OHSCB-3	Acid Mist as (HCI)	BDL
		SO_2	22.8 mg/m^3
		NO_x	20 mg/m^3
	OHSCB-4	Acid Mist as (HCI)	BDL
		SO_2	17.1 mg/m^3
		NO_x	17.4 mg/m^3
	OCSCB-2	Acid Mist as (HCI)	BDL
		SO_2	28.5 mg/m^3
		NO_x	22.7 mg/m^3
	OCSCB-2	Acid Mist as (HCI)	BDL
		SO_2	17.1 mg/m^3
		NO_x	17.4 mg/m^3
	ODSCB-1	Acid Mist as (HCI)	1.2 mg/m^3
		SO_2	22. mg/m^3
		NO_x	20 mg/m^3
	The analysis results reveal that the concentration of emission from the stacks was within the permissible limits as prescribed by the CPCB.		
XIV.	**Past Compliance and Legal Status**		

	Past Compliance: The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions: 1. The industry shall comply with the SOP (standard operating procedure) for recovery of spent solvent (applicable to captive utilization part) issued by the CPCB in Mar, 2018, and submit PERT chart to this office within 7 days mentioning the progress to be taken up for compliance of the SOP (standard operating procedure) with timelines, for compliance of the same at the earliest in true letter & spirit. 2. The industry shall ensure that the sample collection facility attached with the stacks should be as per guidelines mentioned in EPR-3 norms prescribed by the CPCB. 3. The industry shall make permanent shed of size 1000 sq.m. for the storage of fly ash near the boiler area within one month and submit compliance to this office within 7 days, thereafter. 4. The industry shall provide retaining wall/ structure along the boundary of the ash dumping yard along the drain, to prevent the flow of water mixed with fuel ash into the drain, within one month and submit compliance to this office within 7 days, thereafter. 5. The industry shall get the accumulated fuel ash in the drain cleaned and sent it to the low-lying area owned by the industry at Vill. Nimbuan for disposal. The disposed-of ash shall be covered with fresh earth to prevent it from getting air-borne after drying. 6. The industry shall not carry out quenching of fuel ash presently stored in the dumping yard with untreated/ treated effluent at any time. 7. The industry shall submit a time bound action plan for cleaning the ash accumulated in the adjoining drain & to clear the edges of the drain of any wild vegetation, within 7 days. 8. The industry shall get the ground water monitoring of the piezowell(s) located within its premises carried out from the PBTI Laboratory within 7 days and submit the analysis results to the Board, thereafter. 9. The industry shall ensure that no wastewater from its industrial premises / plantation area or otherwise find its way into storm water drain(s) directly or indirectly under any circumstances. 10. The industry shall get the channels carrying wastewater within its premises to the ETP/ MEE lined with impervious material like FRC lining etc. and repair the eroded drains within one month and submit compliance to the Board within 7 days, thereafter. 11. The industry shall provide retaining wall/ structure along the boundary of the ash dumping yard along the drain, to prevent the flow of water mixed with fuel ash into the drain, within one month and submit compliance to this office within 7 days, thereafter.

	12. The industry shall not carry out quenching of fuel ash presently stored in the dumping yard with untreated/ treated effluent at any time. 13. The industry shall provide temporary bridge/ structure after getting approval from the concerned authorities, so that the plantation pocket on the other side of the drain could also be inspected during rainy days. ***Legal Status:*** The industry was involved as a respondent in the matter of OA no. 30 of 2013 titled "Jai Singh &Ors. Vs. U.O.I. &Ors." and O.A. no. 33 of 2013 titled "Karnail Singh &Ors. Vs. CPCB &Ors.' pending before Hon'ble National Green Tribunal, New Delhi and further filed M. A. No. 1559 of 2018, M. A. No. 1560 of 2018, I.A. No. 102 of 2019, I.A. No. 103 of 2019, I.A. Nos. 401/2019 and I.A. No. 402/2019 in relevance to the original applications filed before the Hon'ble National Green Tribunal, New Delhi. The main matter i.e. OA no. 30 of 2013 titled "Jai Singh & Ors. Vs. U.O.I. & Ors." and O.A. no. 33 of 2013 titled "Karnail Singh & Ors. Vs. CPCB & Ors.', is listed for hearing in the Hon'ble National Green Tribunal, New Delhi on 20/11/2020.
XV.	**Recommendations**
	1. The industry needs to handle the fuel ash from its power plants in a diligent manner and ensure that the ash shall not found its way into the Haibatpura drain from the ash dumping area during rain showers. 2. The industry is required to immediately clean the ash accumulated in the adjoining drain and sent the ash scrapped from the drain to the low-lying area owned by the industry at Vill. Nimbuan for disposal. The disposed-of ash shall be covered with fresh earth to prevent it from getting air-borne after drying. 3. The industry is required to provide retaining wall/ structure along the boundary of the ash dumping yard along the drain, to ash dumping yard along the drain, to prevent the flow of water mixed with fuel ash into the drain, without further delay. 4. The industry is required to immediately stop dumping of fuel ash in the area between the ETP & the drain and the fresh fuel ash shall be

	sent to the low-lying area owned by the industry at Vill. Nimbuan for disposal in an environmentally sound manner. The industry shall maintain proper record regarding the lifting of the fresh fuel ash & the legacy ash. 5. The industry needs to carry out mass balance of its operations and the effluent generated from each section & received at the ETP/ MEE for treatment. Further, the industry should install EMFs at all effluent carrying streams/ pipelines origination from each process section leading to the feed of ETP/ MEE installed within its premises. 6. The industry is required to comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install minimum request facility as delineated in the Standard Operating Procedure issued by the CPCB for recovery of spent solvents, immediately.

Annexure-H

I.	Name & Address of the industry	M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil DeraBassi, Distt. SAS Nagar.
II.	Category/ Scale	Red/ Large
III.	Type	Drugs and Pharmaceuticals
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2020/12196029 dated 18/04/2020 having validity upto 31/03/2021. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2020/12196509 dated 18/04/2020 having validity upto 31/03/2021.
V.	Products Manufactured	1. Cefuroxime Axetil @ 0.00715 Metric Tonnes / Day 2. CefditorenPivoxil@ 0.00030 Metric Tonnes / Day 3. Cefdinir @ 0.01050 MTD 4. CefpodoximeProxetil @ 0.85800 MTD 5. Ceftriaxone sodium @ 0.48000 MTD 6. Cefotaxime sodium @ 0.20000 MTD 7. Cefepime injection @ 0.00641 MTD 8. Cefuroxime sodium @ 0.06410 MTD 9. Cephalothin sodium @ 0.01600 MTD 10. Tazo+Piper a sodium @ 0.16000 MTD 11. Tazobactum sodium @ 0.04200 MTD 12. Cefazolin sodium @ 0.06400 MTD 13. Cefprozil @ 0.00003 MTD 14. Meropenem TH @ 0.03000 MTD 15. Doripenem @ 0.00003 MTD 16. Imipenem @ 0.01750 MTD 17. Cloxacillin sodium @ 0.05208 MTD 18. Dicloxacillin sodium @ 0.00350 MTD 19. Sulbactum sodium @ 0.07000 MTD 20. Pantoprazole sodium @ 0.00174 MTD 21. Ampicillin sodium @ 0.17000 MTD 22. Omeprazole Sodium @ 0.00087 MTD 23. Ceftiofur sodium @ 0.00003 MTD 24. cefpirome injection @ 0.00868 MTD

		25. Sodium Carbonate @ 0.00200 MTD 26. L-Arginine @ 0.00260 MTD 27. Chloroamphenicol @ 0.05000 MTD 28. CefiximeTrihydrate @ 0.00700 MTD
VI.	Raw Material Used	1. 2-EHA @ 0.0016 Metric Tonnes/Day 2. 7-ACA @ 0.8020 Metric Tonnes/Day 3. Activated carbon @0.0015 Metric Tonnes/Day 4. 7-APRA @ 0.00002 Metric Tonnes/Day 5. 7-ATCA@ 0.002 Metric Tonnes/Day 6. 7-AVCA@ 0.0078 Metric Tonnes/Day 7. Acetic acid @ 0.0225 Metric Tonnes/Day 8. Acetonitrile @ 0.0602 Metric Tonnes/Day 9. Acetone @ 0.1633 Metric Tonnes/Day 10. AEB@ 0.0026 Metric Tonnes/Day 11. Ammonia @ 0.3406 Metric Tonnes/Day 12. Ammonium chloride @ 0.0051 Metric Tonnes/Day 13. Ampicillin TH @ 0.1700 Metric Tonnes/Day 14. AVCA @ 0.0034 Metric Tonnes/Day 15. Butyl acetate @ 0.0004 Metric Tonnes/Day 16. Cefipime HCL @ 0.0066 Metric Tonnes/Day 17. Cefazolin sodium NS @ 0.0711 Metric Tonnes/Day 18. CAEM @ 0.0090 Metric Tonnes/Day 19. Cefditoren sodium @ 0.0003 Metric Tonnes/Day 20. Cefotaxime acid @ 0.2000 Metric Tonnes/Day 21. Ceftriaxone sodiumNS@ 0.4896 Metric Tonnes/Day 22. Cefuroxime hydroxide @ 0.0062 Metric Tonnes/Day 23. Cefuroxime amorphous @ 0.0050 Metric Tonnes/Day 24. cephalothin acid @ 0.0154 Metric Tonnes/Day 25. CPDA @ 0.7456 Metric Tonnes/Day 26. CFT Acid @ 0.2000 Metric Tonnes/Day 27. CPHS @ 0.0460 Metric Tonnes/Day 28. CPRN @ 0.0094 Metric Tonnes/Day 29. CSI @ 0.0017 Metric Tonnes/Day 30. CYCLOHEXANE @ 0.0004 Metric Tonnes/Day 31. D-7ACA @ 0.0025 Metric Tonnes/Day 32. DEA @ 0.0102 Metric Tonnes/Day 33. DicloxacillinSodium@ 0.0561 Metric Tonnes/Day

		34. DMAC @ 0.0629 Metric Tonnes/Day 35. DMF @ 0.0007 Metric Tonnes/Day 36. Doripenem@ 0.000003 Metric Tonnes/Day 37. EDTA @ 0.0039 Metric Tonnes/Day 38. Enjyme@ 0.0004 Metric Tonnes/Day 39. Ethyl acetate @ 0.1555 Metric Tonnes/Day 40. Formaldehyde @ 0.0014 Metric Tonnes/Day 41. Formic acid @ 0.0035 Metric Tonnes/Day 42. GCLE @ 0.0098 Metric Tonnes/Day 43. GCLE @ 0.0098 Metric Tonnes/Day 44. GVNE @ 0.0080 Metric Tonnes/Day 45. HYDRO @ 0.0060 Metric Tonnes/Day 46. IPA @ 0.00002 Metric Tonnes/Day 47. HCL @ 0.0441 Metric Tonnes/Day 48. Iodomethylpivalate@ 0.0001 Metric Tonnes/Day 49. L-Arginine @ 0.0027 Metric Tonnes/Day 50. MAEM @ 0.3759 Metric Tonnes/Day 51. Mannitol @ 0.0005 Metric Tonnes/Day 52. Meropenem NS @ 0.0349 Metric Tonnes/Day 53. Methanol @ 0.1066 Metric Tonnes/Day 54. DMC @ 0.0042 Metric Tonnes/Day 55. MIBK @ 0.0043 Metric Tonnes/Day 56. MICA ester @ 0.0039 Metric Tonnes/Day 57. Omeprazole @ 0.0003 Metric Tonnes/Day 58. MSA @ 0.0791 Metric Tonnes/Day 59. Dane salt @ 0.000003 Metric Tonnes/Day 60. 60 Pantaprazole free base @ 0.0014 Metric Tonnes/Day 61. Phenol @ 0.00004 Metric Tonnes/Day 62. Piperacillin acid @ 0.1428 Metric Tonnes/Day 63. Potassium acetate @ 0.0156 Metric Tonnes/Day 64. PCL5 @ 0.0025 Metric Tonnes/Day 65. Pivaloyl chloride @ 0.000001 Metric Tonnes/Day 66. Potassium carbonate @ 0.0062 Metric Tonnes/Day 67. PHP @ 0.0019 Metric Tonnes/Day 68. SMIA @ 0.0022 Metric Tonnes/Day 69. Sodium bromide @ 0.0005 Metric Tonnes/Day 70. pyridine @ 0.0002 Metric Tonnes/Day 71. sodium bicarbonate @ 0.0412 Metric Tonnes/Day

		72. Sodium carbonate @ 1.8699 Metric Tonnes/Day 73. Sodium chloride @ 0.2174 Metric Tonnes/Day 74. Sodium hydroxide @ 0.0146 Metric Tonnes/Day 75. Sodium iodide @ 0.0798 Metric Tonnes/Day 76. SMBS 0.0002 Metric Tonnes/Day 77. Sodium thiocynate@ 0.000002 Metric Tonnes/Day 78. Stearic acid @ 0.0010 Metric Tonnes/Day 79. STS @ 0.1459 Metric Tonnes/Day 80. Sulphuric acid @ 0.1337 Metric Tonnes/Day 81. Tazobactum acid @ 0.0563 Metric Tonnes/Day 82. TBAB @ 0.00001 Metric Tonnes/Day 83. THF @ 0.0019 Metric Tonnes/Day 84. TMG @ 0.1905 Metric Tonnes/Day 85. Sulbactum sodium NS @ 0.0786 Metric Tonnes/Day 86. Toulene@ 0.0212 Metric Tonnes/Day 87. TEA @ 0.2174 Metric Tonnes/Day 88. TPP @ 0.0003 Metric Tonnes/Day.
VII.	Water Consumption	175 KLD
VIII.	Fuel Consumption	HSD (in 03 no. D.G. set of capacity 1000 KVA, 1000 KVA & 500KVA) 3120 ltr/day, 3120 ltr/day & 2400 ltr/day & Furnance Oil (in Boiler 5TPH of capacity 5 MTD), Rice Husk (in Boiler of capacity 8 MTD) and Furnace oil (in Boiler of capacity 2.8 MTD)
IX.	Brief Process Flow Chart	Various chemical reactions.
X.	**Observations**	
	1. The industry was in operation for manufacturing of bulk drugs & sterile products. 2. There is generation of high TDS effluent from the bulk drug plant & LTDS effluent from the sterile plant, vessel washings, utilities like blow down from cooling tower and regeneration of the DM plants. The industry has provided three overhead tanks for the collection of effluent	

	i.e. 2 no. tanks for the collection of HTDS effluent and 1 no. tank for the collection of LTDS effluent. The effluent from the unit is transferred to its sister concern i.e. M/s Nectar Lifesciences Ltd., Unit-2. The industry has installed EMF meters at the pipelines provided for the transferring of effluent of both LTDS and HTDS. However, there is no distinction between both HTDS / LTDS effluent whilst transfer as the HTDS or LTDS effluent from the collection tanks is being transferred to its sister concern unit with the help of motorized means through a common underground pipeline for further treatment. 3. Further, the industry has installed one no. DM plant for the sterile section and one for the remaining plant. The wastewater generated from regeneration of the DM plants is collected in a intermediate collection tank and is pumped to the overhead collection tank of LTDS effluent. The industry has also installed R.O. plant in its sterile plant and the R.O reject is either being used for ash quenching or in the cooling tower as make-up water. 4. The domestic effluent is treated in the septic tank and is being discharged onto land for plantation, made along the boundary wall of the unit. 5. The industry has installed one boiler of capacity 8.0 TPH (rice husk fired) equipped with twin cyclone followed by bag filter house as APCD. The boiler as well as APCD were in operation. 6. The industry has also installed boilers of capacity 5.0 TPH (*currently sealed by the SPCB*) & 2.8 TPH and the same were not in operation. Both these boilers are FO fired and having common chimney connected with stack of boiler of capacity 8 TPH. 7. The representative of the industry informed that the boiler ash is also transferred to its sister concern i.e. M/s Nectar Lifesciences Ltd., Unit-2 through covered Tractor/ Trolleys. 8. The industry is having 03 no. DG sets of capacity 2 x 1000 KVA and 1 x 500 KVA. These DG sets are equipped with canopies and stacks of adequate height.

	9. The industry has installed solvent recovery section for the recovery of spent solvent generated from its process. It is worth to mention here that the Central Pollution Control Board has issued Standard Operating Procedure (SOP) for the units engaged in recovery of spent solvents vide notification in August, 2019. As such, the SOP is applicable for units engaged utilization of spent solvent including captive utilization and the industry is required to the comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install minimum request facility as delineated in the Standard Operating Procedure issued by the CPCB for recovery of spent solvents. In this regard, it was observed during visit that the industry is yet not fully complying with the guidelines mentioned in the SOP for recovery of spent solvent like the industry has not install VOC absorption media connected to the vent of condenser, online analyzer for TOC at the vent outlet and had not made connection of vent of all the storage tanks with the condenser unit etc. 10. It was noted that the industry has no provision for measurement of effluent from each source of effluent generation / manufacturing plant(s). It is reckoned here that the industry is large scale unit involved in manufacturing of chemicals & generating crude effluent from each section and therefore required to install provision/ flow measuring devices for measurement of effluent flow from each section to the treatment plant to surmise a clear record of the effluent generated and being treated in the treatment plant. As such, the mass balance of the whole process is not being kept by the industry.
XI.	**Effluent Treatment Status**
	The entire quantity of trade effluent of HTDS and LTDS generated from the premises, is being stored in overhead storage tanks and being transferred to its sister concern unit i.e. M/s Nectar Life Sciences Ltd. Unit-2, through an underground pipe line for treatment.
XII.	**Emission Control Status**

	Sources of Fuel /	**Number**	**Steam Gen./ capacity**	**Type &Qty. of fuel to**	**Height of stack**	**APCD**	

	Process Emissions			**be consumed**	**(m)**	
	Flue Gas Emissions	1	8 TPH	Rice Husk @ 16 TPH	Common stack 30 m AGL	NR
		1	5 TPH	Furnace Oil@ 3 TPH	Common stack 30 m AGL	Twin cyclone followed by Bag filter house
		1	2.8 TPH	Furnace Oil @3.31 TPH	Common stack 30 m AGL	NR
	DG set	3 no.	1000 KVA	HSD @ 3120 liter/day	6.5 m ARL	Canopy provided
			1000 KVA	HSD @ 3120 liter/day	6.5 m ARL	Canopy provided
			500 KVA	HSD @ 2400 liter/day	6.3 m ARL	Canopy provided
XIII.	**Discussion w.r.t. Analysis Results of Effluent/ Emissions**					
	Emission Samples: During visit on 10.09.2020, samples were collected from the stack attached to rice husk fired boiler of capacity 8 TPH and got it analyzed from SPCB laboratory. The FO fired boiler of capacity 2.8 TPH was not in operation and only kept as stand-by arrangement. Further, the FO fired boiler of capacity					

87.

	5.0 TPH has already been sealed by the SPCB to rule out its operation and was also found not in operation. The analysis results of the emission sample from the stack attached to rice husk fired boiler of capacity 8 TPH are as under:

Point of Sample Collection	**Parameter**	**Results**	**Prescribed Standards**
Port hole on stack after APCD of Boiler Furnace of Cap 8 TPH	Particulate Matter	119 mg/NM^3 at 12% CO_2	350 mg/NM^3 at 12% CO_2

The analysis results reveal that the concentration of emission from the stack was within the permissible limits as prescribed by the CPCB.

XIV.	**Past Compliance and Legal Status**
	Past Compliance:

The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions:

1. The industry shall comply with the SOP (standard operating procedure) for recovery of spent solvent (applicable to captive utilization part) issued by the CPCB in Mar, 2018, within 3 months in true letter & spirit and submit compliance to this office within 7 days, thereafter.
2. The industry shall not operate the FO fired boiler of capacity 5 TPH without obtaining consent to establish/ varied consent to operate under the provisions of the Air (Prevention & Control of Pollution) Act, 1981 for re-instating the FO fired boiler of capacity 5 TPH which was earlier sealed by the Board.
3. The industry shall ensure that no wastewater from its industrial premises / plantation area or otherwise find its way into storm water drain(s) directly or indirectly under any circumstances.
4. The industry shall comply with the guidelines issued by the CGWA from time to time.
5. The industry shall ensure that the whole of the HTDS and LTDS effluent generated from the industry is transferred to its sister concerned unit i.e. M/s Nectar Lifesciences Ltd. (Unit-II) and shall maintain record of the EMF meter installed on the pipe line provided for transferring of the HTDS and LTDS effluent.

Legal Status:

	As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.
XV.	**Recommendations**
	1. As its sister concern unit M/s Nectar Lifesciences Ltd. (Unit-II) has already installed new MEE of treatment capacity 150 KLD and is planning to keep the existing MEE of treatment capacity 90 KLD as stand-by arrangement. The industry can install the same in this unit for disposal of the HTDS as well as LTDS effluent. 2. The industry needs to carry out mass balance of its operations and the effluent generated from each section & received at the HTDS and LTDS effluent collection tanks. Further, the industry should install EMFs at all effluent carrying streams/ pipelines origination from each process section within its premises. 3. The industry is required to comply with the guidelines mentioned in the SOP for utilization of the spent solvents and install minimum request facility as delineated in the Standard Operating Procedure issued by the CPCB for recovery of spent solvents, immediately.

Annexure-I

I.	Name & Address of the industry	M/s Punjab Chemicals &Crop Protection Ltd. (Agro-Division), Village Bhankharpur, DeraBassi.
II.	Category/ Scale	Red/ Large
III.	Type	Pesticide
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2017/5251058 dated 13/11/2017 having validity upto 31/03/2022. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2017/5240511 dated 13/11/2017 having validity upto 31/03/2022.
V.	Products Manufactured	1) Oxalic acid @10000Metric Tonnes/Day 2) Sodium Nitrite @1800Metric Tonnes/Day 3) Ethyl Oxalylchloride(EOC @1080Metric Tonnes/Day 4) Diethyl oxalate(DEO) @2700Metric Tonnes/Day 5) Ethyl phenyl gly oxalate(EPGO) @1080Metric Tonnes/Day 6) Metamitron @800Metric Tonnes/Day 7) Ethofumisate(Etho) @250 Metric Tonnes/Day 8) Metalaxyl @100 Metric Tonnes/Day 9) Metaconazole(MCZ) @240 Metric Tonnes/Day 10) Diflufenican @300 Metric Tonnes/Day 11) Dithianon @150 Metric Tonnes/Day 12) Tricyclozole @200 Metric Tonnes/Day 13) Tebuconazole @20 Metric Tonnes/Day 14) Thiamethoxam @100 Metric Tonnes/Day 15) Pretilachlor @250 Metric Tonnes/Day 16) Diafenthiuron @100 Metric Tonnes/Day 17) Lenacil @20 Metric Tonnes/Day 18) ACF(85%) @500 Metric Tonnes/Day 19) ACF(25%) @500 Metric Tonnes/Day 20) Difenoconazole @50 Metric Tonnes/Day 21) Fenpyroximate @10 Metric Tonnes/Day 22) Cyanazine @20 Metric Tonnes/Day

VI.	Raw Material Used	1) SUGAR @ 15.317 TPD 2) NITRIC ACID @ 13.289 TPD 3) SULPHURIC ACID @ 0.932 TPD 4) CAUSTIC LYE (47.50%) @ 5.891 TPD 5) OXA ACID @ 6.871 TPD 6) ETHYL ALCOHAL 92% @ 3.685 TPD 7) BENZENE @ 0.019 TPD 8) SODIUM CARBONATE @ 0.344 TPD 9) DIETHYL OXALATE (DEO) @ 2.727 TPD 10) POT.CARBONATE @ 1.290 TPD 11) THIONYL CHLORIDE @ 2.673 TPD 12) CAUSTIC LYE (47.50%) @ 1.590 TPD 13) BENZENE @ 1.437 TPD 14) EOC @ 2.406 TPD 15) ALUMINIUM CHLORIDE (AICI3) @ 3.006 TPD 16) SODIUM CARBONATE @ 0.059 TPD 17) ETHYL ACETATE @ 1.525 TPD 18) H.HYDRATE 80% @ 2.279 TPD 19) EPGO @ 2.880 TPD 20) IBA @ 0.196 TPD 21) MORPHOLINE @ 0.237 TPD 22) PBQ @ 0.294 TPD 23) TOLUENE @ 0.046 TPD 24) METHYL SULPHONYL CHLORIDE@0.312 TPD 25) TEA @ 0.022 TPD 26) CAUSTIC LYE (47.0 %) @ 0.223 TPD 27) ETHYL ALCOHAL @ 0.135 TPD 28) HYDRO CHLORIC ACID @ 0.039 TPD 29) METHOXY ACETIC ACID @ 0.110 TPD 30) BENEZENE @ 0.025 TPD 31) HEXANE @ 0.008 TPD 32) THIONYL CHLORIDE @ 0.150 TPD 33) MDMPA @ 0.245 TPD 34) METHANOL @ 0.292 TPD 35) BROMINE @ 0.729 TPD 36) SULPHUR @ 0.050 TPD 37) DMSO @ 0.202 TPD 38) TOLUENE @ 0.176 TPD 39) TMOF @ 0.007 TPD 40) DIMETHYL ADIPATE @ 0.609 TPD 41) SODIUM METHOXIDE (30.50%) @ 1.294 TPD 42) DIEMETHYL FORMANIDE(DMF) @ 0.013 TPD

		43) P-CHLORO BENZYL CHLORIDE @ 0.543 TPD 44) DIAOXANE @ 0.013 TPD 45) NaH (65%) @ 0.119 TPD 46) CAUSTIC LYE(47%) @ 0.531 TPD 47) 1,2,4 TRIAZOLE @ 0.143 TPD 48) CAUSTIC FLAKES @ 0.083 TPD 49) NMP @ 0.132 TPD 50) t-BuONa @ 0.066 TPD 51) ETHYL CYCLO HEXANE @ 0.026 TPD 52) DIEMETHYL FORMANIDE @ 0.425 TPD 53) SODIUM CYANIDE @ 0.170 TPD 54) CARBON DISULPHIDE @ 0.306 TPD 55) TOLUENE @ 0.024 TPD 56) DICHLONE @ 0.340 TPD 57) ACETIC ACID @ 0.034 TPD 58) 2 CHLORO NICOTINIC ACID @ 0.386 TPD 59) THIONYL CHLORIDE @ 0.386 TPD 60) BENZENE @ 0.042 TPD 61) TOLUENE @ 0.116 TPD 62) CAUSTIC LYE (47%) @ 0.408 TPD 63) 2,4 DIFLURO ANILINE @ 0.315 TPD 64) POTTASIUM HYDROXIDE (KOH) @ 0.175 TPD 65) m-HYDROXY BENZYL TRIFLORIDE @ 0.457 TPD 66) HYDRAZINAL-4 METHYL BENZOTHIAZOLE @ 0.588TPD 67) FORMIC ACID @ 0.180 TPD 68) ORTHO ZYLENE @ 0.024 TPD 69) OXIRANE @ 0.180 TPD 70) DMSO @ 0.010 TPD 71) 1,2,4 TRIZOLE @ 0.058 TPD 72) CAUSTIC FLAKES @ 0.007 TPD 73) TOLUENE @ 0.010 TPD 74) THMNO @ 0.222 TPD 75) CCMT @ 0.225 TPD 76) DMSO @ 0.015 TPD 77) CAUSTIC FLAKES @ 0.041 TPD 78) DIPPIC @ 0.271 TPD 79) T-BUTYL ANLINE @ 0.080 TPD 80) METHYL CYCLO HEXANE @ 0.015 TPD 81) 2,6 DIMETYL ANILINE @ 0.385 TPD 82) CHLORO ACETYL CHLORIDE (CAC) @ 0.262 TPD 83) BENZENE @ 0.035 TPD

		84) 2,PROPOXYETHYL CHLORIDE @ 0.290 TPD 85) CAUSTIC FLAKES @ 0.098 TPD 86) DI ETHYL ADIPATE @ 0.267 TPD 87) SOD. ETHOXIDE @ 0.080 TPD 88) BENZENE @ 0.008 TPD 89) HYDROCHLORIC ACID (30%) @ 0.280 TPD 90) ABSOLUTE ALCOHAL @ 0.045 TPD 91) CYCLOHEXYL UREA @ 0.140 TPD 92) HEXANE @ 0.013 TPD 93) CAUSTIC FLAKES @ 0.038 TPD 94) METHANOL @ 0.014 TPD 95) CDPE @ 1.474 TPD 96) SOD.NITRATE @ 0.490 TPD 97) ACETIC ACID @ 0.070 TPD 98) SULPHURIC ACID @ 0.203 TPD 99) ACETIC ANHYDRIDE @ 1.750 TPD 100) TOLUENE @ 0.070 TPD 101) ACF -85% @ 0.396 TPD 102) C.LYE @ 0.076 TPD 103) MIX ZYLENE @ 0.259 TPD 104) CYCLOHEXANON @ 0.748 TPD 105) t-BUTYL-4-CHLORO METHYL BENZOATE @ 0.128 TPD 106) 1,3 DINETHYL-5 PHENOXY-4-PYROZOLE @ 0.128 TPD 107) BENZENE @ 0.004 TPD 108) E.ALCOHAL @ 0.000 TPD 109) CAUSTIC FLAKES @ 0.019 TPD 110) ACETONE CYNOHYDRIN @ 0.105 TPD 111) AMMONIA @ 0.021 TPD 112) CYNNURIC CHLORIDE @ 0.179 TPD 113) ETHYL AMINE @ 0.050 TPD 114) CAUSTIC LYE(47%) @ 0.142 TPD 115) METHYL ISO BUTYL KETONE @ 0.020 TPD 116) PHENYLENE KETAL BROMIDE @ 0.600 TPD 117) 1,2,4 TRIZOLE @ 0.089 TPD 118) POTTASIUM HYDROXIDE (KOH) @ 0.073 TPD 119) DIMEYHYL FARMAMIDE @ 0.010 TPD 120) METHANOL @ 0.025 TPD 121) TOLUENE @ 0.015 TPD
VII.	Water Consumption	193.96 KLD

VIII.	Fuel Consumption	HSD (in 07 No. D.G. sets of capacity 500 KVA each) @ 300ltr/day (each)& and in Rice Husk/Wood Chips @ 40 TPD (in Boiler House of capacity 6 TPH), Rice Husk/Wood Chips @ 70 TPD (in Boiler House of capacity 15 TPH) & Rice Husk/Wood Chips @ 40 TPD (in Boiler House of capacity 7 TPH).
IX.	Brief Process Flow Chart	There are various chemical reactions involved for the manufacturing of above said products.
X.	**Observations**	
	1. The industry was in operation during the visit and was engaged in the business of manufacturing of technical grade pesticide products for which it was granted consent to operate. 2. The industry had not done segregation of low TDS & high TDS steams and all trade effluent streams of the industry are taken into common collection tanks, from where it is Oil skimming is done with the help of mechanical oil separator and O & G traps. After pH correction and settling of poised solids through a sedimentation tank, the effluent is passed through a filteration bed and then finally collected in an equalization tank. Thereafter, the effluent is fed to the MEE installed by the industry for disposal. 3. The pre-treatment system before the MEE feed seems to be in-effective and the same is evident from the comparisons of the analysis results of the Raw Effluent Intake and the Feed to MEE as mentioned at point XIII. (2) below. It is evident from the results that the concentration of TSS & TDS in the effluent at the inlet of MEE has increased rather than decreasing. The whole pre-treatment system has been put-in place for removal of solids/ settleable material from the influent, to improve the working efficiency of the MEE, but the ineffective pre-treatment is reducing the working efficiency of the MEE. 4. The industry has installed an MEE, (four calendrias, all forced convection type). The industry has installed an ATFD for drying of the concentrate generated from the MEE. The concentrate was being sent to the incinerator provided by the industry and the condensate was being sent to the cooling tower. The industry has installed EMF meter at the inlet and condensate of the MEE and maintaining	

	its record. 5. The industry has also provided online effluent monitoring meters at the condensate line of the MEE showing the concentration of pH, TSS, BOD & COD. This online meter has been connected with the server of the SPCB and CPCB. 6. The industry has installed dual chamber incinerator for incineration of the incinerable hazardous waste generated from its manufacturing/ treatment processes. The incinerator ash being generated is stored in the hazardous waste storage room provided by the industry, which is further sent to the common TSDF of the state of Punjab. The industry has provided an alkali scrubber as APCD to control various pollutants in the permissible limits. 7. The industry has provided an STP for the treatment of domestic effluent based on MBBR Technology, which was in operation at the time of visit and the treated wastewater was being discharged onto land for plantation purpose. 8. The industry has installed three rice husk fixed boilers of 15 TPH, 7 TPH and 6 TPH steam generation capacity. During visit, the boilers of 7 TPH and 6 TPH steam generation capacity were in operation and are separately equipped with multi cyclone as APCD. **9.** It was noted that the industry has no provision for measurement of effluent from each source of effluent generation / manufacturing plant(s). The industry is required to install provision/ flow measuring devices for measurement of effluent flow from each section to the treatment plant to summerise a clear record of the effluent generated and being treated in the treatment plant.
XI.	**Effluent Treatment Status**
	The trade effluent streams of the industry are taken into different collection tanks and then into common equalization tank. Oil skimming is done and after pH correction & equalization of effluent, the same is fed into MEE. The MEE plant consists of four calendrias (all forced convection type). The industry has installed an ATFD for drying of the concentrate generated from the MEE. The concentrate is sent to the incinerator provided by the industry and the condensate is sent to the cooling tower for use as make-up water. The industry has installed a skid mounted STP for the treatment of domestic effluent based on MBBR Technology.

XII. **Emission Control Status**

Sources of Fuel / Process Emissions	Number	Steam Gen./ capacity	Type & Qty. of fuel to be consumed	Height of stack (m)	APCD
Flue Gas Emissions	1	6 TPH	Rice Husk/Wood Chips @ 40 TPD	30 m AGL	Multi cyclone followed by water scrubber
	1	15 TPH	Rice Husk/WoodChips @ 70 TPD	35 m AGL	Multi cyclone followed by water scrubber
	1	7 TPH	Rice Husk/Wood Chips @ 40 TPD	31 m AGL	Multi cyclone followed by water scrubber
Incinerator	1	250 kg/ hr	-	35 m AGL	Dual Stage Alkali Scrubber
DG set	7 no.	500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided
		500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided
		500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided
		500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided
		500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided
		500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided

				500 KVA	HSD @ 300 liter/day	4.5 m	Canopy provided

XIII. **Discussion w.r.t. Analysis Results of Effluent/ Emissions**

Effluent Analysis:

1. The industry is achieving Zero Liquid Discharge 'ZLD' and recirculating its MEE condensate in the cooling towers. Therefore, samples were drawn samples were collected from MEE feed, MEE condensate and MEE concentrate to ATFD and the analysis results as received from the Head Office Laboratory are tabulated as under:

S. No.	Parameters	MEE Feed	MEE Condensate	MEE Concentrate to ATFD
1	pH	6	6.9	5.7
2	COD mg/l	47600	3010	39800
3	BOD mg/l	13200	640	9800
4	TSS mg/l	2810	9	7930
5	TDS mg/l	49460	128	73680

From the above, it is clear that the concentration of total solids in the effluent at the inlet of MEE and concentrate of MEE has been analyzed as 52270 mg/l (5.22%) and 81610 mg/l (8.16%), respectively. The low percentage of solids in the MEE concentrate means additional load on the Agitated thin film dryer(ATFD).

Further, sample was also collected from the inlet of the pre-treatment system given to the raw effluent before feeding it to the MEE. A comparison of the results of the Raw Effluent Intake and the Feed to MEE is given below as an indicator to the efficiency of this pre-treatment system:

S. No.	Parameters	Raw Effluent Intake	MEE Feed	Difference in concentration (in %)
1	pH	5.0	6	+20%

2	COD mg/l	58800	47600	-19.04%
3	BOD mg/l	14600	13200	-9.58%
4	TSS mg/l	1040	2810	+170.04%
5	TDS mg/l	25240	49460	+96.67%

From the above, it is clear that the concentration of TSS & TDS in the effluent at the inlet of MEE has increased rather than decreasing. The whole pre-treatment system has been put-in place for removal of solids/ settleable material from the influent, to improve the working efficiency of the MEE.

2. During visit, sample was collected from the outlet of STP as well and the samples were analyzed from SPCB laboratory. The analysis results are as under:

Sr. no.	Parameters	Outlet of STP
1.	pH	7.4
2.	Chemical Oxygen Demand mg/l	58
3.	Bio-chemical Oxygen Demand mg/l	14
4.	Total Suspended Solids mg/l	19
5.	Total Dissolved Solid mg/l	998
6.	*Oil & Grease mg/l	BDL

The analysis results reveal that the concentration of the various parameters is within the permissible limit for discharges onto land for plantation purpose.

Emission Samples:

Point of sample collection	Parameter	Results
Port hole on stack after APCD of Boiler furnace of Cap (6 TPH)	Particulate Matter	296 mg/Nm^3 at 12 % CO_2
Port hole on stack after	Particulate Matter	304 mg/Nm^3 at 12 % CO_2

	APCD of Boiler furnace of Cap (7 TPH)		
	Port hole on stack after APCD of incinerator of Cap. 250 kg/hr	Particulate Matter Acid Mist as (HCI) SO_2 NOx CO	39 mg/Nm^3 at 11 % O_2 174.1 mg/NM^3 at 11 % O_2 90.2 mg/Nm at 11% O_2 101.5 mg/Nm at 11% O_2 13.8 mg/Nm at 11% O_2
	Port Hole on stack of Oxalic Acid	Nox	174.1 mg/m^3
	The analysis results reveal that the concentration of emission from the stack was within the permissible limits as prescribed by the CPCB.		
XIV.	**Past Compliance and Legal Status**		
	Past Compliance: The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions: 1. The industry has been approved by the Board from pollution angle and the industry shall obtain the statutory clearances / permissions from all other concerned departments. 2. The industry will ensure that there is no increase in the pollution load in terms of water / air / solid due to change in the product mix and manufacturing of the products, for which this consent has been issued. 3. The industry shall ensure the compliance of conditions stipulated in Board's letter no. 6382 dated 14/9/2016 while granting permission for change in product mix without any increase in pollution load. 4. The industry will regularly operate and maintain its air pollution control devices / MEE / incinerator and ensure that the concentration of pollutants in its emissions conforms to the emission standards laid down by the Board / Ministry of Environment and Forests & Climate Change. 5. The industry will maintain record of readings of separate energy meters installed with air pollution control devices / MEE / incinerator, on daily basis and monthly reading may be sent to the Board by the fifth of the following month. 6. The industry shall obtain the authorization under the Hazardous and Other		

	Wastes (Management and Transboundary Movement) Rules, 2016. 7. The hazardous wastes generated from various processes / activities of the industry shall be handled, managed, treated and / or disposed off as per provisions of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. 8. The industry shall not consume any fuel except rice husk in boilers of capacity 6 TPH, 7 TPH & 15 TPH and HSD in incinerator & 6 no. DG sets of capacity 500 KVA each for burning purposes without the prior written permission of the Board. 9. The industry shall comply with the instructions issued by the Board vide office order no. Admn./SA2/F.No.783/ 2010/448 dated 8/6/2010 regarding DG sets. 10. The industry shall make necessary arrangements for the monitoring of emissions samples / ambient air & shall monitor its emissions four times in a year and shall submit analysis results to the Board. 11. The industry shall ensure that no water / air pollution problem / public nuisance / odour problem is created in the area due to discharge of emissions from its industrial premises. 12. The industry shall immediately get its continuous online emissions monitoring system calibrated from the supplier of online system and also ensure the regular operation, maintenance and calibration of the online system so as to obtain continuous reliable accurate results and shall also maintain records of operation & maintenance, calibration of online monitoring system as per SOP / guidelines. 13. The industry shall ensure that CCTV cameras installed on pollution control devices, shall always remain connected with the website of the Board for online surveillance of pollution control devices. 14. All amendments / revisions made by the Board / MoEF&CC in the emissions / stack height / incinerator standards shall be applicable to the industry from the date of such amendments / revisions. 15. The adequacy and efficacy of the air pollution control devices will be the entire responsibility of the industry. 16. The industry shall ensure that at any time the emission do not exceed the emissions standards laid down by the Board from time to time. 17. The industry shall dispose off solid waste generated by the industry in a proper manner and to the satisfaction of the Board to avoid public nuisance and air pollution in the vicinity. 18. The industry shall obtain cover under the Public Liability Insurance Act, 1991. 19. The industry shall maintain proper record of disposal of boiler ash and shall provide a cover of good earth where the ash is disposed off for filling the low lying areas, so as to avoid of becoming the same air borne. 20. The industry shall ensure that the vehicles will be covered with the tarpaulin during transportation of ash and ash will be transported in wet conditions to

prevent it becoming the same air borne during transportation.

21. The industry shall make arrangements for automatic feeding of material in the incinerator.
22. The industry shall buy & use RDF as fuel in compliance of the directions issued by Hon'ble National Green Tribunal on 22/12/2016 in the matter of Almitra H. Patel Vs. Union of India and others (Original Application No. 199 of 2014).
23. The industry shall ensure the compliance of bye-laws of Master Plan of DeraBassi notified by the Deptt. of Town & Country Planning.
24. In case the industry fails to comply with the above consent conditions and provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and/or any other environmental law applicable to the industry and Rules, Circulars & Directions issued by the Board from time to time, the Board shall constrained to take strict action against the industry which may include encashment of bank guarantee of Rs. 10.00 lac and/or closure of the unit without giving any further notice / opportunity.
25. The industry is to operate and maintain its ETP, STP and APCD diligently and maintain record regarding their operation on regular basis. Further, the industry is required to submit the same record to the SPCB on monthly basis.
26. The industry shall properly & efficiently operate its multiple effect evaporator (MEE) to achieve desired concentration of solids in the MEE concentrate and the MEE concentrate is properly incinerated in the incinerator installed by the industry.
27. The industry shall not discharge any effluent (treated or untreated) into any drain or at any unauthorized place by any unauthorized means and will discharge its treated domestic effluent onto land for plantation / irrigation only.
28. The industry will provide electro-magnetic flow meters at all necessary points, so as to ensure complete mapping of the water used, wastewater generated, wastewater treated, wastewater reused & domestic effluent discharged and maintain the record of the same on daily basis and submit a copy of the record maintained to the Board on monthly basis by the 5th of following month.
29. The industry shall also provide electro-magnetic flow meters at MEE feed & MEE condensate line and maintain the record of the same on daily basis and submit a copy of the record maintained to the Board on monthly basis by the 5th of following month.
30. The industry will maintain record of readings of separate energy meters installed with sewage treatment plant / MEE / incinerator, on daily basis and monthly reading may be sent to the Board by the fifth of the following month.
31. The industry shall make necessary arrangements for the monitoring of

effluent / samples & shall monitor its effluent four times in a year and shall submit analysis results to the Board.

32. The industry shall ensure the provisions contained in the guidelines / criteria for abstraction of ground water, notified by the Central Ground Water Authority (CGWA) from time to time and obtain permission from concerned authorities in this regard.
33. The industry shall get the soil samples of its premises analyzed from Board's Lab. / NABL approved laboratory atleast once in a year to check the affect on the quality of soil due to storage of high TDS & low TDS effluent in underground tanks and in case any affect is found on the quality of soil of the said area, the same will be got rejuvenated from an expert agency and intimation in this regard shall be given to the Board. The industry shall maintain proper record in this regard so as to assess the long term effect of storage of high TDS & low TDS effluent on its soil quality.
34. The industry shall get the mapping of entire streams of wastewater so as to assess actual quantity of high TDS & low TDS effluent and to get the waste characterization of each stream so that required treatment to each waste stream may be given.
35. The entire cooling water used by the industry shall be re-circulated.
36. The industry shall employ well qualified and experienced person for operation and maintenance of the MEE / incinerator / sewage treatment plant.
37. The industry shall ensure the provisions contained in the guidelines / criteria for abstraction of ground water, notified by the Central Ground Water Authority (CGWA) from time to time and obtain pemrission from authorities concerned in this regard.
38. The industry shall ensure that no water pollution problem is created in the area due to discharge of effluents from its industrial premises.
39. The industry will do colour coding of its various pipelines as per details given below:
    a) High TDS effluent pipeline – Red
    b) Low TDS effluent pipeline – Orange
    c) Treated effluent pipeline – Blue
    d) Fresh water pipeline – White
40. The industry shall treat already stored effluent in MEE as per directions given by the Board from time to time.

Legal Status: A non complying industry is figuring as;

The industry was a respondent in the matter of OA no. 30 of 2013 titled "Jai Singh & Ors. Vs. U.O.I. & Ors." and O.A. no. 33 of 2013 titled "Karnail Singh & Ors. Vs. CPCB & Ors.' pending before Hon'ble National Green Tribunal, New Delhi.

The main matter i.e. OA no. 30 of 2013 titled "Jai Singh & Ors. Vs. U.O.I. & Ors."

	and O.A. no. 33 of 2013 titled "Karnail Singh & Ors. Vs. CPCB & Ors.', is listed for hearing in the Hon'ble National Green Tribunal, New Delhi on 20/11/2020.
XV.	**Recommendations**
	1. The industry shall get the adequacy and efficacy of the treatment system checked from an institute of repute and implement the recommendations given by the institute at the earliest. 2. The industry shall re-design its pre-treatment system to support the working efficiency of the already installed MEE Plant. 3. The industry is required to treat the high volume of effluent retained in the equalization tank in a timely manner through the MEE plant and if required as per recommendation of the consulting institute, the industry is required to enhance the treatment capacity of its MEE. 4. The industry needs to carry out mass balance of its operations and the effluent generated from each section & received at the collection tanks. Further, the industry should install EMFs at all effluent carrying streams/ pipelines origination from each process section within its premises. 5. The industry is required to separate the streams of low TDS effluent and high TDS effluent at source and provide appropriate & adequate treatment systems both the streams.

Annexure-J

I.	Name & Address of the industry	M/s. Rajasthan liquors limited (Distillery Division),Vill. Haripur Hinduan, Barwala Road, Derabassi,SAS Nagar.
II.	Category/ Scale	Red/ Large
III.	Type	Distilleries
IV.	Consents Status	Under the Water (Prevention & Control of Pollution) Act, 1974: CTOW/Renewal/SAS/2018/7106323 dated 29/04/2018 having validity upto 31/03/2021. Under the Air (Prevention & Control of Pollution) Act, 1981: CTOA/Renewal/SAS/2019/9622993 dated 21/05/2019 having validity upto 31/03/2024.
V.	Products Manufactured	Product: Grain Extra Neutral Alcohol (GENA) @ 120 KLD. By Product: Rectified Spirit @ 9 Kiloltr/day, CO2 @ 50 MTD, DDGS @ 66 MTD, Impure (SDS) @ 2 Kiloltr/day, Cogeneration Power @ 3 Megawat
VI.	Raw Material Used	Grain, Rice, Maize, Bajra @ 250 MTD.
VII.	Water Consumption	Borewell @ 900 KLD
VIII.	Fuel Consumption	HSD (in 500 KVA DG Set @ 100ltr/hour, in 1000 KVA DG Set @ 200ltr/ hour;crushed coal @ 90 TPD and Rice Husk @ 130 TPD in boiler of capacity 36 TPH.
IX.	Brief Process Flow Chart	Raw material →Cleaning →Milling →Lignifications→Fermentation →Distillation →Decanter→Evaporation.

X.	**Observations**
	The industry was not in operation during visit on 10/09/2020 due to strike observed by the employees of Excise & Taxation Department throughout the State of Punjab.
XI.	**Effluent Treatment Status**
	• The spent wash generated from the distillation section, is pass through decanters and the thin slop is treated in the Multi Effect Evaporator (MEE) followed by Agitated Thin Film Dryer (ATFD)& the thick slop alongwith the wet cakes from decanters are treated in dryers to recover Distillers Dried Grains with Solubles (DDGS), from the spent wash, which is sold out in the market being by-product. • The condensate from MEE alongwith other streams of wastewater are treated in the ETP installed by the industry based on Anaerobic treated followed by the aerobic biological treatment followed by filtration & R.O system. All the components of the ETPare Collection tank, dozing arrangement, Buffer tank, digester, aeration tank (02 nos.), mixing tank, tube settler, pre filtration, Dual media filter, ultra filtration (three stage), RO plant (triple stage) for treatment of process condensate. • The industry has installed online continuous effluent monitoring system at the outlet of R.O., which has been connected with the server of Punjab Pollution Control Board and Central Pollution Control Board for real time monitoring of quality of treated industrial waste water. • The industry is utilizing the Permeate water of the RO plant installed after ETP in the Cooling Towers as make-up water and the RO plant Reject water onto land for irrigation purpose in the plantation area as per Karnal Technology in about 4 acres of land area as per Karnal Technology adjoining to the premises of its sister concern unit.
XII.	**Emission Control Status**
	• The industry has installed co generation power plant of capacity 3 MW alongwith the boiler of steam generation capacity of 36 TPH.

Crushed coal and rice husk are use as fuel in the boiler. The industry has installed Electro Static Precipitator(ESP) as APCD to contain the various pollutants within the prescribed standards.

- The industry has installed pulverizer for crushing of the coal and has installed multi-cyclone followed by bag filter house as APCD to contain the concentration of SPM within the prescribed standards.
- The industry has installed a silo of capacity 50 T for storage of boiler ash. The blow down from the boiler is used in quenching of ash.
- The industry has installed 2 no. DG sets of capacity 1010 KVA and 500 KVA which are equipped with canopies and stacks of adequate height.

XIII. **Discussion w.r.t. Analysis Results of Effluent/ Emissions**

Effluent Analysis:

The SPCB had later visited the industry on 23/09/2020 and collected sample from the outlet of ETP (permeate of RO system) leading to cooling tower/ onto land for plantation and got analyzed from SPCB laboratory. The analysis results are as under:

Sr. No.	Parameters	RO permeate II
1.	pH	5.6
2.	Chemical Oxygen Demand mg/l	13
3.	Bio-Chemical Oxygen Demand mg/l	BDL
4.	Total Suspended Solids mg/l	BDL
5.	Total Dissolved Solids mg/l	326
6.	*Oil & Grease mg/l	BDL

The analysis results reveal that the concentration of the various parameters is within the permissible limit for discharges onto land for plantation purpose.

Emission Samples:

The SPCB had later visited the industry on 23/09/2020 and collected sample got analyzed from SPCB laboratory. The analysis results are as under:

Point of sample	Parameter	Results	Prescribed Standards

	collection			
	From Port hole on stack after APCD (ESP)	Particulate Matter	76 mg/Nm^3 at 12 % CO_2	150 mg/Nm^3 at 12 % CO_2
	The analysis results reveal that the concentration of emission from the stack was within the permissible limits as prescribed by the CPCB.			
XIV.	**Past Compliance and Legal Status**			
	Past Compliance:			

The industry was lastly granted renewal of 'consent to operate' under the Water (Prevention & Control of Pollution) Act, 1974 subject to the following specific conditions:

1. The industry shall reuse its entire treated effluent for industrial activities and shall discharge into RO reject (not more than 35 KLD) onto land for plantation/ irrigation conforming to the effluent standards prescribed by the Board/ Ministry of Environment and Forests & Climate Change.
2. The industry shall ensure that no trade & domestic effluent (treated or untreated) shall find its way into choe/ drain/ storm water drain or any inland surface water at any time or any other unauthorized place by any unauthorized means.
3. The industry shall comply with the bye laws of the Master Plan of the area notified by the Government.
4. Regarding use of rainwater harvesting system, the industry shall ensure the compliance of following conditions:
    a. Regarding use of rainwater shall be discharged into rainwater harvesting system.
    b. No surface run off or any other rainwater flowing in lawns/ garden be allowed to enter into the rain water harvesting system.
    c. All the pipes provided for recharging system should be visible and properly coloured with the light blue colour.

	5. The industry shall do colour coding of various pipelines carrying fresh water, untreated wastewater & treated wastewater. 6. The industry shall ensure the compliance of the Solid Waste Management Rules, 2016 as well as the Construction and Demolition Rules, 2016. 7. The industry shall ensure that CCTV cameras installed on pollution control devices, shall always remain connected with the website of the Board for online surveillance of pollution control devices. 8. The industry shall regularly carry out the monitoring of quality of underground water monitored through the piezometer wells installed by it, to have first hand information regarding present status of quality of underground water. The industry was lastly granted renewal of 'consent to operate' under the Air (Prevention & Control of Pollution) Act, 1981 subject to the following specific conditions: 1. The industry shall be bound to comply with the order to be passed by the Honble National Green Tribunal in O.A. no. 901 of 2018 and in-case the Hon'ble National Green Tribunal directs the Board to curtail the period of validity of consent, the Board will be at liberty to curtail the validity of this consent as per order of the Hon'ble National Green Tribunal. 2. The industry shall get its stack emission sample(s) of the stack attached with the coal pulverizing section analyzed from Board lab, within one month and thereafter shall submit the analysis report to the Board within 10 days. M/s Rajasthan Liquors Limited (Distillery Division), Village. Haripur Hinduan, Barwala Road, DeraBassi, Distt. SAS Nagar. 3. The industry shall ensure that the sample collection facility attached with the stacks should be as per guidelines mentioned in EPR-3 norms prescribed by the CPCB. 4. The industry shall not consume any other fuel for burning purpose except HSD for D.G. Set & Coal/ Rice Husk for the 36 TPH boiler

	installed within its premises, without the prior written permission of the Board. ***Legal Status:*** As per the record of the SPCB, no ongoing legal proceedings are pending in any court of Law with respect to control of pollution.
XV.	**Recommendations**
	The industry is to operate and maintain its ETP, STP and APCD diligently and maintain record regarding their operation on regular basis. Further, the industry is required to submit the same record to the SPCB on monthly basis.

*****

Annexure - K

PUNJAB POLLUTION CONTROL BOARD

Regional Office

Plot No. 55, Phase-II, Opposite Bassi Theater, Mohali - 160 051.

Phone: 0172 – 5013300

No. 8165 **Date** 24/12/2020

To

The Technical Expert,
Executing Committee,
Constituted by Hon'ble NGT,
Tower no. 5, 4th Floor, Forest Complex,
Sector-68, SAS Nagar.

Kindly put-up file of 1.01.2020 and 16.12.2020 Submitted for information please

Chairman [Mgr. S] 4.1.2021

Subject: **Compliance of order dated 08.07.2020 and 17.08.2020 in OA no. 101 of 2020 in the matter of 'Suhail Dhurani V/s State of Punjab' and OA no. 164 of 2020 in the matter of 'Satinder Mohan Singh Grover & Ors. V/s Central Pollution Control Board & Ors'.**

Ref: **NGT Monitoring Committee office letter endst. no. CEC/2020/1297 dated 04.12.2020.**

In compliance to the directions of Hon'ble National Green Tribunal, New Delhi vide its order dated 17.08.2020, the report of the joint committee of Central Pollution Control Board and Punjab State Pollution Control Board was filed in the Hon'ble NGT and copy of the report was also forwarded to Hon'ble Justice Jasbir Singh, former Judge of Punjab & Haryana High Court, Chairman, Hon'ble NGT Monitoring Committee through email.

The report of the joint committee was considered by the Monitoring Committee and sought the action against 04 industries which were reported as non complying. For initiating action against the industries report sent to higher Authorities and action is under process. The Monitoring Committee has also raised the certain issues conveyed to the Board vide letter no. 1297 dated 04.12.2020. Accordingly, a meeting of the joint committee was held at Nodal office, PPCB, SAS Nagar on 16.12.2020 with CPCB representative Sh. Suneel Dave. Accordingly, to address the issues, the field visit was also carried out on 17.12.2020 by the Joint Committee. During the visit, surface water samples from the upstream and downstream of the drains located in the vicinity i.e. Haibatpura Drain and Dhabi Drain were collected. The groundwater samples from 02 piezometers was also collected from the premises of M/s

Nectar Lifesciences Ltd. (Unit-2), Dera Bassi so as to assess the quality of groundwater along the Haibatpura drain. Samples sent to Board's lab for analysis and results are awaited.

Soil samples were also collected on 21.12.2020 and sent for analysis. The report of the same is awaited.

The complete report can be prepared after the receipt of the analysis reports so as to address the various issues raised. The report shall be submitted in the Hon'ble NGT and to the Hon'ble Monitoring Committee after the approval of the competent authority of the Board as well as CPCB.

Environmental Engineer

Endst. No._____ **Dated_____**

A copy of the above is forwarded to the Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-1, Patiala for information please.

-Sd-

Environmental Engineer

111

Annexure - L

Report of the Joint Committee of Central Pollution Control Boardand Punjab State Pollution Control Board: Hon'ble National Green Tribunal through orders dated 08.07.2020 in the matter of OA No. 101 of 2020 titled as 'Suhail Dhurani V/s State of Punjab' and orders dated 17.08.2020 in the matter of OA No. 164 of 2020 titled as 'Satinder Mohan Singh Grover &Ors. V/s Central Pollution Control Board &Ors.'.

Para No. 1 Comprehensive environmental pollution index (CEPI) of Dera Bassi Area.

CEPI is calculated for the critically polluted area as well as severe critically polluted areas. However, Tehsil Dera Bassi does not fall under critically polluted area or severe critically polluted areas.

Para No. 2 Collection of stack emission samples w.r.t. parameters VOC, SO2, HC, wherever, applicable.

The Stack emission samples were collected w.r.t. parameters PM, SO_2, NOx, CO & HCL wherever applicable, and the analysis results have incorporated in the report of joint committee filed before the Hon'ble NGT.

Para No. 3 Water quality of the drain/ choe.

The Haibatpura Drain and Dhabi Drain flow in the region and confluencing the river Ghaggar. The Committee also collected the samples from the upstream and downstream of Haibatpura Drain and Dhabi Drain on 17.12.2020 and the analysis results are tabulated as under:-

Table No. 1
Analysis results of Surface water monitoring

S. No.	Parameters	Date of Sampling : 17th December, 2020			
		Upstream of Haibatpura Drain at Village Haripur Hinduan	Downstream of Haibatpura Drain at Village Haibatpur	Upstream of Dhabi Drain at Industrial area Focal Point, Dera Bassi	Downstream of Dhabi Drain near bridge/ flyover Dera Bassi
1.	pH	8.3	7.6	5.7	7.8
2.	COD mg/l	182	508	756	610
3.	BOD mg/l	42	119	194	142
4.	TSS mg/l	32	82	232	124
5.	TDS mg/l	753	1534	1349	1089
6.	O & G mg/l	BDL	BDL	BDL	BDL
7.	Phosphate as P mg/l	2.5	2.2	0.9	07
8.	Sulphide mg/l	BDL	2.4	0.6	5.0
9.	Phenol mg/l	BDL	BDL	BDL	BDL
10.	Cyanide mg/l	BDL	BDL	BDL	BDL
11.	Total Chrome mg/l	BDL	BDL	BDL	BDL
12.	Hexa Chrome mg/l	BDL	BDL	BDL	BDL
13.	Lead as Pb mg/l	BDL	BDL	BDL	BDL
14.	Mercury as Hg mg/l	BDL	BDL	BDL	BDL
15.	Arsenic as As mg/l	BDL	BDL	BDL	BDL

Note: BDL: Below detection limit

The higher COD, as depicted in the table above indicates that the drains receiving untreated domestic waste from the villages located on the banks of the drains alongwith the treated industrial effluent. Due to the higher ratio between COD and BOD of water quality the possibility of incidental discharges from the

industries namely M/s Nectar Lifesciences Ltd. (Unit-1), Village Saidpura, Dera Bassi, M/s Nectar Lifesciences Ltd. (Unit-2), Village Saidpura, Dera Bassi and M/s Punjab Chemical & Crop Protection Ltd. (Agro Division), Village Bhankarpur, Dera Bassi, operating on the banks of the above drains cannot be ruled out.

Para no. 4 Groundwater quality monitoring:-

Groundwater samples were collected by the Punjab Pollution Control Board on 10.09.2020 & 19.10.2020 in the vicinity of the drains during the regular monitoring and the joint sampling was carried out by the CPCB and Punjab Pollution Control Board on 17.12.2020. The analysis results are as under:-

Table no. 2

S. No.	Location	Results
	Hand pump: Near Gurudwara village Kakrali Ramgarh Road, Dera Bassi Date of collection: 19.10.2020	
	Parameters	7.0
1.	pH	1764
2.	EC µs/cm	1038
3.	TDS mg/l	927
4.	TFS mg/l	176
5.	T.H. mg/l	36
6.	Ca mg/l	0.3
7.	F mg/l	144
8.	Cl mg/l	38
9.	SO4 mg/l	310
10.	T. alkaline mg/l	511
11.	Na mg/l	7
12.	K mg/l	16.7
13.	SAR	0.29
14.	Fe mg/l	BDL
15.	Zn mg/l	BDL
16.	COD	BDL
17.	BOD	BDL
18.	Turbidity	BDL
19.	TSS	BDL
20.	TKN	BDL
21.	PO4	BDL
22.	P. Alkaline	BDL
23.	T.Coli	BDL
24.	F.Coli	BDL
25.	T.Cr.	BDL
26.	Ni	BDL
27.	Pb	BDL
28.	Cu	BDL
29.	Cd	BDL
30.	Hg	BDL
31.	As	BDL
Sr. No.	**Location**	**Piezowell No. 1**
	Piezometer : M/s Punjab Chemical & Crop Protection Ltd., Date of collection: 10.09.2020	
	Parameters	
1)	*Chemical Oxygen Demand mg/l	BDL
2)	*Bio-Chemical Oxygen Demand mg/l	BDL
3)	*Ammonical Nitrogen mg/l	BDL
4)	Total Alkalinity mg/l	220
5)	*Fluoride mg/l	0.22

6)	Chloride mg/l	45
7)	*Sodium mg/l	76
8)	*Potassium mg/l	6
9)	Total Dissolved Solids mg/l	452
10)	*Total Fixed Solids mg/l	421
11)	*Total Hardness mg/l	228
12)	Calcium mg/l	53
13)	Iron mg/l	BDL
14)	*Nickel mg/l	BDL
15)	Total Chrome mg/l	BDL
16)	Zinc mg/l	0.3
17)	Copper mg/l	BDL
18)	Lead mg/l	BDL
19)	Cadmium mg/l	BDL
20)	Total Coliform MPN/ 100 ml	BDL
21)	Total Feacal Coliform MPN/100 ml	BDL
22)	Alpha HCH	BDL
23)	Beta HCH	BDL
24)	Gama HCH	BDL
25)	Anilophos	BDL
26)	Chloropyrifos	BDL
27)	DDT	BDL
28)	4'DDT	BDL
29)	Endosulphan	BDL
30)	Endosulphan-2	BDL
31)	Dieldrin	BDL
32)	Aldrin & Malathian	BDL
Sr. No.	**Location**	**Piezowell No.2**
	Piezometer : M/s Punjab Chemical & Crop Protection Ltd., Date of collection: 10.09.2020	
	Parameters	
33)	*Chemical Oxygen Demand mg/l	BDl
34)	*Bio-Chemical Oxygen Demand mg/l	BDL
35)	*Ammonical Nitrogen mg/l	BDL
36)	Total Alkalinity mg/l	224
37)	*Fluoride mg/l	0.2
38)	Chloride mg/l	40
39)	*Sodium mg/l	72
40)	*Potassium mg/l	6
41)	Total Dissolved Solids mg/l	442
42)	*Total Fixed Solids mg/l	418
43)	*Total Hardness mg/l	226
44)	Calcium mg/l	44
45)	Iron mg/l	BDL
46)	*Nickel mg/l	BDl
47)	Total Chrome mg/l	BDL
48)	Zinc mg/l	0.28
49)	Copper mg/l	BDL
50)	Lead mg/l	BDL
51)	Cadmium mg/l	BDL
52)	Total Coliform MPN/ 100 ml	BDL
53)	Total Feacal Coliform MPN/100 ml	BDL
54)	Alpha HCH	BDL
55)	Beta HCH	BDL
56)	Gama HCH	BDL
57)	Anilophos	BDL
58)	Chloropyrifos	BDL
59)	DDT	BDL
60)	4'DDT	BDL
61)	Endosulphan	BDL
62)	Endosulphan-2	BDL
63)	Dieldrin	BDL
64)	Aldrin & Malathian	BDL
Sr. No.	**Location**	**Piezometer**

	Piezometer : M/s Nectar Lifesciences Ltd. (Unit-2), Date of collection:-17.12.2020	near Admin Block
	Parameters	
1.	pH	7.2
2.	Electrical Conductance µs/cm	585
3.	TDS mg/l	380
4.	Total Fixed Solids mg/l	323
5.	Total Hardness mg/l	167
6.	Magnesium Hardness mg/l	99
7.	Chloride mg/l	18
8.	Sulphate mg/l	20
9.	Fluoride mg/l	2
10.	Nitrate as NO3 mg/l	1.9
11.	Total Alkalinity mg/l	179
12.	Zinc mg/l	0.12
13.	TSS	BDL
14.	COD	BDL
15.	BOD	BDL
16.	Amm.N	BDL
17.	Turb	BDL
18.	PO4	BDL
19.	NO2	BDL
20.	P.ALk	BDL
21.	As	BDL
22.	Ni	BDL
23.	Cu	BDL
24.	Hg	BDL
25.	Total Cr	BDL
26.	Cd	BDL
27.	Pb	BDL
28.	Fe	BDL
29.	Cyanide	BDL
30.	Phenols	BDL

Sr. No.	Location	Piezometer near power plant
	Piezometer : M/s Nectar Lifesciences Ltd. (Unit-2), Date of collection:-17.12.2020	
	Parameters	
31.	pH	7.1
32.	Electrical Conductance µs/cm	538
33.	TDS mg/l	350
34.	Total Fixed Solids mg/l	298
35.	Total Hardness mg/l	146
36.	Magnesium Hardness mg/l	60
37.	Chloride mg/l	16
38.	Sulphate mg/l	17
39.	Fluoride mg/l	1.2
40.	Nitrate as NO3 mg/l	1.3
41.	Total Alkalinity mg/l	168
42.	Zinc mg/l	BDL
43.	TSS	BDL
44.	COD	BDL
45.	BOD	BDL
46.	Amm.N	BDL
47.	Turb	BDL
48.	PO4	BDL
49.	NO2	BDL
50.	P.ALk	BDL
51.	As	BDL
52.	Ni	BDL
53.	Cu	BDL
54.	Hg	BDL
55.	Total Cr	BDL
56.	Cd	BDL
57.	Pb	BDL
58.	Fe	BDL

59.	Cyanide	BDL
60.	Phenols	BDL

The above analysis results reveals that ground water quality in the catchment is fit for drinking purpose.

Para no. 5 **Quality of Soil:** Soil samples from the plantation area of Nector Lifesciences-II, Derabassi and nearby agricultural fields adjacent to Haibatpura drain were collected on 21.12.2020 and sent for analysis. Report of the same is still awaited.

Para no.6 **Hazardous waste generation and its disposal by the industries:**

The detail of different category of hazardous waste generated alongwith its authorized quantity and its disposal by the industries mentioned in the aforesaid order and found operating at a distance of about 1 Km from the closure to the residence of the complainants is as under:

1) SBL Speciality Coating Pvt. Ltd., Haibatpur Road, Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 33.1 – "Empty barrels/ containers / liners contaminated with hazardous chemicals /wastes"	23.38 Tonn/annum	Through authorized recycler / common facility
2)	Category 5.1- "Waste oil"	@ 0.1 KL/annum	Through authorized recycler / common facility
3)	Category 5.2 – "Wastes or residues containing oil"	@ 6.68 Tonn/annum	Through authorized recycler / common facility
4)	Category 21.1 – "Process wastes, residues and sludges"	@ 3.43 Tonn/annum	Through authorized recycler / common facility

2) KDDL Limited, Haibatpur Road, Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 5.1-Used or spent oil	@ 0.36 KL/ Annum	Through authorized recycler / common facility
2)	Category 5.2- Wastes or residues containing oil	@ 0.156 T/ Annum	Through authorized recycler / common facility
3)	Category 21.1- Process wastes, residues and sludges	@0.084 T/ Annum	Through authorized recycler / common facility
4)	Category 35.3- Chemical sludge from waste water treatment	@ 7.5 T/ Annum	Through authorized recycler / common facility

3) Hansa Tubes Pvt. Ltd., Haibatpur Road, Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 5.1-Used or spent oil	@ 0. 10 KL/Annum	Through authorized recycler / common facility
2)	Category 5.2- Wastes or residues containing oil	@ 0.120 KL/Annum	Through authorized recycler / common facility
3)	Category 34.2- Sludge from treatment of waste water arising out of cleaning / disposal of barrels / cont	@ 3.650 T/Annum	Through authorized recycler / common facility

4) Contour Automotive Products Ltd., Village Bhankarpur, Mubarikpur Road, Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 5.1-Used or spent oil	@ 0.1 KL/Annum	Through authorized recycler / common facility
2)	Category 5.2 Wastes or residues containing oil	@ 0.2 T/Annum	Through authorized recycler / common facility
3)	Category 21.1 Paint or Paint Residues	@ 0.1 T/Annum	Through authorized recycler / common facility
4)	Category 33.1 Empty barrels/containers /liners contaminated with hazardous chemical s /wastes	@ 300 Number/Annum	Through authorized recycler / common facility
5)	Category 35.1 Exhaust Air or Gas cleaning residue	@ 15 T/Annum	Through authorized recycler / common facility

5) Nectar Lifesciences Ltd. (Unit-2), Village Saidpura, Tehsil Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 28.1- Process Residue and wastes	@ 41.975 T/Annum	Through authorized recycler / common facility
2)	Category 28.4-Off specification products	@ 0.365 T/Annum	Through authorized recycler / common facility
3)	Category 28.3- Spent carbon	@ 5.84 T/Annum	Through authorized recycler / common facility
4)	Category 33.1- Empty barrels/containers /liners contaminated with hazardous chemical s /wastes	@ 3650 Number/ Annum	Through authorized recycler / common facility
5)	Category 35.3- Chemical sludge from waste water treatment	@ 25.55 T/Annum	Through authorized recycler / common facility
6)	Category 37.2-Ash from incinerator and flue gas cleaning residue	@ 32.85 T/Annum	Through authorized recycler / common facility
7)	Category 36.1- Any process or distillation residue	@ 73 T/Annum	Through authorized recycler / common facility
8)	Category 5.1-Used or spent oil	@ 3.65 T/Annum	Through authorized recycler / common facility
9)	Category 36.2- Spent carbon or filter medium	@ 7.3 T/Annum	Through authorized recycler / common facility
10)	Category 5.2- Wastes or residues containing oil	@ 0.002 T/Annum	Through authorized recycler / common facility
11)	Category 33.2- Contaminated cotton rags or other cleaning materials	@ 0.002 T/Annum	Through authorized recycler / common facility

6) Nectar Lifesciences Ltd. (Unit-1), Village Saidpura, Tehsil Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 28.1- Process Residue and wastes	@ 1.42 T/Annum	Through authorized recycler / common facility
2)	Category 28.3- Spent carbon	@ 10.95 T/Annum	Through authorized recycler / common facility
3)	Category 28.4-Off specification products	@ 0.365 T/Annum	Through authorized recycler / common facility
4)	Category 33.1- Empty barrels/containers /liners contaminated with hazardous chemical s /wastes	@ 1460 Number/ Annum	Through authorized recycler / common facility
5)	Category 36.1- Any process or distillation residue	@ 18.25 T/Annum	Through authorized recycler / common facility
6)	Category 36.2- Spent carbon or filter medium	@ 4.38 T/Annum	Through authorized recycler / common facility
7)	Category 5.1-Used or spent oil	@ 1 KL/Annum	Through authorized recycler

			/ common facility
8)	Category 5.2- Wastes or residues containing oil	@ 0.002 T/Annum	Through authorized recycler / common facility
9)	Category 33.2- Contaminated cotton rags or other cleaning materials	@ 0.002 T/Annum	Through authorized recycler / common facility

7) Punjab Chemicals & Crop Protection Ltd. (Agro-Division), Village Bhankarpur, Dera Bassi

Sr. No.	Hazardous waste Category	Quantity	Disposal arrangements
1)	Category 5.1-Used or spent oil	@ 12.6 KL/Annum	Through authorized recycler / common facility
2)	Category 28.1- Process Residue and wastes	@ 0.6 T/Annum	Through authorized recycler / common facility
3)	Category 35.1- Exhaust Air or Gas cleaning residue	@ 1.058.85 T/Annum	Through authorized recycler / common facility
4)	Category 37.1- Sludge from wet scrubber s	@ 0.6 T/Annum	Through authorized recycler / common facility
5)	Category 37.2-Ash from incinerator and flue gas cleaning residue	@ 2.904 T/Annum	Through authorized recycler / common facility
6)	Category 37.3- Concentration or evaporation residues	@ 639.845 T/Annum	Through authorized recycler / common facility
7)	Category 33.1- Empty barrels/containers /liners contaminated with hazardous chemical s /wastes	@ 0.12 T/Annum	Through authorized recycler / common facility

Para no. 7 Disposal of solid waste including rice husk ash and its management

Rice husk is used as a fuel in several industries and the detail of its consumption and its disposal is as under:

1) Nectar Lifesciences Ltd (Unit-1), Village Saidpura Tehsil Dera Bassi:
The authorized consumption of rice husk is 16 MTD and fuel ash generated is shifted to its sister concern unit M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura Tehsil Dera Bassi operating adjacent to the premises from where it is further supplied to the nearby farmers to use it as a manure / brick kilns to use it in preparation of brick earth and also dumped to low lying area in village Nimbuan, Dera Bassi.

2) Nectar Lifesciences Ltd (Unit-2), Village Saidpura Tehsil Dera Bassi:
The authorized consumption of rice husk is 520 MTD and fuel ash generated is further supplied to the nearby farmers to use it as a manure / brick kilns to use it in preparation of brick earth and also dumped to low lying area in village Nimbuan, Dera Bassi.

3) Rajasthan Liquors Ltd. (Distillery Division), Village Haripur Hinduan, Tehsil Dera Bassi:
The authorized consumption of rice husk is 130 MTD and fuel ash generated is further supplied to the nearby farmers to use it as a manure / brick kilns to use it in preparation of brick earth.

Para no. 8 Ambient air quality of Dera Bassi area

There are 02 no. ambient air quality monitoring stations installed in Dera Bassi town for monitoring of ambient air. Yearly results of the same are as under:

Station Name: - PCCPL, Mubarikpur Road, Dera Bassi

Month	RSPM ($\mu g/m^3$)	NO_x ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)
	2020	2020	2020
January	118	13	7
February	104	12	6
March	92	11	6
April	--	--	--
May	107	16	8
June	107	17	7
July	89	16	6
August	64	18	6
September	82	17	6
October	127	27	9
Average	**98.88**	**16.33**	**6.78**

Station Name: - M/s Winsome Yarns Ltd., Barwala Road, Dera Bassi.

Month	RSPM ($\mu g/m^3$)	NO_x ($\mu g/m^3$)	SO_2($\mu g/m^3$)
	2020	2020	2020
January	112	12	6
February	103	13	6
March	112	14	7
April	--	--	--
May	110	16	8
June	90	16	6
July	91	17	6
August	63	19	6
September	91	17	6
October	125	26	9
Average	**99.67**	**16.67**	**6.67**

The prescribed standards under NAMP for RSPM is 100 $\mu g/m^3$ (24 hours time weighted avg.). However, the above results reveals that air quality of Tehsil Derabassi is slightly exceeding in the month of January, February, March, May, June & October the prescribed limits. The above may be due to the construction activities in the nearby areas and also due to the traffic congestion in the town. However, Action plan for the mitigation of air pollution of Tehsil Dera Bassi already notified by Directorate of Environment and Climate Change Department of Science, Technology and Environment, Government of Punjab vide dated 30.04.2019. The progress w.r.t various activities delineated in the Action Plan related to each stake holder department is being reviewed on monthly basis by the Air Quality Monitoring Committes constituted at District/Sub Division Level.

Para no. 9 Action plan for mitigation of pollution in the area with relevant details.

Action plan for the mitigation of air pollution of Tehsil Dera Bassi already notified by Directorate of Environment and Climate Change Department of Science, Technology and Environment, Government of Punjab vide dated 30.04.2019.

Er. Mohit Bisht, AEE, PPCB

Er. Rantej Sharma, AEE, PPCB

Er. Lavneet Dubey, EE, PPCB

08/01/2021

Er. Suneel Dave, Addl. Director, CPCB

Annexure-M

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No. — E 3458-63/H.O.Lab. Monitoring-2021
2. ULR No. — TC704518000000002900P
3. Name of Industry — M/s KDDL Ltd. Vill Haibatpur, Haibatpura road Dera Bassi
4. Name of Sample collecting Officer — Er. Mohit Bisht AEE , Er. Rantej Sharma AEE
5. Designation of Officer authorizing Test — EE, RO,SAS Nagar
6. Type of Sample — Grab
7. Date & Time of Sample collection — 28.01.2021
8. Date & Time of Sample receipt in Lab. — 29.01.2021
9. Period of Analysis — 29.01.2021 to 5.02.2021
10. Test Methods — As per relevant parts of IS:3025/IS:1622 & Method of APHA

Results

Sr. No.	Parameters	Inlet tank of ETP	Outlet of Tube settler	Final Outlet after filteration	Prescribed standards as per EPA	Plantation area	Inlet of STP	Outlet of STP	Prescribed standards as per EPA
1	pH	6.7	7.2	7.4	6.0-9.0	8.0	8.0	7.6	6.5-9.0
2	Chemical Oxygen Demand mg/l	365	314	247	-	320	164	116	-
3	Bio-Chemical Oxygen Demand mg/l	55	52	36	-	48	55	27	30
4	Total Suspended Solids mg/l	41	38	29	100	37	48	41	100
5	Total Dissolveed Solids mg/l	705	1610	1655	-	1580	986	1077	-
6	*Oil & Grease mg/l	-	-	-	10	BDL	BDL	BDL	-
7	*Sulphate mg/l	98	254	226	400	209	-	-	-
8	*Phosphate mg/l	0.1	0.2	0.1	5.0	BDL	-	-	-
9	Nickel mg/l	6.47	1.31	1.07	3.0	1.01	-	-	-
10	Zinc mg/l	1.34	0.52	0.33	5.0	027	-	-	-
11	*Silver mg/l	BDL	BDL	BDL	-	BDL	-	-	-
12	*Cyanide mg/l	BDL	BDL	BDL	-	BDL	-	-	-

* Not covered under the scope of NABL

Note: BDL means below Method detection limit

Remarks: The prescribed standards are EPA standards. However, if any stringent/other standards have been imposed by the Board, the same shall prevail.

---End of Report---

Analyzed By

Incharge Water Lab

Endst. No: 2826-27 Dt. 5/2/2021

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar

Jr. Scientific Officer

PUNJAB POLLUTION CONTROL BOARD

Regional Office, SAS Nagar.

E3458-3463

DETAILS TO BE SUPPLIED FOR THE COLLECTION OF SAMPLE

1.	Name & Address of the industry	M/S KOOL Ltd., Vill. Haibatpura, Haibatpura Road, Dera Bassi			
2.	Category: R	Scale: L	Raw Material: Brass Metal & Various Chemicals	Product: Watch Dials	
3.	i. Processes involved				
4.	i. Give the name of the processes in operation at the time of sampling	All in operation			
	ii. The number of wastewater streams from different processes along with discharge of each.	All leading to the inlet collection tank of ETP			
5.	i. Quantity of industrial effluent discharge per hour (in liters)/m³/day.	Emf : 13.89 m³/hr +Σ 13901 9.64 m³	MFM : Σ 2926 5 m³		
	ii. Is the discharge of industrial effluent continuous on intermittent and it intermittent, date & time of its discharges	Intermittent			
	iii. Is the quantity and quality of industrial effluent from different streams uniform through out or not.	Almost Uniform			
	iv. Present method of disposal of industrial effluent(if plantation, give detail)	Onto land for plantation			
6.	i. Working hours	8 hrs	Closed day: Sunday		
7.	Number of outlets through which industrial effluent is discharged/carried outside the industry.	One no. into plantation area within premises			
8.	Name of the occupants/representative of the industry with designation and mobile no present at the time of sampling.	Sh. Karan Singh Rana, AGM - HR	Mobile No. 9805082635		
9.	Process not working at the time of sampling & why?	All in operation			
10.	Parameters to be analyzed.	1,2,3 → A - pH, TSS, TDS, PO_4, SO_4 B - Ni, Zn, Ag C - CN D - COD E - O&G 5,6 → A. pH, TSS, TDS, BOD B. COD C. O&G			
11.	Point of sample collection	E3458 – 1. Inlet tank of ETP E3459 – 2. Outlet of Tube Settler E3460 – 3. Final outlet after filteration	4. Plantation Area E3461 5. Inlet of STP E3462 6. Outlet of STP E3463		
12.	Sample preserved for (tick)				
	i. Organic parameter (freezer below 4° C)	✓			
	ii. Metals (pH less than 2 with HNO_3)	✓			
	iii. Cyanide (pH above 10 with NaOH)	✓			
	iv. Oil & grease (separate 1 Lt. sample glass bottles & freeze)	✓			
	v. Others	Separate bottle for COD			
13.	Details visuals report of Water & Air	1. Light Yellow 2. Slight Yellowish tint 3. Almost Clear	4. Slightly Turbid 5. Highly Turbid 6. Slightly Turbid		
14.	i. Name the components of the ETP which were working.	Inlet Tank → Chemical Dosing (neutralizer) → Aeration Tank (2 nos.) → Flocculator → Tube Settler → Outlet ← ACF ← PSF ← TUF			
	ii. If any component was not working why?	—			
15.	Date & time of collecting the sample	28/01/21 at 11:15 AM onwards			
16.	Temperature in °C a) Air/Sample	13°C / 17°C			

121

17.	Colour and odour of the sample	As per 13.
18.	Type of sample collected grab or composite.	Grab
19.	Remarks:- → The ind. has installed ETP based on physico-chemical treatment & is operating its ETP in batches for treatment of effluent. → The ind. has installed EMF at wall as well as MFM at outlet of ETP & reading given at point 5(i) above. → The ind. has installed electronic pH analyzer & TDS analyzer & the readings were noted as 6.88 & 673 mg/l respectively. → The STP installed was also in operation. → As per record maintained & shown by the rep. of ind., the ind. has treated avg. of 50.7 KLD effluent in Nov, 20, 54.5 KLD in Dec, 20 & 51.6 KLD in Jan, 21 (till date), through the ETP. → Further, sample of soil was also collected from the plantation area for analysis purpose. → The samples have been collected for monitoring purpose in presence of NGT monitoring Committee team headed by Justice Jasbir Singh, Sh. S.C. Aggarwal, Sant Seechewal Ji, Dr. Babu Ram and Sh. Lavneet Dubey, EE	

NOTE:-

The samples of trade effluent of M/s _____ from the point mentioned at Sr. No. 18 above was collected in the presence of Sh. _____ occupier _____ representative of the industry/Placed in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to them. No request to send the sample to the State Water Laboratory under section 52 (i) if the said Act has been made by occupier/representative of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed _____ hearing inscription of AEE.

1) Er. Mohit Bansal AEE(3) Smt. Manmeet Kaur, SA
2) Er. Ranjeev Sharma, AE(8) Sh. Karan Rana, AGM-NK

Signature of the Occupant/Representative of the Industry with Designation

28/01/2021

:Signature of the Officer official collecting the sample

28/01/21

Received sealed/unsealed and preserved sample on _____ at _____ through Sh. _____.

BOARD ANALYST
Patiala

Annexure - N

PUNJAB POLLUTION CONTROL BOARD

AIR LABORATORY, HEAD OFFICE, VATAVARAN BHAWAN, PATIALA
Telefax: 0175-2302392 Email : ppcbairlab@gmail.com

1. Laboratory Sample No.	1044/H.O.Lab./Air/Monitoring/2020-21
2. Name of Industry	M/s KDDL Ltd, Haibutpur Road, Derabassi, Distt-S.A.S. Nagar
3 Name of Sample collecting Officer	Er.Rantej Sharma, AEE, Er. Mohit Bisht, AEE and Mrs. Manveer Kaur, Sc. Astt.
4. Designation of authorizing Test	Environmental Engineer, Regional Office, Mohali.
5. Type of Sample	Stack Emission
6. Date &Time of Sample collection	28-01-2021
7. Date &Time of Sample receipt in Lab.	29-01-2021
8. Point of Sample collection	Details as Given Below

Results:

Point of sample Collection	Parameter	Results	Prescribed Standard
Port hole on stack of lacquering section after APCD	Particulate Matter	30 mg/Nm^3	150 mg/Nm^3

Note:- If any, stringent limits/specific standard has been prescribed time to time by MoEF&CC, CPCB and PPCB then stringent limits/specific standard would prevail subject to clarification from the concerned Regional Office.

Analyzed by:

05-2-2021
for **Assistant Scientific Officer**
(Air Lab)

Endst. No: 2812-13 **Dt.** 5-2-21

A copy of the above is forwarded to the following for information and necessary action: -

1. The Senior Environmental Engineer, Punjab Pollution Control Board, ZO- 1, Patiala.
2. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, S.A.S. Nagar.

05.2.2021
for **Assistant Scientific Officer**
(Air Lab)

PB Jan

PUNJAB POLLUTION CONTROL BOARD
Regional Office, Sangrur.

24/01/21

ASO L PT)

SF

DATA SHEET 1044

DETALIS TO BE SUPPLIED FOR THE COLLECTION OF SAMPLE OF PROCESS/FLUE GAS EMISSION.

1. Name of the Industry with Address: M/S KDDL Limited, Haibatpur Road, Deea Bassi, SAS Nagar
2. Date and time of collection of the sample: Date 28 Month Jan Year 2021 Hrs. 12:10 pm
3. Type and capacity of the Boiler and Rating: (i) Lacqueing section (ii) Buffing section - Not in operation
4. Height of the stack from ground level+: 10 feet above Roof Level
5. Diameter of the stack: Top 8 inch Bottom 31.5 inch
6. Type of air pollution control equipment (s) installed and working: (1) Wet Scrubber with Lacqueing Section (2) BFH with buffing Section (Not in operation)
7. Type of fuel used with quantity in MT/day of KL/day.: Type of fuel — Quantity —
8. Thimble No. with initial weight/type and volume of absorbent used.: S 37 - 9 Wt. - 1.6462 gm
9. Temperature °C: Ambient Air °C 14°C Air Emission °C 34°C
10. Process/flue emission velocity: 7.3 m/sec.
11. i. Rate and duration of sampling: 30 LPM for 25 min.

    ii. Carbon dioxide in flue gas emissions: —
12. Samples collected from: i) Port hole before inlet to APCD.

    ~~ii)~~ From port hole on stack. after APCD & Lacqueing Section
13. Persons with designation (Present at the time of collection of sample (s)): Mrs. Manveer Kaur, Scientific Assistant HO Waterlab.
14. Remarks:- (2) Er. Ranjeej Sharma, AEE (3) Er. Mohit Bisht, AEE

Sample collected in presence of NGT Monitoring Committee

i) Samples of the process/flue gas emission of M/s KOOL Limited, Dera Bassi from the point mentioned at Sr. No. 12 above was collected in the presence of Sh. Karan Singh Rana representative of the industry.

ii) The provisions of the section 26 of the Air (Prevention & Control of Pollution) Act, 1981 have been explained to the occupier/ representative of the industry.

iii) Request has been made by the industry to send the sample to Laboratory established under sub section (1) of section 26 of the Air Act, 1981.

iv) The samples has been collected as per the provisions of the Air (Prevention & Control of Pollution) Act, 1981.

v) The sample was sealed bearing the inscription as under and placing a chit signed by:-

i) _____ ii) _____

iii) _____ iv) _____

No request has been made by the industry
to send the sample to laboratory stablished under subsection (1) of section 28.

Signature of the occupier/representative of the Industry with designation with seal
28/01/2021

Signature of Officer/Official Collecting the sample.
28/1/21

Endst No._____

Dated 28/1/21

To

Mr./Mrs._____ Board Analyst,
Punjab Pollution Control Board,
Patiala.

Enclosed please find sent herewith sealed and preserved sample of emission collected under section 26 of the Air (Prevention & Control of Pollution) Act, 1981 from the industry mentioned in the data shed.

You are requested to analyze the following parameters and send the report as per the legal procedure laid down in the Air (Prevention & Control of Pollution) Act, 1981 immediately.

Parameters to be analyzed SPM

_____

Annexure - O

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
SOIL ANALYSIS REPORT

1. Laboratory Sample No.	101/H.O.Lab. Monitoring/2021
2. ULR No.	-
3. Name of Industry	M/s KDDL Ltd. Vill Haibatpur, Haibatpura road Dera Bassi
4. Name of Sample collecting Officer	Er. Mohit Bisht AEE , Er. Rantej Sharma AEE
5. Designation of Officer authorizing Test	EE, RO,SAS Nagar
6. Type of Sample	Grab
7. Date & Time of Sample collection	28.01.2021
8. Date & Time of Sample receipt in Lab.	29.01.2021
9. Period of Analysis	29.01.2021 to 5.02.2021
10. Test Methods	As per relevant parts of IS:3025/IS:1622 & Method of APHA

Results

Sr. No.	Parameters	Plantation area	
1	pH	8.1	
2	Eectrical Conductivity µs/cm	100	
3	Iron mg/gm	13.3	13300 mg/kg
4	Zinc mg/gm	0.03	30 mg/kg
5	Total Chromium mg/gm	0.01	10 mg/kg
6	Chloride mg/gm	1.2	1200 mg/kg
7	Total Hardness mg/gm	0.96	

Note: 5 gm of soil sample dissolved in 100 ml of de-ionized water
For metals: 2 gm of soil sample taken and volume made is 50 ml

---End of Report---

5/2/21 5/2/21
Analyzed By

5/2/21
Incharge Water Lab

Endst. No: 9818-19

Dt. 5/2/2021

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar

5/2/21
Jr. Scientific Officer

Sr. No. 101

PUNJAB POLLUTION CONTROL BOARD

Regional Office, SAS Nagar.

E 3458-3463

DETAILS TO BE SUPPLIED FOR THE COLLECTION OF SAMPLE

1. Name & Address of the industry: M/s KOOL Ltd., Vill. Haibatpur, Haibatpur Road, Dera Bassi

2. Category	Scale	Raw Material	Product
R	L	Brass Metal & Various Chemicals	Water Bottle

3. i. Processes involved

ii. Give the name of the processes in operation at the time of sampling: All in operation

iii. The number of wastewater streams from different processes along with discharge of each: All leading to the inlet collection tank of ETP

4. i. Quantity of industrial effluent discharge per hour (in liters)/m³/day: Emf : 13.89 m³/hr; ±Σ 13.90 19.64 m³ | MFM reading 22926.5 m³

ii. Is the discharge of industrial effluent continuous or intermittent and if intermittent, date & time of its discharges: Intermittent

iii. Is the quantity and quality of industrial effluent from different streams uniform through out or not: Almost Uniform

iv. Present method of disposal of industrial effluent(if plantation, give detail): Bnto bond for plantation & use

5. Working hours: 8 hrs | Closed day: Sunday

6. Number of outlets through which industrial effluent is discharged/carried outside the industry: One no. into plantation area within premises

7. Name of the occupants/representative of the industry with designation and mobile no present at the time of sampling: Sh. Karm Singh Rana, Asstt. HE | Mobile No: 9805082635

8. Process not working at the time of sampling & why?: All in operation

9. Parameters to be analyzed: 1,2,3 & 4 → A - pH, TSS, TDS, Na_2, SO_4 D - COD; B - Ni, Zn, Oil E - Oil & Grease; C - Cr

5, 6 - a. pH, TSS, TDS, B.O.D, COD; b. COD

10. Point of sample collection:
- E 3458 – 1. Inlet tank of ETP
- E 3459 – 2. Outlet of Tube Settler
- E 3460 – 3. Final outlet after filtration
- E 3461 – 4. Plantation Area
- 5. Inlet of STP E 3462
- 6. Outlet of STP E 3463

11. Sample preserved for (tick)
- i. Organic parameter (freezer below 4 °C): ✓
- ii. Metals (pH less than 2 with HNO_3): ✓
- iii. Cyanide (pH above 10 with NaOH): ✓
- iv. Oil & grease (separate 1 Lt. sample glass bottles & freeze): ✓
- v. Others: Separate bottle for COD

12. Details visuals report of Water & Air:
1. Light Yellow
2. Slight Yellowish tint
3. Almost Clear
4. Slightly Turbid
5. Highly Turbid
6. Slightly Turbid

13. i. Name the components of the ETP which were working: Inlet Tank → Chemical Dosing Chamber → Clarifloculator → Tube Settler → Collection Tank → ACF → BF → TUF

ii. If any component was not working why?

14. Date & time of collecting the sample: 28/01/21 at 11:15 AM

15. Temperature in °C
a) Air/Sample: 13°C / 17°C

17. Colour and odour of the sample: As per 13.

18. Type of sample collected grab or composite: Grab

19. Remarks:-
- → The ind. has installed ETP based on physico-chemical treatment & is operating its ETP in batches for treatment of effluent.
- → The ind. has installed EMF at well as MFM at outlet of ETP & reading given at point S (i) above.
- → The ind. has installed electronic pH analyzer & TDS analyzer & the readings were noted as 6.18 & 673 mg/l respectively.
- → The STP installed was also in operation.
- → As per record maintained & shown by the rep. of ind., the ind. has treated avg. of 50.7 KLD effluent in Nov, 20, 54.5 KLD in Dec, 20 & 51.6 KLD in Jan, 21 (till date), through the ETP.
- → Further, sample of soil was also collected from the plantation area for analysis purpose.
- → The samples have been collected for monitoring purpose in presence of NGT monitoring Committee team headed by Justice Jasbir Singh, Sh. S.C. Aggarwal, Smt Seachawal Ji, Sh Babu Ram and Sh. Laxman Chhetry, ES

NOTE:- The samples of trade effluent of M/s _____ from the point mentioned at Sr. No. 18 above was collected in the presence of Sh. _____ occupier _____ representative of the industry in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to him/her request to send the sample to the State Water Laboratory under section 52 (i) if the said Act has been made by occupier/his agent of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed bearing inscription of AEE.

1) Er. Mohit Bisht AE(3) Smt. Manisha Kaur, SA
2) Er. Rahul Sharma, AE(3) Sh. Karan Rana, Asstt. HK

Signature of the Occupant/Representative of the Industry with Designation

28/01/2021

:Signature of the official collecting the sample

Received sealed/unsealed and preserved sample on _____ at _____ through Sh. _____

BOARD ANALYST
Patiala

Annexure - P

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No. — E 3464-69/H.O.Lab. Monitoring/2021
2. ULR No. — TC704518000000002901P
3. Name of Industry — M/s Punjab Chemicals & Crop Protection Ltd (Agro-Division) Village BhankarpurDera Bassi
4. Name of Sample collecting Officer — Er. Rantej Sharma AEE
5. Designation of Officer authorizing Test — EE, RO,SAS Nagar
6. Type of Sample — Grab
7. Date & Time of Sample collection — 28.01.2021
8. Date & Time of Sample receipt in Lab. — 29.01.2021
9. Period of Analysis — 29.01.2021 to 5.02.2021
10. Test Methods — As per relevant parts of IS:3025/IS:1622 & Method of APHA

TC-7065

Results

Sr. No.	Parameters	Lagoon	Aeration Point	MEE Condensate	Settling tank without Aeration	Inlet of STP	Outlet of STP	Prescribed standards as per EPA
1	pH	7.8	7.8	9.6	7.7	6.9	7.3	6.5-9.0
2	Chemical Oxygen Demand mg/l	59610	51930	12480	46810	743	144	-
3	Bio-Chemical Oxygen Demand mg/l	14200	12500	2150	11600	225	36	30
4	Total Suspended Solids mg/l	380	1450	11	450	222	70	100
5	Total Dissolveed Solids mg/l	58500	66600	1309	49400	1470	1013	-
6	*Oil & Grease mg/l	-	-	-	-	-	BDL	-

*Not covered under the scope of NABL

Note: BDL means below Method detection limit

Remarks: The prescribed standards are EPA standards. However, if any stringent/other standards have been imposed by the Board, the same shall prevail.

---End of Report---

Analyzed By

Incharge Water Lab 5/2/21

Endst. No: 2828-29

Dt. 5/2/2021

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar

Jr. Scientific Officer

PUNJAB POLLUTION CONTROL BOARD E3464 – 3469

Regional Office, SAS Nagar.

DETAILS TO BE SUPPLIED FOR THE COLLECTION OF SAMPLE

1.	Name & Address of the industry		Punjab Chemicals & Crop Protection Ltd', (Agro - Division), Village Bhambaerpur, Dera Bassi		
2.	Category: Red	Scale: large	Raw Material: Oxalic Acid, Sodium Sulfide, SOCl, Diffurine etc.	Product: Pesticides Manufacturing.	
3.	i. Processes involved		RM – Oxidation – Crystallization – Filteration – Drying – Sulphuration & Methylation & Solvent Drying & Distillation		
4.	i. Give the name of the processes in operation at the time of sampling		All in operation at the time of visit.		
	ii. The number of wastewater streams from different processes along with discharge of each.		Various streams leading into single.		
5.	i. Quantity of industrial effluent discharge per hour (in liters)/m^3/day.		No effluent being discharged.		
	ii. Is the discharge of industrial effluent continuous on intermittent and it intermittent, date & time of its discharges		Intermittent		
	iii. Is the quantity and quality of industrial effluent from different streams uniform through out or not.		Non - Uniform		
	iv. Present method of disposal of industrial effluent(if plantation, give detail)		MEE Condensate to Cooling Tower. Treated Domestic Effluent onto Land for Plantation.		
6.	i. Working hours		24 Hours	ii Closed day: As Per Requirement.	
7.	Number of outlets through which industrial effluent is discharged/carried outside the industry.		Nil.		
8.	Name of the occupants/representative of the industry with designation and mobile no present at the time of sampling.		Sh. Surinder Pal, V.P.	Mobile No. 98726 00405	
9.	Process not working at the time of sampling & why?		N.A.		
10.	Parameters to be analyzed.	P1, P2, P3, P4	pH, BOD, COD, TDS, TSS	P5 – pH, BOD, COD TDS, TSS; P6 – pH, BOD, COD TDS, TSS, Oil	
11.	Point of sample collection		P1 – Lagoon – E3464 P2 – Aeration Point E3465 P3 – MEE condensate E3466 P4 – Settling tank without Aeration E3467 P5 – Inlet of STP – E3468 P6 – Outlet of STP – E3469		
12.	Sample preserved for (tick)				
	i. Organic parameter (freezer below 4°C)		✓		
	ii. Metals (pH less than 2 with HNO_3)				
	iii. Cyanide (pH above 10 with NaOH)				
	iv. Oil & grease (separate 1 Lt. sample glass bottles & freeze)		✓		
	v. Others				
13.	Details visuals report of Water & Air		ETP/MEE/STP installed in operation.		
14.	i. Name the components of the ETP which were working.		Holding Tank → Neutralization Tank → Aeration cum MEE Feed Tank ← Equalization Tank ← MEE ← ATFD		
	ii. If any component was not working why?		N.A.		
15.	Date & time of collecting the sample		28/01/2021; 12:30 p.m		
16.	Temperature in °C a) Air/Sample		—		

130

17.	Colour and odour of the sample	P1 – Dark Black. P5 – Yellowish. P2 – Brownish. P3 – Slightly Turbid. P6 – Slightly Turbid. P4 – Greyish Black
18.	Type of sample collected grab or composite.	Grab.
19.	Remarks:-	

1. MEE / STP in operation.
2. MEE concentrate is fed into Incinerator.
3. MEE Condensate is fed into Cooling Tower for use as a Makeup water.
4. Samples collected from various Points mentioned at Pt. No. 11. in the presence of NGT Monitoring Committee Hardwar visiting office.
5. The industry has installed OCEMS at the outlet / inlet of pipeline which feeds MEE condensate into cooling tower. Reading of the Board COD – 104.25 ppm, BOD – 13.664, TSS – 25.128 ppm & pH – 7.233.

NOTE:-

The samples of trade effluent of M/s _____ from the point mentioned at Sr. No. 18 above was collected in the presence of Sh. _____ occupier _____ representative of the industry/placed in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to them. No request to send the sample to the State Water Laboratory under section 52 (i) if the said Act has been made by occupier/representative of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed _____ bearing inscription of AEE.

Sh. Surender Paul, V.P

1) _____ 3) Mrs Manveer Kaur, SDM Nabha

2) G.R. Panty Sharma, AEE 4) _____

For Punjab Chemicals & Crop. Protection Ltd.

Signature of the occupant/Representative of the Industry with Designation

SURINDER PAUL
VICE PRESIDENT(O)

28/1/21 AEE

;Signature of the Officer official collecting the sample

Received sealed/unsealed and preserved sample on _____ at _____ through Sh. _____.

BOARD ANALYST
Patiala

Annexure - Q

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No.	E 3470-71/H.O.Lab. Monitoring/2021
2. U.I.R No.	TC70451800000002902P
3. Name of Industry	M/s Hansa Tubes Pvt Ltd. Haibatpura Road, Dera Bassi SAS Nagar
4. Name of Sample collecting Officer	Er. Rantej Sharma AEE, Er. Mohit Bisht AEE
5. Designation of Officer authorizing Test	EE, RO.SAS Nagar
6. Type of Sample	Grab
7. Date & Time of Sample collection	28.01.2021
8. Date & Time of Sample receipt in Lab.	29.01.2021
9. Period of Analysis	29.01.2021 to 5.02.2021
10. Test Methods	As per relevant parts of IS:3025/IS:1622 & Method of APHA

Results

Sr. No.	Parameters	Collection tank	Plantation area	Prescribed standards as per EPA
1	pH	2.2	7.4	6.0-9.0
2	Chemical Oxygen Demand mg/l	330	138	-
3	Bio-Chemical Oxygen Demand mg/l	70	25	-
4	Total Suspended Solids mg/l	21	36	100
5	Total Dissolveed Solids mg/l	20150	889	-
6	*Oil & Grease mg/l	BDL	BDL	10
7	Chloride mg/l	8550	175	-
8	*Sulphate mg/l	2900	112	400
9	Iron mg/l	1089	1.71	3.0
10	Zinc mg/l	0.99	0.18	5.0
11	Total Chromium mg/l	0.33	BDL	2.0

* Not covered under the scope of NABL

Note: BDL means below Method detection limit

Remarks: The prescribed standards are EPA standards. However, if any stringent/other standards have been imposed by the Board, the same shall prevail.

---End of Report---

5/2/21 5/2/21
Analyzed By

Incharge Water Lab
05/2/21

Endst. No: 2830-31

Dt. 5/2/2021

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar

5/2/21
Jr. Scientific Officer

PUNJAB POLLUTION CONTROL BOARD

PERFORMA FOR DETAILS OF BE SUPPLIED FOR THE COLLECTION OF SAMPLE

PART-A

E 3470-E 3471

1. Name & Address of the industry — M/S Hamsa tubes Pvt. Ltd, Haibatpura Road Derabassi, SAS Nagar.
2. Raw material used — HR coil, HCl, Lime
3. i. Product — CR Tube / Strip.
   ii. Processes involved — Raw material → Pickling → Annaling → Rolling → Tube making / Slitting
4. i. Give the name of the processes in operation at the time of sampling — All in operation
   ii. The number of wastewater streams from different processes along with discharge of each. — All leading to ETP
5. i. Quantity of industrial effluent discharge per hour (in liters)/m^3/day. — ETP not in operation
   ii. Is the discharge of industrial effluent continuous on intermittent and it intermittent, date & time of its discharge — Intermittent
   iii. Is the quantity and quality of industrial effluent from different streams uniform through out or not. — Non-uniform
   iv. Present method of disposal of industrial effluent. — on to land for plantation
6. i. Working hours — -
   ii. Closed day — -
7. Number of outlets through which industrial effluent is discharged/carried outside the industry. — One leading to Plantation Area
8. Name of the occupants/representative of the industry with designation present at the time of sampling. — Sh. Pardeep Kumar (Manager)
9. Process not working at the time of sampling & why? — All in operation
10. Parameters to be analyzed.
11. Sample preserved for (tick)
    i. Organic parameter (freezer below 4° C) — E 3470 * H_1 - Collection Tank
    ii. Metals (pH less than 2 with HNO_3)
    iii. Cyanide (pH above 10 with NaOH) — * H_2 - Plantation Area — E 3471
    iv. Oil & grease (separate 1 Lt. sample glass bottles & freeze)
    v. Others

G&P - PH, BOD, TSS, TDS, Cl, SO_4
COD -
Metals - Fe, Zn, T.Cr
O/G

* Soil sample from plantation Area
- pH, Cond, Fe, Zn, T.Cr.

133

13. i. Name the components of the ETP which were working. ~~Att~~ ETP not in operation being batch treatment process

ii. If any component was not working why?

14. Date & time of collecting the sample 28/1/2021 . 1:30 pm

15. Temperature in °C
a) Air/Sample Ambient 19°/c - Sample 17°c

16. Colour and odour of the sample Collection Tank - Greenish tinge
Plantation Area - Light greyish

17. Type of sample collected grab or composite. - Grab -

18. Point of sample collection (i) Collection Tank (ii) Plantation Area from

19. Remarks:- (iii) Soil Sample from plantation Area.

* Samples were collected in presence of NGT Monitoring / Executive Committee.
* ETP not in operation being based on batch treatment process
* Sample Collected from plantation area for soil analysis.

NOTE:-

i. The samples of trade effluent of M/s _____

_____ from the point mentioned at Sr. No. 18 above was collected in the presence of Sh._____ occupier_____ representative of the industry/placed in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to them. No request to send the sample to the State Water Laboratory under section 52 (i) if the said Act has been made by occupier/representative of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed _____hearing inscription of AEE.

1) Er. Mohit Bisht, AEE 3) Sh. Charn Singh (JSO)

2) Er. Ranbir Sharma, AEE 4) Ms. Pardeep Kumar (Manager)

Signature of the occupant/Representative of the Industry with Designation

24/1/21 Signature of the Officer official collecting the sample 21/01/21

Received sealed/unsealed and preserved sample on _____

_____at _____ through Sh._____.

ANALYST