

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

Original Application No. 177 of 2017

Ashwini Kumar & Anr. Vs. Central Pollution Control Board & Ors.

**CORAM : HON'BLE MR. JUSTICE SWATANTER KUMAR, CHAIRPERSON
HON'BLE MR. JUSTICE RAGHUVENDRA S. RATHORE, JUDICIAL MEMBER
HON'BLE MR. BIKRAM SINGH SAJWAN, EXPERT MEMBER
HON'BLE DR. AJAY A DESHPANDE, EXPERT MEMBER**

**Present: Applicant: Ms. Mansi Chahal, Adv.
CPCB Mr. Raj Kumar, Adv. with Mr. Bhupendra Kumar, LA
Respondent No. 2&3: Mr. Pradeep Misra and Mr. Daleep Kr Dhyani
Adv.**

Date and Remarks	Orders of the Tribunal
Item No. 09 April 26, 2017	<p>Learned Counsel appearing for Central Pollution Control Board submits that the inspection report is ready and would be filed within one week positively, with copies to all the Counsel by placing the same on the Website of the Board, to which the party may respond within two weeks, thereafter.</p> <p>List this matter on 23rd May, 2017.</p> <p style="text-align: right;">.....,CP (Swatanter Kumar)</p> <p style="text-align: right;">.....,JM (Raghuvendra S. Rathore)</p> <p style="text-align: right;">.....,EM (Bikram Singh Sajwan)</p> <p style="text-align: right;">.....,EM (Dr. Ajay A Deshpande)</p>



JOINT INSPECTION REPORT BY CPCB & UPPCB
Of
M/s Triveni Engineering Industries Ltd.

NGT wide its order dated 15.12.2016 directed CPCB to inspect the industry along with UPPCB (O.A No.317 of 2014) to check the compliance of observation No-4 & 13 of the joint inspection report dated 20.10.2016 and the complaint by applicant (O.A. No-177 of 2017) with respect to bypass of untreated effluent on 20.02.2017 to the nearby Bhandura drain by the industry. The joint inspection team comprising the following officials of CPCB & UPPCB carried out inspection of the unit on Dated 12.04.2017

1. S.K. Arora, Scientist 'E', CPCB, Delhi
2. A.K. Tiwari, RO, UPPCB, Muzaffarnagar
3. R.K. Singh, AEE, UPPCB, Muzaffarnagar
4. Vinod Kumar, JE, UPPCB, Muzaffarnagar
4. Ratnesh Kumar, Scientist 'B' CPCB Delhi

The detail inspection report along with the observations and recommendations are given below:


A: General Information:

1.	Name of the unit and Address	M/s Triveni Engg.& Industries Ltd. Bilaspur, Jolly road, Muzaffanagar, Uttar Pradesh		
2.	Spatial Co-ordinates (Lat& long)	29°25'46.1" N, 77°46'38.8" E 29°42'46.0" N, 77.777452 E		
3.	Name of the Contact person – Designation Contact No. & e-mail	Sh. Lakhvindra Gaur Asst. General Manager(ETP), Mob.-7895789999 lgaur@alco.trivenigroup.com		
4.	Year of Commissioning.	2007		
5.	Sector	Distillery		
6.	Manufacturing process	Fed-Batch Fermentation		
7.	Production capacity <ul style="list-style-type: none">• Installed Prod. Cap.• Present Production	Excise certificate attached as Annexure-I 160.KBL/Day 160 KBL/Day		
	Products Manufactured (KLA)	2014-15	2015-16	2015-17
	Rectified Spirit	3915.7517	1776.0899	932.1489
	ENA	17822.1214	7284.4443	10193.3905
	Absolute Alcohol	18258.5308	32153.9329	28616.7751
	Raw materials requirement	2014-15	2015-16	2015-17
	Molasses(in Qtls)	1704440	1811840	1762920
8.	Actual no. of operating days in a year	269	264	261

9.	Process details (attach material balance & flow diagram):	Attached as Annexure-II
10.	Status of consents & Authorization (validity/applied)	Air Consent:01.01.2017 to 31.12.2018 Water Consent: 01.01.2017 to 31.12.2018 HW Authorization: Not Applied

B: Water Pollution and its Control:

11.	Water Supply Source No. of bore wells Water Consumption (KLD) (with details of water meters installed) Logbook maintained: (Y/N) CGWA Permission Obtained:	Bore well 04 Nos. Fresh water-2400 KLD(Avg.), 02 Nos. of ITRON (Acteris), 01 No. Acteris & 01 No. of Kranti Works Yes No, Applied vide application dated 11.04.2017
12.	Waste Water Generation (KLD)	
	Stream/section	Quantity(m3/day)
	Spent Wash	1520
	Spent lees	Re-circulated in the system
	Fermenter washing	80
	Floor washing	--
	Process Condensate	14
	Cooling tower blow down	50
	Boiler blow down	2
	Others	--
	Total	1600
13.	Details of ETP ➤ ETP Description with flow diagram	ETP Details: Spent wash – Primary Settling Tank– Anaerobic Bio digester –RO Plant – Lagoon – MEE – Bio-Compost Yard Primary Treatment (if any): Bio-methanation Bio digester Outlet sent to Lagoon and RO



 [Signature] [Signature] [Signature] [Signature]

14.	Details of R.O plant	Details of pre-treatment: Primary Settling Tank RO Feed rate:80m ³ /hr Permeate generation :40m ³ /hr Reject generation: 40 m ³ /hr Whether R.O achieving design efficiency; Yes Whether R.O operated continuously: Yes																
15.	Details of MEE plant	Type: Falling Film No. of effects: 06 MEE Feed rate(sp. Gr. 1.05) : 50m ³ /hr Condensate generation :35m ³ /hr Generation of concentrate :17.5m ³ /hr Sample collected from MEE feed, Concentrate and condensate. <table border="1" data-bbox="694 929 1444 1120"> <thead> <tr> <th>Sample Location</th> <th>pH</th> <th>TSS (mg/l)</th> <th>TDS (mg/l)</th> </tr> </thead> <tbody> <tr> <td>MEE feed</td> <td>8.14</td> <td>4780</td> <td>44240</td> </tr> <tr> <td>Concentrate</td> <td>10.12</td> <td>20912</td> <td>162500</td> </tr> <tr> <td>Condensate</td> <td>9.66</td> <td>08</td> <td>144</td> </tr> </tbody> </table> Whether MEE achieving design efficiency; Yes Whether MEE operated continuously: Yes	Sample Location	pH	TSS (mg/l)	TDS (mg/l)	MEE feed	8.14	4780	44240	Concentrate	10.12	20912	162500	Condensate	9.66	08	144
Sample Location	pH	TSS (mg/l)	TDS (mg/l)															
MEE feed	8.14	4780	44240															
Concentrate	10.12	20912	162500															
Condensate	9.66	08	144															
16.	Utilisation of R.O permeate & MEE condensate	Utilization of R.O permeate: Process Utilization of R.O Reject: MEE Feed Utilization of MEE concentrates: Bio-compost Utilization of MEE condensate:Process																
17.	Incineration Boiler Detail (if available)	Not applicable																
18.	Details of online Flow measuring device installed for spent wash and MEE concentrate	Online flow meter with connectivity to CPCB installed at Flow meter installed at Spent wash and MEE concentrate whether operating satisfactorily: Yes																
19.	Details of reduction in water consumption due to utilisation of R.O permeate and MEE condensate & treatment given, if any	RO and MEE results in a fresh water reduction of up to 8.0 KL/litre of alcohol approx. on a normative basis, all other applications and conditions remaining the same.																

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C: Information regarding Bio-composting:

20.	Active area for bio compost preparation	20 Acres
21.	Area for press mud storage	5 Acres
22.	Area for bio compost storage	6.6 Acres, Not Covered (Under construction)
23.	Finished compost packing facility	Yes
24.	Spent wash storage capacity	Lagoons at bio-compost site: 3000m ³ Raw S.W: 24000 m ³ B.M S.W: 24000 m ³ (As informed 11000m ³ spent wash was stored in both the lagoons put together) R.O feed: 1600 m ³ : R.O rejects: 800 m ³ . MEE feed: 800 m ³ : MEE concentrate: 325 m ³ .
25.	Availability of press mud & Quantity stored	Press mud from its own sugar units at Khatauli, Deoband etc. As informed, Press mud quantity stored as on 12.04.2017 was 22000MT Approx.
26.	Maturity time in days for one cycle & total cycles/year	60 days 4 cycles/year
27.	Utilisation of S.W/Conc. S.W in bio composting	Avg. no. of days of spraying S.W in a cycle: 45 days Avg. S.W quantity sprayed in a day: 325 m ³
28.	Ratio of filler material to spent wash	1:2 (after installation of MEE)
29.	Details of windrows (Number, length, height, width of stacking, space between two windrows) and equipment's	Length: 100-140 m, Width: 3m, Height: 1.5 m Number: 45, Space between rows: 3 m Quintals of press mud used in one windrow: 0.235 MT No. of aero tillers used: 2 No No. of JCB used: 2 No, Tractor - 8 No, Loaders- 3 Nos
30.	Details of registration from Agriculture department, as per new notification of compost quality	Applied vide letter dated 04.04.2017
31.	Arrangement for rainy season and details regarding closure of operations for 03 months during monsoon	Closure in rainy season and certificate enclosed as Annexure-III
32.	Details of PTZ cameras provided and its connectivity	PTZ 360 Cameras provided at: 1 Lagoon Area: 114.134.21.71 2 Bio-compost: 114.134.21.70 User id & PW : admin / admin whether operating satisfactorily: No

*M*⁴ *AEE*

S. Anil

P. K.

D: Air Pollution and its Control:

33.	Sources of Air Pollution	1. Boiler : one capacity-32TPH	
34.	Type of Fuel/s used with consumption and Stack details with APCD Most of the time 85% bio Gas and 15% Bio-fuel is used (Bagasse or Woodchips)	Details	Boiler
		Fuel used	Biogas+ Bio fuel
		Fuel consumption	Bio Gas : 86000NM3 /day Baggase:60MT/day(app rox.)
		Stack height & Diameter	45M Height 2.78 M Dia Meter
	APCD attached	Wet Scrubber	
35.	Details of online P.M meter (opacity) available & connectivity	P.M reading:<100 mg/m ³ URL/I.P of opacity meter: 192.168.101.205 User id & PW:TEIL/TEIL whether operating satisfactorily: Yes	

E: Solid & Hazardous Waste Management:

36.	Type & Quantity of Waste Generated	Fermenter sludge: 150 Tons per month. Bottom sludge (molasses).....NA..... Boiler ash: 0.6 TPD (used in bio compost) Others		
37.	Facility of Storage/ Disposal	Fermenter sludge: Used for Bio-composting Bottom sludge (molasses).....NA..... Boiler ash : Used for Bio-composting and land filling.		
38.	Hazardous wastegeneration & disposal status:			
	HW Generated	Category	Authorized Quantity	Quantity Generated
	Used Oil	5.1	-	Lower than 320lit/annum
	Wastes containing oil	5.2	NIL	-
	Details of agreement with recycler: Not Applicable			

F: Observations & recommendations:

39.	Any By-pass / un authorized discharge?	Received complaint of bypass of untreated effluent by the industry on 20 th Feb, 2017 (O.A No.177 of 2017)
40.	Treatment/disposal of domestic effluent	Facilities available: Septic Tank/Soak Pit

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41.	Route of reaching effluent to River Ganga	No discharge, Zero Liquid Discharge:
42.	<p>Observations:</p> <ol style="list-style-type: none"> 1. The unit is involved in the production of absolute alcohol and rectified spirit using molasses. 2. As per order of Hon'ble NGT, the Joint Inspection Team conducted complete survey of all anti - pollution control devices installed on 12.04.2017. 3. The unit has provided treatment system for spent wash (1600 KLD) generated during the production of Rectified Spirit (RS) (160 KL). The treatment system consists of Settling Tank, Digesters, Lagoons, Reverse Osmosis (RO), and Multi Effect Evaporator (MEE), Bio Composting. 4. The spent wash from digester is sent to RO plant (1600KL/Day) designed in module of 800 KL/Day each. The RO reject (50% of feed) is then sent to Multi effect Evaporator (MEE) where the solid concentration of spent wash is enhanced through 6 stages. 5. As informed by the unit for pumping of rejects from MEE having high solid concentration is pumped by higher capacity motor to comply the observations no-4 of joint inspection dated 22.10.2016. 6. The RO permeate (800 KLD) and condensate from MEE (400KLD) is reused in fermentation. 7. The unit has provided two PTZ cameras one at Bio-compost field and another at lagoon both the cameras are not connected to CPCB server as per CPCB guidelines. Camera which was installed at Lagoon is not covering all the three lagoons. 8. Unit has provided online emission monitoring system at the stack connected to the boiler. 9. Flow meters were installed at Raw spent wash and MEE concentrate & are connected to CPCB server. 10. Ground water samples were collected from five Hand pump and one bore well (common head) & analysis results indicate that the ground water quality meet the norms for drinking water (IS 10500: 2012) & complying the observation no-13 of previous inspection. Hand pump no-3 at bio-compost area has been closed & new hand pump is installed at the entry of Bio-compost yard. 11. Joint inspection team visited the Bhandura drain & surrounding area to examine the complaint of bypass of untreated effluent by the industry on 20th Feb, 2017 (O.A No.177 of 2017). Inspection team found no bypass of effluent through pipes or any other means however there is three holes in the boundary wall of the industry. Photograph of drain and boundary wall of the industry are enclosed. 12. UPPCB has issued a show cause notice dated 10.04.2017 to the industry based on inspection on 28.03.2017 and 04.04.2017 13. The sample has been collected from drain (referred as irrigation canal in OA). As per Analysis report, the drain water is polluting in nature. 14. Joint inspection team observed that allegations by the applicant in OA no 177 of 2017 regarding bypass of untreated effluent into drain can not be denied 	

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43.

Recommendations:

1. The industry has provided treatment and management system for spent wash & following Zero liquid Discharge.
2. The industry is complying with the observations no 4 and 13 made during the last inspection dated 20.10.2016(as per NGT order dated 15.12.2016). Detail given in the table given below :

Point No of the report	Observation	Observation made during inspection dated 12.04.2017	Status
4	Rejects from MEE having high concentration of solid is mixed with permeate which is pumped for Bio compost	High capacity motor is used to pump the MEE reject only	comply
13.	Ground water from Hand pump no 3 at Bio compost yard was coloured	Hand pump no 3 is closed and a new hand pump is installed at the gate of Bio Compost which is meeting the drinking water standard	comply

3. The industry should install the sufficient no of CCTV camera toward drain side and maintain record of DVR

44.

Date of Inspection

12.04.2017

45.

Name & designation of inspecting officer(s)

Signature

1. S.K. Arora, Scientist 'E', CPCB, Delhi
2. A.K. Tiwari, RO, UPPCB, Muzaffarnagar
3. R.K. Singh, AEE, UPPCB, Muzaffarnagar
4. Vinod Kumar, J.E., UPPCB, Muzaffarnagar
5. Ratnesh Kumar, Scientist 'B' CPCB Delhi

Analysis report of Ground water sample

S. No.	Sampling Point	pH	COD	Colour	Sulphate	TDS	No3-N	Chloride	Fluoride	Phosphate-P
1	HP No-1 near Lagoon	7.2	BDL	<10	07	245	8	18	0.1	BDL
2	HP No-2 at the entrance of Bio Compost site	7.2	BDL	<10	10	192	19.7	08	0.1	BDL
3	HP No-3 near Bio Compost site	7.2	BDL	<10	BDL	198	BDL	04	0.1	BDL
4	HP No-4 near Gain Gate(inside)	7.2	BDL	<10	BDL	232	BDL	07	0.1	BDL
5	HP No-1 near Main Gate(outside)	7.3	BDL	<10	BDL	226	BDL	06	0.2	BDL
6	Bore well sample(common head)	7.3	BDL	<10	08	235	6.2	17	0.1	BDL
	Standard	6.5-8.5	--	15	400	2000	45	1000	1.5	---

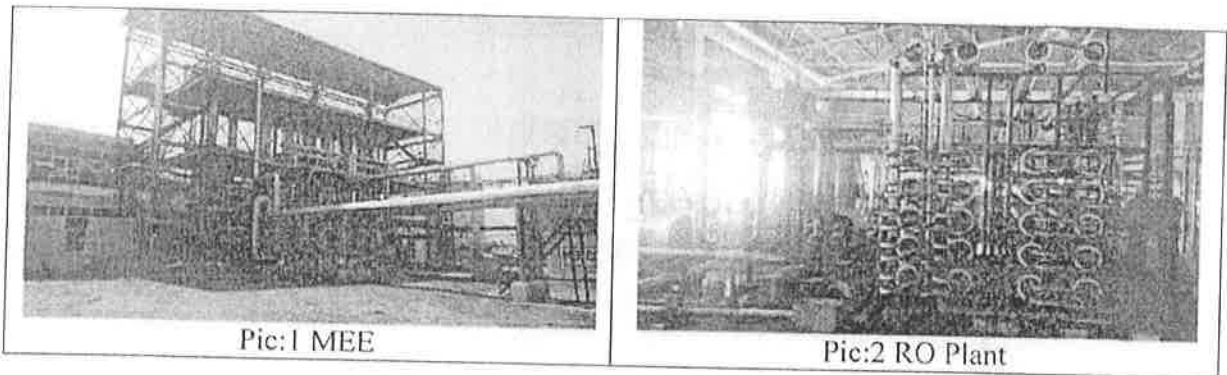
All values are in mg/l except pH and Colour in Hazen unit

Analysis report of Bhandura Drain

Sl No	Location	Date of Sample collection	Parameters			
			pH	TSS	COD	BOD
1.	Drain U/S	12.04.2017	6.98	3260	2283	650
2.	Drain D/S	12.04.2017	6.93	1543	1865	660

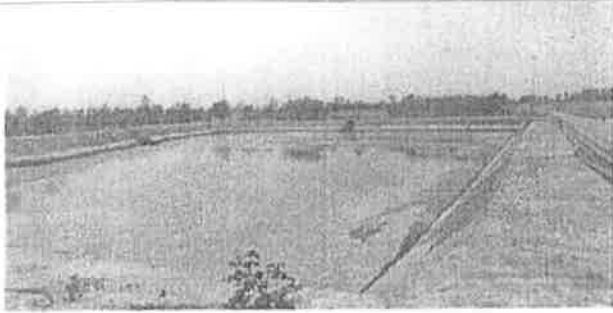
All values are in mg/l except pH

Photograph Indicating Locations: M/s Triveni Engg. Industries Ltd. Bilaspur, Jolly road, Muzaffanagar, Uttar Pradesh



Pic:1 MEE

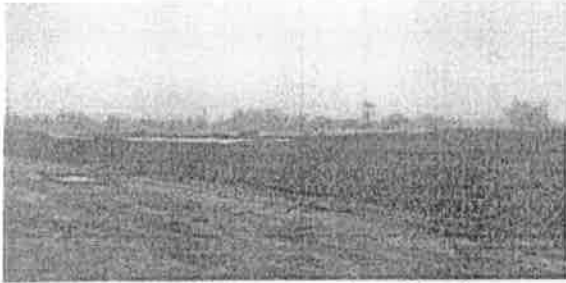
Pic:2 RO Plant



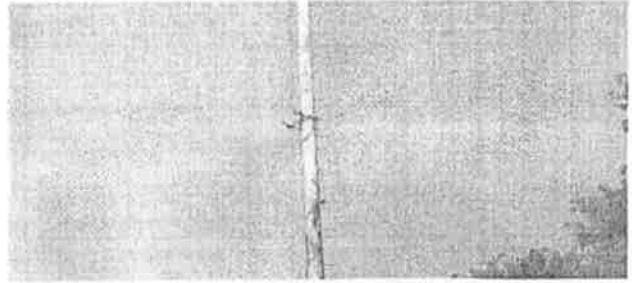
Pic:3 Lagoon



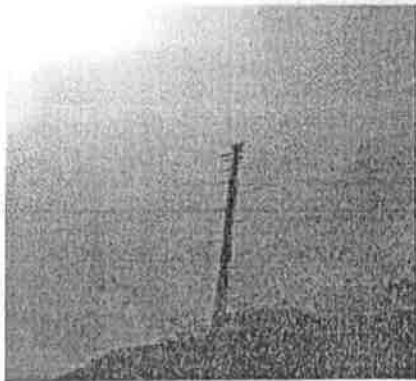
Pic:4 Hand pump near Bio-composting Yard



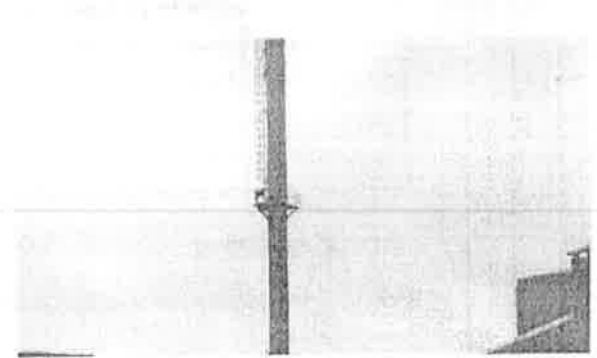
Pic:5 Bio-composting Yard



Pic:6 Webcam installed at Lagoon



Pic:7 Webcam installed at Bio-composting yard

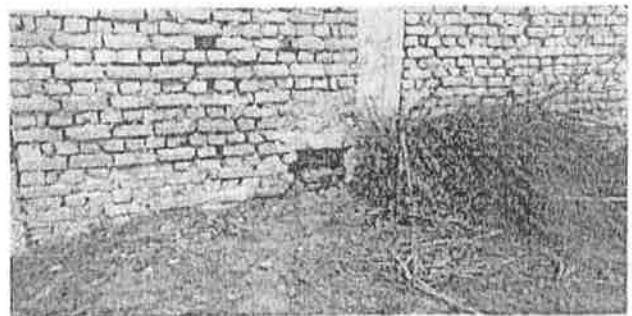


Pic: 8 Emission monitoring system installed at Stack

Photograph showing opening in the Boundary wall & nearby drain



Pic: 9 Bandura drain



Pic: 10 Opening in the wall Closed during inspection

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AEE

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Annexure - I

M/s Triveni Distillery, Muzaffarnagar

(Figurs are Finacial year)

Production

Year	Rectified Spirit	ENA	Absolute Alcohol
2014-15	3915751.7	17822121.4	18258530.8
2015-16	1776089.9	7284444.3	32153932.9
2016-17	932148.9	10193390.5	28616775.1

Finacial Year wise Molasses Recept and Consumption

Year	Receipt	Consumption
2014-15	1836714.5	1704440
2015-16	1728734.1	1811840
2016-17	1737402.3	1762920

Operating Days

Year	Oprating Days
2014-15	269
2015-16	264
2016-17	261

Plant Capacity

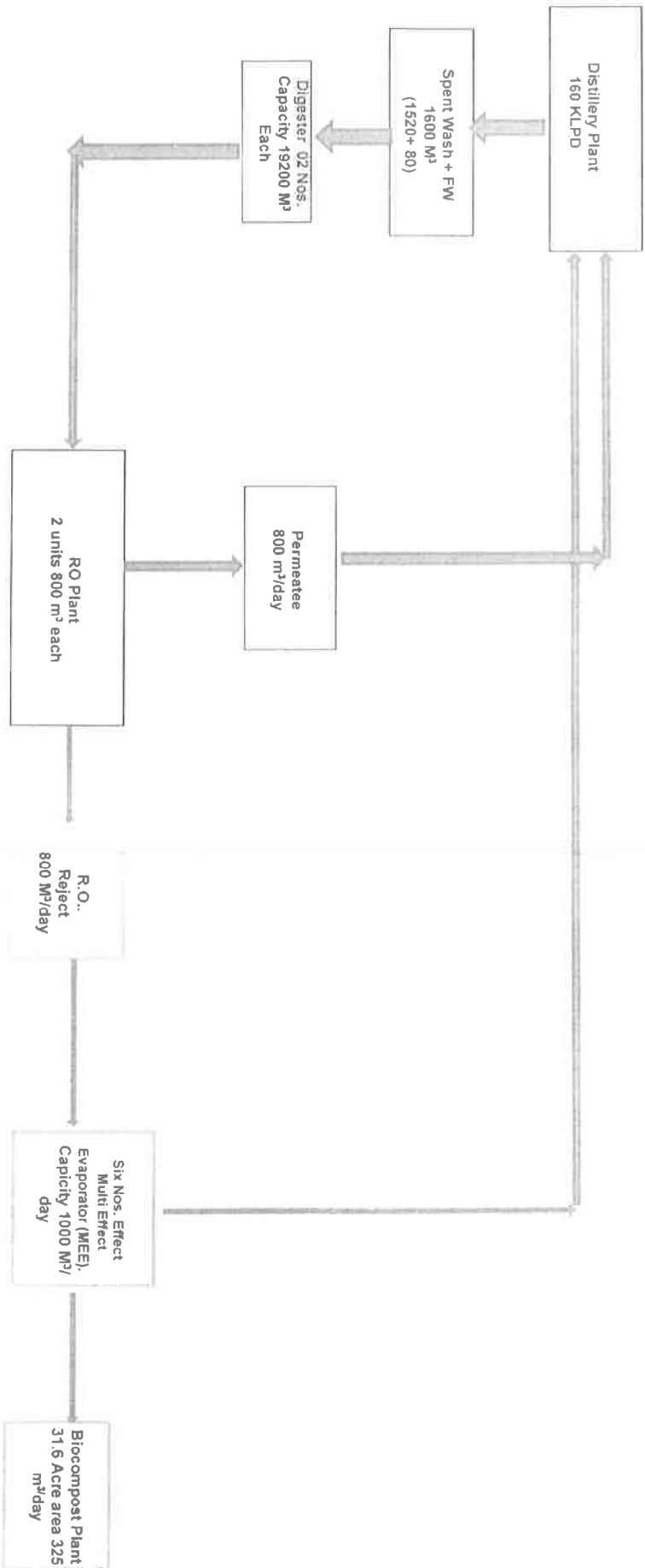
432 Lac per annum
1.60 Lac Par Day



प्रमारी आबकारी निरीक्षक
मिर्जापूर आसवनी मुजफ्फरनगर

Annexure - II

Triveni Alco-Chemical Complex, Muzaffarnagar (UP) Flow Diagram (ETP Plant)



PROCESS FLOW DIAGRAM

Annexure - III

जिस किसी से सम्बन्धित हो

प्रमाणित किया जाता है कि मैसर्स त्रिवेणी आसवनी, मुजफ्फरनगर द्वारा वर्षाऋतु 01 जुलाई 2016 से 23 सितम्बर 2016 तक किसी भी प्रकार का आसवन का कार्य नहीं किया गया।

13.4.17

प्रभारी आवकारी निरीक्षक
त्रिवेणी आसवनी मुजफ्फरनगर।

प्रभारी आवकारी निरीक्षक
त्रिवेणी आसवनी मुजफ्फरनगर