In the Hon'ble National Green Tribunal,Delhi

Subject: Report of the Joint Committee of Central Pollution Control Boardand Punjab State PollutionControl 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.'.

1.0 Background

A complaint was filed by Suhail Dhurani to the Hon'ble National Green Tribunal, which had been registered as O.A No. 101 of 2020 by the Ld. National Green Tribunal, wherein, the complainant has raised concern against air pollution in the industrial belt at Derabassi, affecting the health of the residents in theradius of one km on account of emissions in violation of theenvironmental norms.

The Hon'ble Tribunal has passed orders on 08.07.2020 in Original Application no. 101 of 2020 titled as 'Suhail Dhurani V/s State of Punjab'. The operative part of the said order is reproduced as under:

> *"2. We consider it to appropriate to require a factual and action takenreport in the matter from a joint Committee of the Punjab State Pollution Control Board and the Central Pollution Control Board. The Committeemay visit the site, take the samples and furnish a factual report alongwith the recommendation for remedial action within two months by emailat judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF. The nodal agencyfor compliance and coordination will be the State PCB."*

Similarly, a complaint was filed by Satinder Mohan Singh Grover & Others to the Hon'ble National Green Tribunal, which had been registered as O.A No. 164 of 2020 by the Hon'ble National Green Tribunal, wherein, the complainants had raised concern against the operation of M/s. SBL Specialty Coating Private Ltd, , M/s Kamla Dials & Devices Limited, M/s Samrat Plywood Limited, M/s Nector Lifesciences Ltd, M/s Hansa Tubes Private Ltd, M/s Winsome Yarns Ltd and M/s Crop Care Pesticides (I) Private Ltd at DeraBassi, Distt. S.A.S Nagar, Punjab; in proximity of residential areas affecting the right to clean environment of the residents of Gulmohar City, situated at Haibatpur Road, Tehsil DeraBassi, District SAS Nagar, Mohali, Punjab, Kailash Enclave, Shree Bala Ji Golf View, Sai Enclave, Gulmohar City Extension and ATS Golf Meadows Colonies at DeraBassi, Punjab.

The Hon'ble Tribunal has passed orderson17.08.2020 in the matter of OA No. 164 of 2020 titled as 'Satinder Mohan Singh Grover &Ors. V/s Central Pollution Control Board & Ors.'. The operative part of the said order is reproduced as under:

> *"2. We note that another matter raising somewhat identical issues being OA 101/2020, Suhail Durani 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 01.10.20191 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.*

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."

2.0 About Derabassi

Derabassi town under district SAS Nagar is located on National Highway-152 on Chandigarh-Delhi Highway, which spread over an area of about 20.00 Sq. Kms. and accommodates a population of about 1,35,648 in year 2016.Dera Bassi is known for its industrial belt, situated for the most part on Ramgarh and Barwala Road, wherein 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., situated in thearea. Besides, construction projects established / being established like residential colony/townships/ area development projects / restaurants / hotels / malls etc. due to its proximity from Chandigarh and Ambala. 4.5.1 The main stationary sources of air pollution are the industrial units, which are emitting particulate matter, hydrocarbon, sulphur dioxide, oxides of nitrogen, Volatile Organic Compounds (VOCs)and acid mist.

3.0 Visit to the industries

In compliance to the NGT orders dated 08/07/2020 and 17/08/2020, the joint committee, comprising officials from CentralPollution Control Board and Punjab State Pollution Control Board,

visited the industrial area of Derabassi on 26.08.2020, 27.08.2020, 10.09.2020 and 11.09.2020:

a) Er. Suneel Dave, Addl. Director, Central Pollution Control Board
b) Er. Lavneet Dubey, Environmental Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar.
c) Er. Birdavinder Singh, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar.
d) Er. Mohit Bisht, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar.
e) Sh. Avtar Singh, Asstt. Scientific Officer, Punjab Pollution Control Board, Head Office Laboratory, Patiala.

The industries mentioned in the aforesaid order and found operating at a distance of about 1 km from the closure to residence of the complainants, were visited by the joint committee as detailed here under:

S.N.	**Industry**	**Date of Visit**	**Brief Report attached**	**Remarks (Complying/ Non-Complying)**
1.	M/s. SBL Specialty Coating Private Ltd., Haibatpur Road, DeraBassi, Distt. SAS Nagar.	26.08.2020 & 27.08.2020	Annexure-A	Complying
2.	M/s KDDL Limited, Haibatpur Road, Derabassi, Distt. SAS Nagar.	26.08.2020 & 27.08.2020	Annexure-B	Complying
3.	M/s Crop Care Pesticides (India) Pvt.Ltd.,HaibatpurRoad,	27.08.2020	Annexure-C	Complying

	Derabassi, Distt. SAS Nagar.			
4.	M/s Hansa Tubes Pvt.Ltd.,HaibatpurRoad, Derabassi, Distt. SAS Nagar.	27.08.2020	Annexure-D	Non-Complying
5.	M/s Samrat Plywood Ltd., Haibatpur Road, Derabassi, Distt. SAS Nagar.	27.08.2020	Annexure-E	Found closed.
6.	M/s Contour Automotive Products Ltd.,Village Bhankarpur, Mubarikpur Road, Derabassi, Distt. SAS Nagar.	27.08.2020	Annexure-F	Complying
7.	M/s Nectar Lifesciences Ltd (Unit-2), Village Saidpura, Tehsil DeraBassi, Distt. SAS Nagar.	27.08.2020, 10.09.2020 & 11.09.2020	Annexure-G	Non-Complying
8.	M/s Nectar Lifesciences Ltd (Unit-1), Village Saidpura, Tehsil DeraBassi, Distt. SAS Nagar.	10.09.2020 & 11.09.2020	Annexure-H	Non-Complying
9.	Punjab Chemicals &Crop Protection Ltd. (Agro-Division), Village Bhankharpur, DeraBassi, Distt. SAS	11.09.2020	Annexure-I	Non-Complying

	Nagar.			
10.	M/s Rajasthan liquors limited (Distillery Division),Vill. Haripur Hinduan, Barwala Road, Derabassi,SAS Nagar.	10.09.2020	Annexure-J	Complying

A map showing the location of industries inspected and monitored w.r.t. the location of the complainant residence is given below:

Recommendations:

Keeping in view of the above visit to the industries and observations made by the team, it is recommended that the concerned industries may be directed by State Pollution Control Board to take corrective measures and comply with the observations by 31.3.2021 and to submit compliance for verification and submit its report accordingly.

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	

<table>
<tr><td></td><td>to land for plantation developed within the premises. The industry has provided network of pipeline for proper distribution of treated waste water.</td></tr>
<tr><td>XII.</td><td>Emission Control Status</td></tr>
<tr><td></td><td>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.</td></tr>
<tr><td>XIII.</td><td>Discussion w.r.t. Analysis Results of Effluents/ Emissions</td></tr>
<tr><td></td><td><u>Effluent Analysis:</u>
During visit, sample was collected from the outlet of ETP and got analyzed from SPCB laboratory. The analysis results are as under:
<table>
<tr><th>Sr. no.</th><th>Parameters</th><th>Outlet of ETP</th></tr>
<tr><td>1.</td><td>pH</td><td>8.5</td></tr>
<tr><td>2.</td><td>Chemical Oxygen Demand mg/l</td><td>212</td></tr>
<tr><td>3.</td><td>Total Suspended Solids mg/l</td><td>12</td></tr>
<tr><td>4.</td><td>Total Dissolved Solid mg/l</td><td>1555</td></tr>
<tr><td>5.</td><td>*Oil & Grease mg/l</td><td>BDL</td></tr>
<tr><td>6.</td><td>*Phosphate mg/l</td><td>BDL</td></tr>
<tr><td>7.</td><td>*Sulphate mg/l</td><td>198</td></tr>
<tr><td>8.</td><td>*Cyanide mg/l</td><td>BDL</td></tr>
<tr><td>9.</td><td>Nickel mg/l</td><td>0.48</td></tr>
<tr><td>10.</td><td>Zinc mg/l</td><td>BDL</td></tr>
<tr><td>11.</td><td>*Silver mg/l</td><td>BDL</td></tr>
</table>
<u>The analytical results reveal that the concentration of prescribed parameters is found to be within the permissible limit for discharge onto land.</u>
<u>Emission Analysis:</u>
During visit, one sample was collected from the stack attached to the APCD of the buffing section and got analyzed from SPCB</td></tr>
</table>

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	

	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

	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	

<table>
<tr><td></td><td>pandemic by the Govt. of India. However, the repair/maintenance of machines etc. was being carried out during visit.</td></tr>
<tr><td>XI.</td><td>Effluent Treatment Status</td></tr>
<tr><td></td><td>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.</td></tr>
<tr><td>XII.</td><td>Emission Control Status</td></tr>
<tr><td></td><td>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.</td></tr>
<tr><td>XIII.</td><td>Discussion w.r.t. Analysis Results of Effluent/ Emissions</td></tr>
<tr><td></td><td>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:
<table>
<tr><th>Point of Sample Collection</th><th>Parameter</th><th>Results</th><th>Prescribed Standards</th></tr>
<tr><td>From Port Hole on stack after APCD</td><td>Particulate matter</td><td>302 mg/Nm^3 at 12% CO_2</td><td>800 mg/Nm^3 at 12% CO_2</td></tr>
</table>
<u>The analysis results reveal that the concentration of emission from the stack was within the permissible limit for emanation into the atmosphere.</u></td></tr>
</table>

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**

Source s of Fuel / Process Emissio ns	**Nu mbe r**	**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 Acid Mist as (HCI) SO_2 NO_x CO	20 mg/ Nm^3 at 11% O_2 1.8 mg/ Nm^3 at 11% O_2 74.5 mg/ Nm^3 at 11% O_2 164.2 mg/ Nm^3 at 11% O_2 23 mg/ Nm^3 at 11% O_2
	OHSCB-2	Acid Mist as (HCI) SO_2 NO_x	BDL 34.2 mg/m^3 16 mg/m^3
	OHSCB-3	Acid Mist as (HCI) SO_2 NO_x	BDL 22.8 mg/m^3 20 mg/m^3
	OHSCB-4	Acid Mist as (HCI) SO_2 NO_x	BDL 17.1 mg/m^3 17.4 mg/m^3
	OCSCB-2	Acid Mist as (HCI) SO_2 NO_x	BDL 28.5 mg/m^3 22.7 mg/m^3
	OCSCB-2	Acid Mist as (HCI) SO_2 NO_x	BDL 17.1 mg/m^3 17.4 mg/m^3
	ODSCB-1	Acid Mist as (HCI) SO_2 NO_x	1.2 mg/m^3 22. mg/m^3 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 /	**Nu mbe r**	**Steam Gen./ capacity**	**Type &Qty. of fuel to**	**Heigh t 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**						
	<u>Emission Samples:</u> 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						

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 (AlCl3) @ 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**					
	Source s of Fuel / Process Emissio ns	**Nu mbe r**	**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
	Incinera tor	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.

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