

Joint Inspection Report
(16.10.2019)
of
M/s C.L. Gupta Export Ltd., Amroha,
U.P

In The Matter Of
Adil Ansari Vs. M/s C. L. Gupta Exports
Pvt. Ltd. & ors.

[O.A. NO. 220/2019]

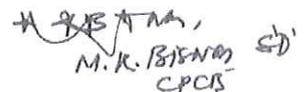
-Prepared by-
The Joint Committee of CPCB, UPPCB &
CGWA

Constituted by
Hon'ble National Green Tribunal
(Order dated 29th August, 2019)









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JOINT INSPECTION REPORT OF M/S C. L. GUPTA EXPORTS PVT. LTD., 18 KM BEFORE MORADABAD, VILL. JIVAI, AMROHA-244001 AS PER HON'BLE NGT ORDER DATED 29.08.2019 CARRIED OUT BY JOINT INSPECTION COMMITTEE OF UPPCB, CGWA & CPCB ON 16.10.2019

1.0 Subject Matter

Matter: Adil Ansari Vs. M/s. C.L. Gupta Exports Ltd., O.A. No. 220/2019

Subject: Remedial action against the illegal discharge of hazardous waste into the river and illegal drawal of groundwater by M/s C.L. Gupta Export Ltd., Amroha, U.P., is the grievance in this application.

2.0 Order of Hon'ble NGT dated 29.08.2019

The Hon'ble Tribunal in the said matter passed the following directions on 29.08.2019 which is placed as under:-

"Remedial action against the illegal discharge of hazardous waste into the river and illegal drawal of groundwater by M/s C.L. Gupta Export Ltd., Amroha, U.P., is the grievance in this application. Vide order dated 08.03.2019, a joint action taken report was sought from CPCB and the State PCB.

In view of the joint Committee report filed on 07.05.2019, a further updated status needs to be submitted by a joint Committee of CPCB, UP State PCB and CGWA. The joint Committee may also make an assessment of the compensation to be recovered for the damage caused which should cover the entire period of damage and should be deterrent having regard to financial capacity of the unit and the nature of violations. The nodal agency will be the State PCB for coordination and compliance. The report may be furnished within two months by e-mail at judicial-ngt@gov.in"

3.0 Observations made in relevant NGT orders

3.1 NGT order dated 01.02.2019 in O.A. No. 301/2016 (M.A. No. 90/2017)

1. This application O.A. No. 301/2016, M.A. No. 90/2017 was filed under Section 14 & 15 read with Section 18(1) & (2) of the National Green Tribunal Act, 2010 by Shri Shailesh Singh seeking following directions:
 - a. M/s. C.L. Gupta Export Ltd. to stop illegal and unlimited withdrawal of ground water without permission of Central Ground Water Authority or by any other authority concerned;



- b. To direct M/s C.L. Gupta Export Ltd. to stop discharging harmful untreated hazardous effluent waste water and sludge into open drains ultimately leading into holy river Ramganga;
 - c. To direct UPPCB, CPCB and CGWA to monitor and conduct a spot inspection of the premises of the Respondent No. 1 and file report before the Tribunal;
 - d. To maintain proper tabular data of such violation etc.
2. The unit has CGWA NOC for 02 borewells only, while the unit have total 06 nos. of borewells in the premises.
 3. According to the NGT order dated 01.02.2017, the unit is extracting water at the rate of 960 KLD since 1994, thereby the unit caused sufficient depletion of natural resources impacted the environment adversely.
 4. Hence, NGT passed an interim order to direct the unit to pay and deposit 15 Lakhs as Environment compensation subject to final determination. Taking into consideration of relevant fact as referred, NGT was of the opinion that a sum of Rs 5 Lakhs shall be imposed as additional compensation to be paid by the unit to make total compensation at 20 lakhs.
 - As per the reply of the unit vide letter no. CLG/HR-31/19-20/85 dated 15.10.2019 the unit has paid 20 lakhs vide DD no. 105631 dated 17.02.2017 through SBI to CGWB in the name of NGT, New Delhi.
 5. The NGT directed that CGWA should ensure that out of 06 borewells which are installed in the industry, four regarding which the permission has not been granted shall be sealed and utilization of water therefrom is restrained subject to further action in law as may be permissible.
 - During the joint inspection dated 16.10.2019, it was observed that, unit has covered the illegal 04 borewells with red cloth only and all the connections of illegal borewells were observed.

M.A. No. 90 of 2017 which was filed for the compliance does not survive for consideration. And the same was disposed of accordingly.

3.2 NGT order dated 08.03.2019 O.A. No. 220/2019

1. The Hon'ble NGT vide it's order dt. 08.03.2019 in O.A. No. 220/2019 Principal Bench, New Delhi mentioned Prayer in this application is to stop illegal drawal of ground water and to stop discharging of hazardous effluent waste into the

3.3 NGT order dated 29.08.2019 O.A. No. 220/2019

1. In view of the joint Committee report filed on 07.05.2019, NGT vide order dated 29.08.2019 directed a joint Committee of CPCB, UP State PCB and CGWA to submit further updated status. The joint Committee may also make an assessment of the compensation to be recovered for the damage caused which should cover the entire period of damage and should be deterrent having regard to financial capacity of the unit and the nature of violations. The nodal agency was the State PCB for coordination and compliance.
2. A joint Committee of CPCB, UP State PCB and CGWA inspected the unit M/s C.L. Gupta Export Ltd. dated 16.10.2019.

4.0 The Joint Inspection dated 16.10.2019

In compliance to the Hon'ble NGT order dated 29.08.2019, inspection of M/s C.L. Gupta Export Ltd., Amroha, U.P (hereinafter referred as 'the unit') was carried out on 16th October, 2019 by a joint team comprising of the officials from RO-Bijnor, Uttar Pradesh Pollution Control Board (UPPCB), Central Ground Water Authority (CGWA), Lucknow and Central Pollution Control Board (CPCB), Delhi.

The unit is engaged in manufacturing of Metal Artware, Glass Artware, Wood Artware and Thermocoal Block. The unit possesses Consent to Operate issued by Uttar Pradesh Pollution Control Board under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 which are valid till 31/12/2019. The Authorization (under the Hazardous and Other Wastes Management [HOWM] Rules, 2016) for generation, collection, utilization, storage and disposal of ETP dried sludge (40 kg/day) is valid till 16.07.2024.

The team visited the unit which is comprising of the following manufacturing sections:

- a) Wooden Art ware mfg. Section - 15 Ton/Month consented capacity
- b) Glass Art ware mfg. Section - 150 Ton/Month consented capacity
- c) Metal Art ware mfg. Section - 30 Ton/Month consented capacity
- d) Thermocoal Block mfg. Section - 65 Ton/Month consented capacity

river Ramganga. According to the applicant, respondent No. 1 is a metal factory which is spread over 50 acres of land at 18 Km. Stone, Delhi road, Village Jivai, Jyotibaphule Nagar- 244221, consuming huge amount of water and discharging effluents into the river.

2. NGT directed the joint Committee of Central Pollution Control Board (CPCB) and Uttar Pradesh Pollution Control Board (UPPCB) to furnish a factual and action taken report within one month to the Tribunal by e-mail. The UPPCB was the nodal agency.
3. The joint Committee of Central Pollution Control Board (CPCB) and Uttar Pradesh Pollution Control Board (UPPCB) visited the unit M/s C.L. Gupta Export Ltd., Amroha dated 28.03.2019 and UPPCB filed the report in NGT dated 07.05.2019.
4. As per the submitted report, it was found that industry was involved in the expansion/modification in premises and Thermo-coal manufacturing unit was found operational without having consent to establish/operate. The effluent analysis report of wood division and metal division were not as per stipulated discharge norms. Hence, the unit was directed to pay Rs. 10 lakhs as environmental compensation (As calculated by UPPCB) and not to operate expansion/modification component without CTE and CTO.
5. The UPPCB also filed a report on 16.07.2019 to the effect that authorization has been applied for disposal of hazardous waste like empty containers of paint, lacquer, electroplating chemicals, oil soaked cotton rags used oils etc. Thermo coal manufacturing unit has filed an application for consent. The unit has set up a blower. Treatment equipments have been installed to deal with pickling phosphate and electroplating activities. Sample was found to be compliant from wooden and glass division also. Illegal borewells have been closed. Sewage disposal is taking place. Hence, UPPCB revised the environmental compensation to Rs. 3,60,000 vide letter no. H40103/C-7/Jal-58/Nikshp/2019 dated 16.08.2019. Copy of the letter is placed at **Annexure-1**.
6. As per the reply of the unit vide letter no. CLG/HR-31/19-20/85 dated 15.10.2019, the unit has paid Rs. 3,60,000 vide letter dated 20.08.2019 for environment damage.

This unit has following separate 03 Nos. of Effluent Treatment Plant and 03 Nos. of Sewage Treatment Plant for treatment of industrial and domestic effluent:

- i. Effluent Treatment Plant for Wood Section – 25 KLPD capacity
- ii. Effluent Treatment Plant for Glass Section – 100 KLPD capacity
- iii. Effluent Treatment Plant for Metal Section – 175 KLPD capacity
- iv. Sewage Treatment Plant near Glass Section – 60 KLD capacity
- v. Sewage Treatment Plant near Metal Section – 60 KLD capacity
- vi. Sewage Treatment Plant in Residential Colony – 120 KLD capacity

M/s C.L.Gupta Ltd. has above mentioned 4 manufacturing sections in their premises at Village: Jivai, Amroha. The Committee focused on Ground water withdrawal, Hazardous waste management, ETP and STP Adequacy and compliance verification w.r.t effluent discharge norms/Zero Liquid Discharge (ZLD).

5.0 Samples Collection

The Committee collected samples from ETPs of the different manufacturing sections of the unit during inspection and samples have been analyzed in CPCB laboratory w.r.t the notified parameters relevant to that particular sector of the manufacturing unit.

The Committee has also collected groundwater samples as well as STP treated water from the industry premises. The samples have been analyzed in CPCB laboratory following specified methods as per American Public Health Association (APHA) and the guidelines/SOPs certified by the National Accreditation Board for Testing and Calibration Laboratories (NABL).

The detail of the collected samples and analysis results are mentioned in the following sections.

6.0 Freshwater Consumption

6.1 Sources of Fresh Water

- The unit has total of 06 nos. of bore wells located at different places within the campus. However, the CGWA has granted NOC only for 02 borewells, which was valid upto 20.12.2018.

Table 1 CGWA permission for ground water abstraction

No. of Borewell	Max. Abstraction Permission from CGWA (KLD)	Not exceeding (KL/Year) by CGWA	Date of CGWA permission	Valid upto
02	330	99,000	21.12.2016	20.12.2018

- The unit has applied for renewal of the NOC to abstract groundwater to CGWA on 08/12/2018.
- Expired CGWA NOC and Renewal Application copy is attached as **Annexure-2 & Annexure-3** respectively.
- As informed by the unit, the active borewells are Borewell no. 4-Located near the entrance of Glass division & Borewell no. 3-Located at the residential colony to meet its freshwater requirements.
- The unit has another bore well at the entrance of the glass division (Borewell no. 5), which was found closed with the help of red cloth but connections were not dismantled and it was not properly sealed.
- The detail of the locations of the Borewells along with co-ordinates provided by the unit are as below:

Table 2 Borewell locations with co-ordinates details

Borewell Locations & Co-ordinates Details					
Sr. No.	Borewell No.	Location	Borewell Meter No.	Coordinates	
				Northing (Latitude)	Easting (Longitude)
1	Borewell No. 1	Res. Area	Not in Operation	28° 49' 14.484"	78° 35' 47.3208"
2	Borewell No. 2	Res. Area	Not in Operation	28° 49' 10.3152"	78° 35' 46.05"
3	Borewell No. 3	Res. Area	666	28° 49' 12.288"	78° 35' 47.5872"
4	Borewell No. 4	Glass Div.	667	28° 49' 4.4328"	78° 35' 44.052"
5	Borewell No. 5	Glass Div.	Not in Operation	28° 49' 6.3228"	78° 35' 46.428"
6	Borewell No. 6 (For fire hydrant)	Pump House	-	28° 49' 12.5688"	78° 35' 49.614"

6.2 Quantity of Fresh Water Consumption

- As per the record of borewell meters provided by the unit, the total freshwater consumption by the unit from July-2019 to Oct-2019 (Upto 15.10.2019) is as below:

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Table 3 Quantity of fresh water consumption

Sr. No.	Month	Fresh water consumption (KL)		
		Borewell No. 3	Borewell No. 4	Borewell No. 6
1.	July-2019	1767	2269	130
2.	Aug-2019	1582	2145	774
3.	Sept-2019	5266	2559	0
4.	Oct-2019 (upto 15.10.19)	2151	949	0
Total fresh water consumption		10,766	7922	904
Average freshwater consumption per month		2691.5	1980.5	226
Fresh water consumption per day		174.65 KLD ~ 175 KLD against 330 KLD		8.45 KLD (Illegal extraction)

6.3 Piezometers Detail

- The Unit has provided 02 nos. of Piezometers for measurement of groundwater depth at the following locations:

Table 4 Piezometer location details

Piezometer Locations		
S. No.	Piezometer No.	Location
1	Piezometer No. 1	Res. Area Near Borewell No-3
2	Piezometer No. 2	Glass Div. Near Borewell No.-4

6.4 Rain Water harvesting system

- As informed by the unit, it has provided total 12 nos. of rainwater harvesting ponds for recharge of groundwater having potential to recharge 1,07,526 m³/year at different locations for compliance of CGWA NOCs which expired on 20.12.2018 against the minimum required potential of 1,06,000 m³/year. Details as follows;

Table 5 Rain water harvesting pond details

As Per CGWA ground water recharge to be implemented atleast (m ³ /year)	Recharge Potential (m ³ /year)	No. of rain water harvesting ponds
1,06,000	1,07,526	Total 12*
		*04 (Near ETP of Metal division) 04 (At Gas Yard) 04 (Near F.O. tank of Glass division)

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6.5 Characteristics of the Ground Water

- The analysis result of samples collected from the borewells of the unit is as below:

Table 6 Characteristics of ground water samples of the unit

Sr. No	Parameter	Sampling Location			
		Borewell No.3 (Near residential colony)	Borewell No.4 (Near Glass Section Main Gate)	Handpump inside Masjid (Besides unit)	BIS IS 10500:2012 (Permissible limit in absence of alternative source)
1	pH	7.4	7.3	7.3	6.5-8.5
2	TSS	BDL	BDL	BDL	-
3	COD	BDL	BDL	BDL	-
4	Chloride	26	79	16	1000
5	PO ₄ -P	0.11	0.06	0.06	-
6	NO ₃ -N	BDL	8.0	1.0	45
7	Sulfate	BDL	BDL	BDL	400
8	As	0.04	BDL	BDL	0.05
9	Cd	BDL	BDL	BDL	0.003
10	Co	BDL	BDL	BDL	-
11	Cr	BDL	0.20	BDL	0.05
13	Cu	BDL	BDL	BDL	1.5
14	Fe	0.06	BDL	1.94	0.3
15	Mn	0.24	0.20	0.35	0.3
16	Ni	BDL	BDL	BDL	0.02
17	Pb	BDL	BDL	BDL	0.01
18	Sb	BDL	BDL	BDL	-
19	Se	BDL	BDL	BDL	0.01
20	V	BDL	BDL	BDL	-
21	Zn	0.07	BDL	0.10	15
22	Hg	-	-	BDL	0.0001

(except pH and Hg($\mu\text{g/l}$) all are in mg/l)

6.6 Observation on the Water consumption of the unit & Analysis result of groundwater

- The unit is not having valid NOC from CGWA for withdrawal of groundwater, the NOC has been expired on 20.12.2018.
- Average freshwater consumption of the unit from July-2019 to Oct-2019 (Upto 15.10.2019) is 175 KLD through 03 nos. of bore wells (Borewell No. 3, Borewell No. 4 & fire hydrant borewell).
- As per expired CGWA NOC, the unit was permitted to extract 330 KLD of ground water from 02 nos. of borewells only. However, as per the water



extraction details provided by the unit, it has extracted **8.45 KLD** of ground water apart from 02 borewells (from borewell no. 6-refer Table-3) from July-2019 to 15th Oct-2019, which is violation of CGWA NOC.

4. As per CGWB report "**Dynamic Ground Water Recourses of India (as on 31.3.2013)**" (Page No. 260) Joya, District Amroha has been deteriorated from Semi Critical (2011) to Over Exploited category (2013).
5. Analysis result of samples collected from Borewell No. 3 & 4 found complying with the permissible limit of drinking water quality standard while, sample collected from handpump (inside Masjid) showed Fe-1.94 mg/l against 0.3 mg/l and Mn-0.35 mg/l against 0.3 mg/l of the permissible limit of drinking water quality standard.

7.0 Observations on mfg. sections of Metal Artware, Glass Artware, Wood Artware and Thermocoal Block

7.1 Wooden Art ware mfg. Section (Consented capacity-15 Ton/Month)

- The unit has a Wooden Art ware mfg. Section and for the same the unit has a valid common Consent to Operate (CTO) under the Water (Prevention & Control of Pollution) Act, 1974 (Consent No. 939591) & under the Air (Prevention & Control of Pollution) Act, 1981 (Consent No. F68503) from UPPCB, which are valid up to 31.12.2019. The CTO under the Water Act, 1974 and the Air Act, 1981 are attached at **Annexure-4** and **Annexure-5** respectively.

7.1.1 Observations

1. The manufacturing process of the wooden art ware mfg. section comprises of Log Yard, Sawing, Treatment Process, Seasoning, Machining, Fabrication, Finishing, Packing and Dispatch.
2. In this section, the unit has total 40 nos. of lacquer spray booths, which is the source of effluent generation.
3. For the treatment of the effluent, the unit has installed one Effluent Treatment Plant of 25 KLPD capacity.
4. The ETP at Wood division consisting of 01 collection cum equalization tank with dosing of chemicals (automatic dosing and mechanical mixing facility- for physico-chemical treatment of effluent), 02 nos. of Aeration tank, 01 settling tank, Sand Filter, Activated Carbon Filter and 01 HDPE final treated

tank. Acid, Poly-electrolyte, Alum, Sodium Hypo Chloride and Caustic are used as dosing material in the treatment.

5. Dosing of chemicals is carrying out in equalization tank rather than in separate flash mixer.
6. After treatment, the treated effluent is recycled again in the wood section in spray booth.
7. The unit has installed flow meter at the outlet of ETP and maintaining the log book for flow meter reading at ETP outlet. The unit submitted log book copy of the same for the month of July-2019, August-2019 and September-2019.
8. The unit has not installed flow meter at inlet of the ETP and at pipeline for recycled effluent in the wood section.
9. The unit has provided the treated water tank (HDPE tank) on the roof and not provided any sampling point after Sand filter or after treated water tank. The unit has provided additional T-line before Activated carbon filter, which is doubtful.
10. At the time of inspection, samples from Aeration tank-1 and Aeration tank-2 were taken in a beaker and as per visible observation, after 30 minutes no MLSS settling was found, which indicated that the unit is not maintaining proper MLSS concentration/biological treatment in the ETP. During visit, no ETP sludge was found stored at ETP area and the unit is not maintaining logbook for sludge generation from the ETP.
11. The unit does not have requisite effluent treatment facility, as it has not installed primary clarifier for separation of settleable solids.
12. Many un-named pipelines were found connected with the final treated tank. On inquiry about the pipelines, the ETP operator of the unit was not able to clarify the same.
13. Effluent samples were collected from the Inlet and outlet of ETP for analysis purpose and to assess the performance of the ETP. The analysis result of collected samples are mentioned in the following section (Section 7.1.2).



7.1.2 Characteristics of the samples collected from ETP of Wooden mfg. section of the unit

Table 7 Analysis result of samples collected from ETP of wooden art ware mfg. section of the unit

Sr. No.	Parameters	Sample Location		Norms as per CTO & General Standard for Discharge to Inland surface
		ETP Inlet	ETP Outlet	
1.	pH	7.27	7.13	5.5-9
2.	TSS	1170	36	100
3.	COD	6880	165	250
4.	BOD	3240	43	30
5.	Chloride	136	64	-
6.	PO ₄ -P	BDL	BDL	5
7.	NO ₃ -N	48	1.1	10
8.	Colour	25	BDL	-
9.	Sulfate	73	14	-
10.	As	0.01	0.03	0.2
11.	Cd	BDL	BDL	2
12.	Co	0.02	BDL	-
13.	Cr	0.24	BDL	0.1
14.	Cu	0.04	0.01	3
15.	Fe	6.89	1.07	3
16.	Mn	0.43	0.06	2
17.	Ni	0.02	BDL	3
18.	Pb	0.02	BDL	0.1
19.	Sb	BDL	BDL	-
20.	Se	BDL	BDL	0.05
21.	V	BDL	BDL	0.2
22.	Zn	2.93	0.4	5
23.	Hg	BDL	BDL	0.01
24.	NH ₃ -N	21	68	50
25.	CN	-	BDL	0.2
26.	Oil & Grease	-	BDL	10

(except pH and Hg($\mu\text{g/l}$) all are in mg/l)

7.1.3 Observation on the basis of Analysis Result of the samples collected from ETP of Wooden mfg. section

1. Analysis result of sample collected from ETP outlet showed, **BOD-43 mg/l** against the stipulated standard of 30 mg/l and **NH₃-N-68 mg/l** against the stipulated standard of 50 mg/l for discharge on inland surface water, which is non-complying (refer Table 7).
2. As per the visual observations, the unit is not maintaining MLSS concentration while as per analysis result, COD reduction was found 97.6 % (from 6880 mg/l to 165 mg/l) and BOD reduction was found 98.7 % (from 3240 mg/l to 43 mg/l), which may not be possible without having primary clarifier as well as not maintaining proper MLSS concentration in

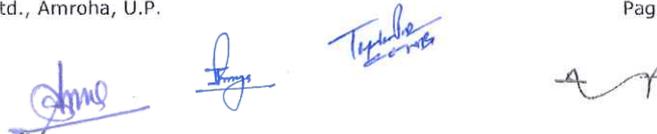
the Aeration tanks. Hence dilution with the fresh water addition in the ETP, cannot be ruled out.

7.2 Glass Art ware mfg. Section (Consented capacity-150 Ton/Month)

- The unit has a valid common CTO under the Water (Prevention & Control of Pollution) Act, 1974 & the Air (Prevention & Control of Pollution) Act, 1981 from UPPCB, which are valid up to 31.12.2019.

7.2.1 Observations

1. The unit has 01 common bore well (Borewell no. 4) near the entrance of Glass division to meet its freshwater requirements. Flow meter reading at the time of inspection was found 74938 m³.
2. The unit has another bore well at the entrance of the glass division (Borewell no. 5), which was found closed with the help of red cloth but connections were not dismantled and it was not properly sealed.
3. The unit is involved in the manufacturing of Glass art wares using silica sand, Soda ash, limestone and Feldspar as a raw material.
4. The unit has 02 nos. of Glass Melting Furnace (Operating at 1500 °C-melting point of glass), 02 nos. of Float bath (Glass from the furnace gently flows over the refractory spout on to the mirror-like surface of molten tin, starting at 1100 °C and leaving the float bath as solid ribbon at 600 °C), 02 nos. of Annealing furnace and 04 nos. of chakkas.
5. Glass Art Wares process comprises of Raw material storage, Batch Mixing, Lifting to Furnace Hopper, Charging through DOG house, Melting furnace (1470-1500 °C), Refining (@ 1260 °C), Working Bay (@ 1180-1220 °C), Blowing, Annealing, Inspection, Wire Curtting, Grinding, Etching and packing.
6. The Glass division has a Plating section, which is part of glass art wares.
7. In the Glass division, waste water generation is from chakka as well as from the plating section. For the treatment of the same the unit has installed 01 Effluent Treatment Plant of 100 KLPD capacity.
8. The ETP is consisting of Collection tank, pH correction tank, Chemical Dosing tank, Flash mixer, Clarifier, Activated carbon filter, Sand filter and Ultrafiltration. As informed by the representative of the unit, treated effluent from ETP is utilized again in the Glass mfg. division. ETP system is inadequate as it does not have secondary/biological treatment unit for BOD and COD removal.



9. The unit has provided Ultrafiltration additionally for the quality requirement in the Glass division for utilization of treated effluent.
10. The flow meter installed at ETP outlet was indicating reading as 883513 m³ at the time of visit.
11. The unit provided copy of the log book of the flow meter for the month of July-2019, August-2019 and September-2019.
12. During visit, no ETP sludge has been found stored at ETP area. The unit is not maintaining logbook for sludge generation from the ETP.
13. The unit has not displayed actual flow chart of the unit processes being followed in the ETP.
14. At the time of inspection, domestic effluent was found to be mixing with the effluent coming from glass division and the mixed effluent was found going in the ETP of Glass division. Hence, dilution as well as by-pass of the same could not be ruled out.
15. The drain meeting the septic tank was found full of sewage waste, due to that there was no flow in the drain and it was found stagnant and was in very bad condition. Photograph of the same is placed at Section-13.
16. During inspection, grinding effluent from glass mfg. unit was also observed going for treatment in STP provided at Glass division. A sample of the same was collected for analysis purpose. Photograph of the same is placed at Section-13. Analysis result of the same is mentioned in following section (Section 7.2.2).
17. Effluent samples were collected from the Inlet and outlet of ETP for analysis purpose and to assess the performance of the ETP. The analysis result of collected samples are mentioned in the following section (Section 7.2.2).

7.2.2 Characteristics of the samples collected from ETP of Glass mfg. section of the unit

Table 8 Analysis result of samples collected from ETP of Glass art ware mfg. section of the unit

ETP for Glass Art ware mfg. section					
Sr. No.	Parameters	Sample Location		Grinding Water going to STP inlet	Norms as per CTO & General Standard for Discharge to Inland surface
		ETP Inlet	ETP Outlet after carbon filter tank		
1.	pH	1.95	6.51	7.35	5.5-9.0
2.	TSS	134	69	287	100
3.	COD	759	88	83	250
4.	BOD	170	27	26	30
5.	Chloride	1559	180	227	-
6.	PO ₄ -P	1.02	BDL(<0.1)	BDL	5

7.	NO ₃ -N	527	48	78	10
8.	Colour	113	15	17	-
9.	Sulfate	655	42	128	-
10.	As	BDL	BDL	-	0.2
11.	Cd	BDL	BDL	-	2
12.	Co	0.23	0.02	-	-
13.	Cr	4.71	0.12	-	0.1
14.	Cu	20.98	0.79	-	3
15.	Fe	178.00	8.35	-	3
16.	Mn	3.33	0.35	-	2
17.	Ni	100.80	6.93	-	3
18.	Pb	0.34	0.02	-	0.1
19.	Sb	BDL	BDL	-	-
20.	Se	BDL	0.06	-	0.05
21.	V	BDL	BDL	-	0.2
22.	Zn	318.35	10.40	-	5
23.	Hg	BDL	BDL	-	0.01
24.	NH ₃ -N	29	12	-	50
25.	CN	-	-	-	0.2
26.	Oil & Grease	-	-	-	10

(except pH and Hg($\mu\text{g/l}$) all are in mg/l)

7.2.3 Observation on the basis of Analysis Result of ETP of Glass mfg. section

1. Analysis result of samples collected from ETP outlet found non-complying w.r.t NO₃-N -48 mg/l against 10 mg/l, Cr-0.12 mg/l against 0.1 mg/l, Fe-8.35 mg/l against 3 mg/l, Ni-6.93 mg/l against 3 mg/l, Se-0.06 mg/l against 0.05 mg/l and Zn-10.40 mg/l against 5 mg/l for discharge to inland surface water.
2. In the Glass division, the unit has not installed secondary/biological treatment units and as per the analysis result of collected sample of ETP, having COD-759 mg/l and BOD-170 mg/l at inlet and COD-88 mg/l and BOD-27 mg/l at outlet, which is practically not possible without biological treatment, which indicates dilution of ETP system.

7.2.4 Sewage Treatment Plant for Glass division-(Capacity-60 KLD)

1. The unit has one Sewage treatment plant having capacity of 60 KLD for treatment of sewage generating from the Glass section.
2. The STP consist of Collection tank, Electrode tank, Flash mixer, Clarifier tank, intermediate storage tank, Pressure Sand Filter and Activated Carbon Filter as Tertiary Treatment units. STP is also inadequate as it does not have secondary/biological treatment unit.
3. The treated effluent is utilized for toilet flushing purpose and for gardening purpose within the premises.

4. The unit is not maintaining logbook for sludge generation from the STP. During visit, no STP sludge was found stored at STP area.
5. The unit is mixing grinding effluent with the domestic effluent and treating the same in STP provided for Glass division.
6. The unit has not installed secondary/biological treatment units in STP.
7. One sample from STP inlet and one from STP outlet was collected for analysis purpose and to assess the performance of the STP. The analysis result of collected samples are provided in Section 7.2.5.

7.2.5 Characteristics of the samples collected from STP of Glass mfg. section of the unit

Table 9 Analysis result of samples collected from STP of Glass art ware mfg. section of the unit

STP at Glass Art ware mfg. section				
Sr. No.	Parameters	Sample Locations		Domestic Effluent discharge standards as per Consent
		STP Inlet	STP Outlet	
1.	pH	2.58	3.08	6.5-9.0
2.	TSS	135	230	100
3.	COD	475	243	250
4.	BOD	169	81	30
5.	Chloride	425	737	-
6.	PO ₄ -P	0.12	BDL	-
7.	NO ₃ -N	527	104	-
8.	Colour	98	24	-
9.	Sulfate	413	450	-
10.	As	BDL	BDL	-
11.	Cd	BDL	BDL	-
12.	Co	0.09	0.05	-
13.	Cr	1.02	1.02	-
14.	Cu	14.15	1.11	-
15.	Fe	19.37	73.18	-
16.	Mn	1.05	5.04	-
17.	Ni	60.10	20.73	-
18.	Pb	0.08	0.05	-
19.	Sb	BDL	BDL	-
20.	Se	BDL	BDL	-
21.	V	BDL	BDL	-
22.	Zn	93.08	19.82	-
23.	NH ₃ -N	59	26	-
24.	TC/FC	<1.8/<1.8	<1.8/<1.8	<1000

(except pH, TC/FC in MPN/100 ml, all are in mg/l)









7.2.6 Observation on the basis of Analysis Result of STP of Glass mfg. section

1. The unit is mixing grinding effluent of Glass division with the domestic effluent and treating the same in STP provided for Glass division.
2. The characteristics of the effluent (pH-2.58, COD-475 mg/l) at inlet of STP indicates that the unit is treating industrial effluent along with the domestic effluent in STP.
3. Analysis result of samples collected from outlet of STP showed pH-3.08, TSS-230 mg/l and BOD-81 mg/l, which are non-complying in comparison of effluent discharge standards of pH: 6.5-9.0, TSS-100 mg/l and BOD-30 mg/l respectively and shall not be allowed to utilize for gardening within the premises.

7.3 Metal Art ware mfg. Section (Consented capacity-150 Ton/Month)

- The unit has a valid common CTO under the Water (Prevention & Control of Pollution) Act, 1974 & the Air (Prevention & Control of Pollution) Act, 1981 from UPPCB, which are valid up to 31.12.2019.

7.3.1 Observations

1. Metal Art Wares process comprises of Raw material storage, Pre-treatment (Polishing, Phosphating and Shot Blasting), Finishing of goods (Powder Coating, Painting and Plating/Electrophoresis coating), Packing and Dispatch.
2. In the Metal division, for the treatment of effluent the unit has installed Effluent Treatment Plant of 175 KLPD capacity.
3. The ETP is consisting of Collection tank, pH correction tank, Flocculation tank, Flash Mixer, Lamela type clarifier, Final pH tank, Dual Media filter, Carbon Filter, Micro Cartridge filter, Ion-exchange unit, Ultrafiltration and Treated water storage tank. As informed by the representative of the unit, treated effluent from ETP is utilized again in the Metal mfg. division. ETP is inadequate as it does not have requisite secondary/biological treatment unit.
4. The unit has installed flow meter at the outlet of ETP and maintaining the log book for flow meter reading at ETP outlet. The unit submitted log book copy of the same for the month of July-2019, August-2019 and September-2019.



5. During visit, no ETP sludge was found stored at ETP area and the unit is not maintaining logbook for sludge generation from the ETP, indicating that the ETP is not operated regularly and poor operation and maintenance of ETP.
6. Effluent samples were collected from the Inlet and outlet of ETP for analysis purpose and to assess the performance of the ETP. The analysis result of collected samples is provided at Section-7.3.2.

7.3.2 Characteristics of the samples collected from ETP of Metal mfg. section of the unit

Table 10 Analysis result of samples collected from ETP of Metal art ware mfg. section of the unit

Sr. No.	Parameters	Sample Location		Norms as per CTO & General Standard for Discharge to Inland surface
		ETP Inlet	ETP Outlet	
1.	pH	2.47	6.82	5.5-9
2.	TSS	15	06	100
3.	COD	178	39	250
4.	BOD	58	18	30
5.	Chloride	36	110	-
6.	PO ₄ -P	0.67	0.31	5
7.	NO ₃ -N	82	10	10
8.	Colour	BDL	BDL	-
9.	Sulfate	322	155	-
10.	As	0.03	0.02	0.2
11.	Cd	BDL	BDL	2
12.	Co	0.07	0.01	-
13.	Cr	0.18	BDL	0.1
14.	Cu	4.55	0.72	3
15.	Fe	1.80	0.16	3
16.	Mn	0.27	0.14	2
17.	Ni	37.90	1.76	3
18.	Pb	0.04	BDL	0.1
19.	Sb	BDL	BDL	-
20.	Se	BDL	BDL	0.05
21.	V	BDL	BDL	0.2
22.	Zn	4.74	0.84	5
23.	Hg	BDL	BDL	0.01
24.	NH ₃ -N	16	13	50
25.	CN	-	0.09	0.2
26.	Oil & Grease	-	BDL	10

(except pH and Hg($\mu\text{g/l}$) all are in mg/l)

7.3.3 Observation on the basis of Analysis Result of ETP of Metal mfg. section

1. Analysis result of samples collected from ETP outlet found complying w.r.t norms stipulated in the CTO and general discharge norms.









7.3.4 Sewage Treatment Plant for Metal Section-(Capacity-60 KLD)

1. The unit has one Sewage treatment plant having capacity of 60 KLD capacity for treatment of sewage generating from the Metal section.
2. The STP consists of Collection tank, Electrode tank, Flash mixer, Clarifier tank, intermediate storage tank, Pressure Sand Filter and Activated Carbon Filter as Tertiary Treatment units. STP is inadequate as it does not have requisite secondary/biological treatment unit.
3. The treated effluent is utilized for toilet flushing purpose and for gardening purpose within the premises.
4. The unit is not maintaining logbook for sludge generation from the STP. During visit, no STP sludge was found stored at STP area.
5. One sample from STP inlet and one from STP outlet was collected for analysis purpose and to assess the performance of the STP. The analysis result of collected samples are provided in Section 7.3.5.

7.3.5 Characteristics of the samples collected from STP of Metal mfg. section of the unit

Table 11 Analysis result of samples collected from STP of Metal art ware mfg. section of the unit

STP at Metal Art ware mfg. section				
S. No.	Parameters	Sample Locations		Domestic Effluent discharge standards as per Consent
		STP Inlet	STP Outlet	
1.	pH	7.36	7.29	6.5-9.0
2.	TSS	148	63	100
3.	COD	356	267	250
4.	BOD	134	104	30
5.	Chloride	643	832	-
6.	PO ₄ -P	0.89	1.48	-
7.	NO ₃ -N	19	07	-
8.	Colour	96	44	-
9.	Sulfate	63	26	-
10.	As	0.03	0.03	-
11.	Cd	BDL	BDL	-
12.	Co	BDL	BDL	-
13.	Cr	BDL	BDL	-
14.	Cu	0.04	0.05	-
15.	Fe	0.54	0.45	-
16.	Mn	0.11	0.11	-
17.	Ni	0.03	0.02	-
18.	Pb	BDL	BDL	-

19.	Sb	BDL	BDL	-
20.	Se	BDL	BDL	-
21.	V	BDL	BDL	-
22.	Zn	0.15	0.02	-
23.	NH3-N	188	133	-
24.	Oil & Grease	-	BDL(<05)	10
25.	TC/FC	33 X10 ⁶ / 17X10 ⁶	<1.8/<1.8	<1000

(except pH, TC/FC in MPN/100 ml, all are in mg/l)

7.3.6 Observation on the basis of Analysis Result of STP of Metal mfg. section

1. Analysis result of samples collected from outlet of STP found non-complying w.r.t BOD-104 mg/l and COD-267 mg/l against effluent discharge standards of BOD-30 mg/l and COD-250 mg/l respectively and shall not be allowed to utilize for greening purpose within the premises.

7.4 Thermocoal Block mfg. Section (Consented capacity-65 Ton/Month consented capacity)

- The unit has a Thermocoal Block mfg. Section and for the same the unit has a valid separate Air consent (Consent No. 5223743) of UPPCB, which is valid up to 31.12.2019. The Consent is placed at **Annexure-6**.

7.4.1 Observations

1. Thermocoal Block mfg. process comprises of Raw material storage, Pre-Foaming, Making of Blocks (using steam) and Storage of blocks.
2. In Thermocoal division, the unit has one wood fired Boiler of 4 TPH capacity.
3. As informed by the unit's representative, there is no water requirement in thermocoal manufacturing process as well as no waste water generation from this division.

7.5 Sewage Treatment Plant for Residential Colony (Capacity-120 KLD)

- The unit has one residential colony where about 400-500 of people are living. The unit has provided one Sewage treatment plant of 120 KLD capacity for treatment of domestic waste water generating from the residential colony. The unit has started operating this STP from 14th June, 2019.

7.5.1 Observations

1. The provided STP is consisting of Collection tank, Electrode tank, Flash mixer, Clarifier tank, intermediate storage tank, Pressure Sand Filter and Activated Carbon Filter as Tertiary Treatment units and 02 nos. of sludge drying beds. STP is inadequate as it does not have requisite secondary/biological treatment unit.
2. The treated effluent is utilized for toilet flushing and gardening purpose within the premises.
3. During visit, sludge drying bed were found empty and no STP sludge was found stored at STP area, indicating poor/irregular operation and maintenance of STP.
4. The unit is not maintaining logbook for sludge generation from the STP.
5. Unit has installed entire STP in the covered roof setup. Sludge drying beds were also provided under the covered roof setup, which is defaulted design.
6. The unit is having open channel towards the boundry wall and during inspection, Leakage was also found from the periferrial wall of residential colony's STP, which was going into the Kaccha Pond, which is located behind the unit. Photograph of the same is placed at Section-13.
7. One sample from STP inlet and one from STP outlet was collected for analysis purpose and to assess the performance of the STP. Analysis result of the same is mentioned in the following section (Section 7.5.2).

7.5.2 Characteristics of the samples collected from STP for Residential Colony

Table 12 Analysis result of samples collected from STP for Residential Colony

STP at residential colony				
S. No.	Parameters	Sample Locations		Domestic Effluent discharge standards as per Consent
		STP Inlet	STP Outlet	
1.	Ph	7.27	7.26	6.5-9.0
2.	TSS	48	50	100
3.	COD	121	136	250
4.	BOD	49	37	30
5.	Chloride	98	96	-
6.	PO ₄ -P	1.90	2.03	-

7.	NO ₃ -N	1.4	1.7	-
8.	Colour	25	20	-
9.	Sulfate	33	30	-
10.	As	0.01	BDL	-
11.	Cd	BDL	BDL	-
12.	Co	BDL	BDL	-
13.	Cr	BDL	BDL	-
14.	Cu	0.06	0.11	-
15.	Fe	1.41	1.72	-
16.	Mn	0.33	0.25	-
17.	Ni	0.13	0.17	-
18.	Pb	BDL	BDL	-
19.	Sb	BDL	BDL	-
20.	Se	BDL	BDL	-
21.	V	BDL	BDL	-
22.	Zn	0.43	0.45	-
23.	NH ₃ -N	14	21	-
24.	TC/FC	-	92x10 ⁶ / 48x10 ⁵	<1000

(except pH, TC/FC in MPN/100 ml, all are in mg/l)

7.5.3 Observation on the basis of Analysis Result of STP of Residential Colony

1. Analysis result of samples collected from outlet of STP showed BOD-37 mg/l against effluent discharge standards of BOD-30 mg/l applicable to all mode of disposal (refer Table 10).

7.6 Kachha Pond located behind the unit

7.6.1 Observation on Characteristics of the sample collected from Kachha Pond located behind the unit

1. As per the analysis result of sample collected from the Kachha pond indicated pH-7.2, TSS-53 mg/l, COD-62 mg/l, Chloride-133 mg/l, PO₄-P-1.48 mg/l, NO₃-N-4.4, Sulfate-48 mg/l, As-BDL, Cd-BDL, Co-BDL, Cr-0.03 mg/l, Cu-0.11 mg/l, Fe-2.40 mg/l, Mn-0.32 mg/l, Ni-0.80 mg/l, Pb-BDL, Sb-BDL, Se-BDL, V-BDL, Zn-0.65 mg/l, Hg-BDL.

8.0 Hazardous Waste Management

1. The unit possesses the Authorization (under the Hazardous and Other Wastes Management [HOWM] Rules, 2016) for generation, collection, utilization, storage and disposal of ETP dried sludge (20 kg/day), valid till 18.01.2021. Authorization is placed at **Annexure-7**.



2. The unit has been granted authorization (No. 8531, issued dated 16.07.2019) for empty containers (50 no./day), cotton waste and used cloth mask (10 kg/day), rubber gloves (5 kg/month), old batteries (20 no./month), paint booth sludge (50 kg/month), oily rags (0.15 kg/day), used oil (0.1 KL/month), empty corrugated cartons (8 kg/day), melting furnace ash (20 kg/month), asbestos gloves/cloth (5 kg/month), fuel filter & air filter (5 no./month), polishing dust (1,000 kg/month) and ETP sludge (40 kg/day), which is valid upto 16.07.2024. Authorization No. 8531 is placed at **Annexure-8**.

8.1 Observations:

1. The unit has made agreement with Transport Storage and Disposal Facility (TSDF) namely, M/s Bharat Oil & Waste Management Ltd., Kanpur for lifting, transportation, treatment, storage and disposal of hazardous waste generated at M/s C. L. Gupta Exports Ltd., Amroha, Uttar Pradesh, which was valid till 31/03/2019.
2. Further, vide letter dated 15/02/2019, unit has requested to the TSDF for extension of agreement, which was valid upto 31/03/2019. Copy of the same is given at **Annexure-9**.
3. The unit has sent generated hazardous waste to the TSDF for which the unit has maintained Manifest document (as required under Rule 19 of the HOWM Rules, 2016). The unit has provided the following data of year 2017-18 and 2018-19:

Table 13 Hazardous waste disposal in Year 2017-18 & 2018-19

Hazardous waste	Year		Disposal
	2017-18	2018-19	
ETP sludge	5.605 MT	4.529 MT	M/s Bharat Oil & Waste Management Ltd., Kanpur
Gloves/ masks	165.44 Kg	23.46 Kg	
Old battery	621 Kg	489.58 Kg	

4. Details of remaining categories of hazardous waste except ETP sludge, Gloves/ masks and old batteries sent to TSDF facility from year 2017 to 2019 could not be provide by the unit;
5. During the time of the visit, about 914 kg of ETP sludge including paint sludge, 100 liters of used oil, 100 liters of used diesel, 38 old batteries, 50 numbers of drums/ empty barrels/ containers contaminated with hazardous

chemicals/ wastes and 61 waste tube lights were stored under covered dedicated storage shed;

6. There were no automatic water sprinkling arrangements, fire alarming systems, flame arresters, smoke/ heat detectors, fire extinguishers and other necessary provisions provided in the storage area as stipulated under the Guidelines for storage of incinerable hazardous wastes;
7. There was no labeling on bags stored with hazardous wastes as per the Rule 17(1) of the HOWM Rules, whereas, the unit is required to label the bags with requisite details as prescribed in Form 8 of the HOWM Rules, 2016;
8. The unit has submitted the Annual return w.r.t. generation and management of hazardous waste to Uttar Pradesh Pollution Control Board, as required under Rule 20(2) of the HOWM Rules, 2016. The copy of the same for the year 2016-17 and 2017-18 are given at **Annexure-10**.
9. Apart from three hazardous wastes (namely ETP sludge, Gloves/ masks and Old battery), details of other categories are not mentioned by the unit in the annual return of year 2017-18 and 2018-19. Further, annual return before the year 2016-17 could not be provided by the unit;
10. The unit is maintaining daily records of the hazardous waste generated and disposed, however, such daily record is not as per the Form 3 prescribed under Rule 20(1) of the HOWM Rules, 2016.
11. The unit has not provided the process flow chart including material balance for production of each of the products, hence, the relationship between products manufactured and quantity waste generated, which may be utilized in the process or sent to the TSDF cannot be establish.

9.0 Compliance Status of the Recommendations provided in the last Joint committee inspection report

Table 14 Compliance status of the recommendations provided in the last Joint committee inspection report

Sr. No.	Recommendation in the last Joint committee Inspection report	Remarks	Compliance Status (Complying / non-complying / partial complying)
1.	Total domestic wastewater generated from industry/colony is about 175 KLD. The industry has installed 120 KLD capacity of STPs and rest sewage passes through septic tank. The Industry must installed STP for remaining capacity of 55 KLD.	The unit has constructed new STP of 120 KLD capacity at the residential colony for treatment of sewage generating from the residential colony and started its operation from 14 th June, 2019.	Complying
2.	It should be ensured by the industry that drain/outlets, carrying industrial/domestic wastewater which are connected with Kacha pond are to be dismantled or sealed and no water or wastewater from the premises reach the pond at any time outside the premises.	A Leakage was observed from the periferrial wall of residential colony's STP, which was going into the Kachha Pond, which is located behind the unit. The unit has not dismantled open drain, which is carrying domestic wastewater at the residential colony behind the installed STP.	Non-complying
3.	As per the permission from CGWA only 02 bore wells are allowed for abstraction of groundwater. The remaining 04 bore wells installed in premises should be dismantled immediately.	At the time of inspection remaining 04 borewells were found just covered with the help of red cloth and all the other connections were observed along with the borewells.	Non-complying
4.	The industry must be strictly followed ZLD process.	A Leakage was observed from the periferrial wall of residential colony's STP, which was going into the Kachha Pond, which is located behind the unit.	Non-complying









		Industrial effluent was being mixed with the domestic effluent and was being used in gardening, which is not acceptable to establish ZLD.	
5.	At the time of inspection, it was found that industry is involved in the expansion/modification in premises hence industry must be obtained CTE from UPPCB before expansion/modification.	The unit has obtained CTO under section 21/22 of the Air (Prevention & Control of Pollution) Act, 1981 from UPPCB for Thermocoal Block manufacturing plant dated 27.09.2019, which is valid upto 31.12.2019.	Complying
6.	The industry has obtained the authorization for disposal of Hazardous waste ETP sludge only. At the time of inspection, it was found that other type of hazardous waste also stored in the premises like empty containers of paint, lacquer, electroplating chemicals, oil-soaked cotton rags, used oils etc. The industry must be obtained authorization for all types Hazardous waste generated from the factory and it should be ensured to dispose of through authorized TSDF only.	The industry has obtained the authorization (No. 8531, issued dated 16.07.2019) for disposal of hazardous waste like empty containers, cotton waste, used cloth mask, rubber gloves, old batteries, booth sludge, oily rags, used oil, empty corrugated cartons, melting furnace ash, asbestos gloves/cloth, filter and air filter, polishing dust and ETP sludge from UPPCB, which is valid upto 16.07.2024. Authorization No. 8531 is placed at Annexure-7.	Complying
7.	The industry should install an electromagnetic flow meter on all the water supply system as well as inlet and outlets of the ETPs and STPs and proper record/logbooks should be maintained.	The unit has not installed electromagnetic flow meter on all the water supply system as well as inlet and outlets of the ETPs and STPs. The unit is maintaining logbook for flow meter reading only and not for daily sludge generation, hence it can be	Non-complying

		concluded that the unit is partially maintaining the record/logbooks.	
8.	Flow meters installed at the outlet pipeline of the wood case ETP and outlet of STPs should be relocated to any suitable outlet position having easy access for getting the flow details of treated effluent.	The unit has not yet relocated the flow meters which are installed at the outlet pipeline of the wood case ETP and outlet of STPs to other suitable outlet position having easy access for getting the flow details of treated effluent.	Non-complying
9.	The performance of wood case division ETP is poor and not meeting the general effluent discharge norms for inland surface water. The unit must upgrade and augment ETP to meet the standards. The ETP treated wastewater strictly should not be used for irrigation/ horticulture purposes till up-gradation of ETP system.	Analysis result of samples collected from ETP outlet of Wood division showed BOD-43 mg/l against the General Standard of 30 mg/l and NH ₃ -N-68 mg/l against the General Standard of 50 mg/l for discharge to inland surface water, which is non-complying (refer Table 7).	Non-complying
10.	Cyanide value of metal and wood case division ETP is on higher sight so, unit should operate and maintain CN (Cyanide) removal unit properly to meet the standards.	Cyanide value of metal and wood case division ETP was observed BDL and 0.09 mg/l respectively against the standard for discharge to Inland surface of 0.2 mg/l, which was within the limit.	Complying

10.0 Conclusion

10.1 Ground water withdrawal

1. The unit is not having valid NOC from CGWA for withdrawal of groundwater, the NOC has been expired on 20.12.2018.
2. As per expired CGWA NOC, the unit was permitted to extract 330 KLD of ground water from 02 nos. of borewells only. However, the unit has extracted 8.45 KLD of ground water apart from 02 borewells (from borewell no. 6-refer Table-3) from July-2019 to 15th Oct-2019, which is violation of






CGWA NOC. Hence, Environmental Compensation for illegal extraction of ground water shall be calculated and levied on the unit.

3. Analysis result of samples collected from Borewell No. 3 & 4 found complying with the permissible limit of drinking water quality standard while, sample collected from handpump (inside Masjid) showed Fe-1.94 mg/l against 0.3 mg/l and Mn-0.35 mg/l against 0.3 mg/l of the permissible limit of drinking water quality standard.

10.2 ETP/STP Adequacy and Effluent Discharge Norms

1. The unit does not have valid consent to operate for separate ETPs and STPs, which are provided at Wooden Artware mfg. division, Glass Artware mfg. division, Metal Artware mfg. division and Residential colony.
2. The unit has not provided adequate requisite biological treatment facility at ETPs installed at Wooden Artware mfg. division and Glass Artware mfg. division.
3. The unit has not installed Secondary/biological treatment facility in any STPs installed in the unit.
4. During visit, no ETP sludge has been found at ETP areas of Glass division, Wood division and Metal division, which indicates that the unit is not operating the ETP continuously.
5. During visit, no STP sludge has been found at STP areas of Glass division, Wood division and Residential Colony, which indicates that the unit is not operating the STP continuously.
6. The unit is not maintaining logbook for ETP/STP for daily dosing of chemicals in physico-chemical treatment, flow meter reading at inlet and recycling point, daily sludge generation from the ETPs/STPs at Glass division, Wood division and Metal division.

Wood Division:

- i. The ETP at Wood division found non-complying w.r.t BOD and $\text{NH}_3\text{-N}$ and the unit is not maintaining MLSS concentration in the Aeration tank of ETP, hence it can be concluded that, the unit do not have adequate ETP at wood division.
- ii. The unit is not operating and mainaining properly the Secondary/biological treatment facility in ETP and reduction of BOD from

3240 mg/l (at inlet) to 43 mg/l (at outlet) clearly indicates dilution with fresh water addition at wood division.

- iii. No flow meter is provided at inlet and recycled pipeline of ETP.

Glass Division:

- i. Analysis result of samples collected from ETP outlet of Glass division found non-complying w.r.t NO₃-N, Cr, Fe, Ni, Se and Zn for discharge to inland surface water.
- ii. The unit has not installed secondary treatment unit while as per the analysis result of collected sample of ETP inlet, it is having COD concen. of 754 mg/l, which practically not possible without biological treatment, hence dilution or by-pass can not be ruled out.
- iii. No flow meter is provided at inlet and recycled pipeline of ETP.
- iv. The unit is mixing grinding effluent of Glass division with the domestic effluent and treating the same in STP provided for Glass division and analysis result of samples collected from STP outlet of Glass division found non-complying w.r.t pH-3.08, TSS-230 mg/l and BOD-81 mg/l, hence it can be concluded that mixing of grinding effluent with the domestic effluent is leading to the non-compliance of the Glass division's STP discharge norms as prescribed in the unit's consent and the unit cannot be allowed to utilize the treated domestic effluent for gardening purpose.
- v. The characteristics of the STP effluent (pH-2.58, COD-475 mg/l) at inlet of STP establish the fact that the unit is treating industrial effluent along with the domestic effluent in STP.

Metal Division:

- i. No flow meter is provided at inlet and recycled pipeline of ETP.
- ii. Analysis result of samples collected from ETP outlet found complying w.r.t stipulated norms for discharge to inland surface water.
- iii. Analysis result of samples collected from outlet of STP found non-complying w.r.t BOD-104 mg/l and COD-267 mg/l against effluent discharge standards to all mode of disposal.



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10.3 Haz. Waste Management

- i. The unit do not have valid agreement with Transport Storage and Disposal Facility (TSDF) for lifting, transportation, treatment, storage and disposal of hazardous waste generated at M/s C. L. Gupta Exports Ltd., Amroha, Uttar Pradesh. It was expired on 31/03/2019.
- ii. The unit could not provided details of remaining categories of hazardous waste except ETP sludge, Gloves/ masks and old batteries sent to TSDF facility from year 2017 to 2019.
- iii. As stipulated under the Guidelines for storage of incinerable hazardous wastes, the unit have not provided automatic water sprinkling arrangements, fire alarming systems, flame arresters, smoke/ heat detectors, fire extinguishers and other necessary provisions in the storage area.
- iv. As prescribed in Form 8 of the HOWM Rules, 2016, the unit is required to label the bags with requisite details, while there was no labeling on bags stored with hazardous wastes as per the Rule 17(1) of the HOWM Rules.
- v. The unit has not mentioned the details of other haz. Waste apart from ETP sludge, Gloves/ masks and Old battery in the annual return of year 2017-18 and 2018-19. Also, annual return before the year 2016-17 could not be provided by the unit.
- vi. The unit is maintaining daily records of the hazardous waste generated and disposed, however, such daily record is not as per the Form 3 prescribed under Rule 20(1) of the HOWM Rules, 2016.
- vii. The unit has not provided the process flow chart including material balance for production of each of the products, hence, the relationship between products manufactured and quantity waste generated, which may be utilized in the process or sent to the TSDF cannot be establish.

In view of the above violations w.r.t haz. Waste management, Environmental Compensation has been calculated to be levied on the unit.



11.0 Recommendations based on the above Observations

11.1 Water Consumption of the unit & Analysis result of ground water samples

1. The unit shall obtain NOC from CGWA for withdrawal of groundwater, as the CGWA NOC have already been expired on 20.12.2018.
2. All the fresh water consumption points and treated effluent recycling points should be metered and logbook shall be maintained against each flow meter.
3. All existing meters should be periodically calibrated and records to be maintained.
4. The unit shall engage expert institute to carry out detailed Water Audit for detailed study of total water consumption and recycling for reduction of the withdrawal of the ground water.

11.2 For Wooden Art ware mfg. Section

1. The unit shall modify/upgrade the ETP and shall operate properly to comply with the norms stipulated in CTO.
2. The unit shall provide sampling point at approachable location for collection of ETP outlet sample.
3. The unit shall install flowmeter at inlet of ETP and at recycled water pipeline.
4. The unit shall install primary clarifier in the ETP provided at Wood division and shall maintain MLSS concentration in Aeration tank-1 and Aeration tank-2.
5. The unit shall maintain ETP log book record for daily dosing of chemicals in physico-chemical treatment, flow meter reading at inlet and recycling point, daily sludge generation from the ETP and ETP sludge disposal.
6. The unit shall operate ETP regularly and shall have trained ETP operator with environment background, who is able to operate the ETP properly.
7. The unit shall discard the extra pipelines which are connected with the final HDPE treated tank.
8. The unit shall obtain consent to operate for separate ETP provided at Wooden Artware mfg. division.

11.3 For Glass Art ware mfg. Section and for STP at Glass Section

1. The unit shall stop mixing of industrial effluent in STP and shall stop using treated effluent in gardening within the premises.



2. The unit shall keep and maintain ETP and STP log book record for daily dosing of chemicals in physico-chemical treatment, flow meter reading at inlet and recycling point, daily sludge generation from the ETP/STP and ETP/STP sludge disposal.
3. The unit shall install flowmeter at inlet of ETP and at recycled water pipeline.
4. The unit shall display the actual flow chart of the actual unit processes being followed in the ETP.
5. The unit shall have trained operator for ETP and STP with environment background, who is able to operate the ETP and STP properly.
6. The unit shall stop the practice of treatment of mixed effluent of grinding section and domestic waste water in the STP and shall treat domestic effluent separately.
7. The unit shall install Secondary/biological treatment facility in the STP installed at Glass division for treatment of sewage and to use the same for toilet flushing/gardening within the premises.
8. The unit shall obtain consent to operate for separate ETP provided at Glass Artware mfg. division.

11.4 For Metal Art ware mfg. Section and for STP at Metal Section

1. The unit shall operate ETP as well as STP properly & continuously.
2. The unit shall keep and maintain ETP and STP log book record for daily dosing of chemicals in physico-chemical treatment, flow meter reading at inlet and recycling point, daily sludge generation from the ETP/STP and ETP/STP sludge disposal.
The unit shall install flowmeter at inlet of ETP and at recycled water pipeline.
3. The unit shall have trained operator for ETP and STP with environment background, who is able to operate the ETP and STP properly.
4. The unit shall install Secondary/biological treatment facility in the STP installed at Metal division for treatment of sewage and to use the same for toilet flushing/gardening within the premises.
5. The unit shall obtain consent to operate for separate ETP provided at Metal Artware mfg. division.






11.5 For STP provided at Residential Colony

1. As Leakage was observed on the periferrial wall of residential colony's STP, hence it can be concluded that, the unit failed to comply with the consent condition of reuse of treated domestic effluent in flushing/gardening within the premises. The unit shall seal/close the leakage and shall ensure that in any condition, the treated/untreated domestic/industrial effluent shall not go outside of the unit's premises and shall strictly follow the ZLD condition as per the consent to operate.
2. The unit shall keep and maintain STP log book record for daily dosing of chemicals in physico-chemical treatment, flow meter reading at inlet and recycling point, daily sludge generation from the STP and STP sludge disposal.
3. The unit shall operate STP regularly and shall have trained STP operator with environment background, who is able to operate the STP properly.
4. The unit shall seal all the open drains which transfer the treated STP and shall install proper closed pipe system for the same.
5. The unit shall obtain consent to operate for separate STP provided at Residential colony.

11.6 For Haz. Waste management

The unit shall:

1. Send hazardous waste to the TSDF with valid agreement with TSDF;
2. Maintain daily records on generation, storage, management of hazardous wastes in compliance with Rule 20(1) of the HOWM Rules, 2016;
3. Submit the Annual return w.r.t. generation and management of each of the hazardous waste to Uttar Pradesh Pollution Control Board, as required under Rule 20(2) of the HOWM Rules, 2016.
4. Package and label the hazardous waste in accordance with provisions stipulated under Rule-17 of the HOWM Rules, 2016;
5. Install automatic water sprinkling arrangements, fire alarming systems, flame arresters, smoke /heat detectors, fire extinguishers and other necessary provisions as stipulated under the Guidelines for storage of incinerable hazardous wastes;
6. Install necessary slope, channelization drain and collection pit for management of spilled oil; and



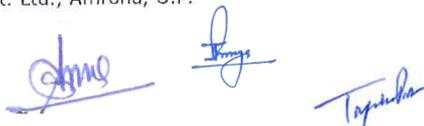
7. Install display board outside the factory gate displaying details of hazardous wastes being handled by the unit.

11.7 For Recommendations provided in the last Joint committee inspection report

1. The unit has failed to comply with the recommendation mentioned at para 10 at point 2, 3, 7, 8 & 9 and shall taken necessary action immediately. In addition following are recommended.
2. The unit shall dismantle the channel carrying effluent from STP located at residential colony.
3. The unit shall seal illegal 04 borewells properly and shall dismantle all the electrical and pipeline connections along with the same and shall not withdraw ground water from the illegal borewells.
4. The unit shall maintain ETP & STP log book record properly for flow meter reading, daily sludge generation and sludge disposal.
5. As per the Analysis result of samples collected from ETP outlet of Wood division, it found non-complying w.r.t BOD-43 mg/l and NH₃-N-68 mg/l for discharge to inland surface water. Hence, the unit shall operate ETP properly and treated effluent must meet the discharge norms as mentioned in the granted CTO. Treated wastewater should not be used for irrigation/horticulture purposes, if the quality of treated effluent is not meeting with the stipulated discharge norms.

11.8 For NGT order dt. 29.08.2019 in O.A. No. 220/2019 Principal Bench, New Delhi

1. Hon'ble NGT vide order dated 29.08.2019 directed that, "*The joint Committee may also make an assessment of the compensation to be recovered for the damage caused which should cover the entire period of damage and should be deterrent having regard to financial capacity of the unit and the nature of violations.*"
 - Assessment of the compensation to be recovered for the damage caused covering the entire period of damage needs detailed survey through expert institutes. Hence, expert institute may be engaged for the detailed study of environmental damage caused by the unit for the entire period to cover the environmental compensation from the unit.



2. However, the committee has been calculated Environmental Compensation for illegal extraction of ground water, for ZLD condition violation and for not managing Haz. Waste as per management as per the the HOWM Rules, 2016 in the following section (Section 12.0).

12.0 Environmental Compensation

12.1 EC for illegal extraction of ground water

1. EC has been calculated as per the Report prepared by CPCB on "Assessment of Environmental Compensation in case of illegal extraction of Ground water" dated 26 June, 2019 which was submitted in compliance to hon'ble NGT order dated 07/05/2019 in O.A. No. 327/2018 in the matter of Shailesh Singh Vs Central Ground Water Board & Ors. The copy of the Report is placed at Annexure-11.
2. The EC has been calculated for the period beyond the expiry of CGWA NOC that is 20.12.2018 to 16.10.2019 and also for illegal annual extraction of 99,691 m³ for the period of 01.10.2017 to 30.09.2018, which is higher than the permitted ground water extraction of 99,000 m³/annum as below:

$EC_{GW} = \text{Water consumption per day} \times \text{EC rate for illegal extraction of ground water (ECR}_{GW}) \times \text{No. of days} \times \text{Deterrent Factor}$

(A) Year: 2018-19

$$EC_{GW} = 330 \text{ (m}^3\text{/day)} \times 120 \text{ (Rs/m}^3\text{)} \times 300^* \text{ (days)} \times 1$$

$$= \text{Rs. 1,18,80,000 /-} \dots \dots \dots \text{(I)}$$

*CGWA NOC was valis upto 20.12.2018. Hence days calculated from the date of NOC expiration to the Joint inspection date (21.12.2018 to 16.10.2019=300 days)

- As per the above detailed calculation, the unit is liable to pay Rs. 1,18,80,000/- of EC for illegal ground water extraction.

(B) Year: 2017-18

$$EC_{GW} = 2.30 \text{ (m}^3\text{/day)} \times 120 \text{ (Rs/m}^3\text{)} \times 365^* \text{ (days)} \times 1$$

$$= \text{Rs. 1,00,740 /-} \dots \dots \dots \text{(II)}$$

*As per the compliance status of CGWA NOC prepared by CGWA (placed at **Annexure-12**), the unit extracted 99,691 m³/annum during 01.10.2017 to




30.09.2018, which is higher than the permitted ground water extraction of 99,000 m³/annum. Hence days calculated from 01.10.2017 to 30.09.2018=365 days

3. As per the above detailed calculation, the unit is liable to pay Rs.1,00,740/- of EC for illegal ground water extraction.

(C) In addition, the unit have total 06 borewells, while CGWA have issued NOC for extraction of ground water from 02 borewells only. Hence, illegal extraction of ground water from illegal 04 borewells could not be excused as the unit has not installed flow meter. Hence environmental compensation for the same could not be calculated.

-The unit is liable to pay total Environmental compensation amount of Rs. 1,19,80,740 (Rs. 1,18,80,000 + Rs. 1,00,740) for illegal ground water extraction for the period of 01.10.2017 to 16.10.2019.

12.2 Environmental Compensation for violation of effluent discharge/ inadequate ETPs/ZLD norms as per CTO

1. As per the valid consent to operate issued under section 25/26 of The Water (Prevention and Control of Pollution) Act, 1974 it is mentioned that the domestic effluent shall be treated and reused in flushing/gardening within the premises.
2. But during inspection, a Leakage was observed from the periferrial wall of residential colony's STP, which was going into the Kachha Pond, which is located behind the unit. This is violation of effluent discharge/ inadequate ETPs/ZLD norms as per CTO. Hence the following EC has been calculated as per the "Report of the CPCB In-house Committee on Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund" acknowledged by Hon'ble NGT vide order dated 19.02.2019 in the matter of Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors. in O.A. No. 93/2017:

Environmental Compensation (EC) = PI x N x R x S x LF

Where,

PI = Pollution index of industrial sector (here-80, for red category industrial sector),

N = Number of days of violation took place (here-203 days, from date of inspection carried out by the joint team and found violation of ZLD



norms dated 28.03.2019 to date of inspection of 2nd inspection of the joint team dated 16.10.2019)

R = A factor in Rupees for Penalty (R to be taken as 250)

S = Factor for scale of Operation of the facility (here-1.5, for large scale industry)

LF = Location factor (Here-1, for less than 1 million population)

Here,

Date of last inspection: 28.03.2019

Date of current inspection: 16.10.2019

As per the EC formula, EC has been calculated as follows:

A). 28.03.2019- 25.06.2019

(EC= PI * N * R * S * LF)

=80* 90*250*1.5*1

=27,00,000/-

B). 26.06.2019- 23.09.2019

(EC= PI * N * R * S * LF)*2

=80* 90*250*1.5*1*2

=54,00,000/-

C). 23.09.2019- 16.10.2019

(EC= PI * N * R * S * LF)*4

=80* 23*250*1.5*1*4

=27,60,000/-

Total EC (A+B+C)= Rs. 1,08,60,000/-.....(III)

The unit is liable to pay total Environmental compensation amount of Rs. **1,08,60,000** /-for violation of ZLD norms for the period of 28.03.2017 to 16.10.2019.

12.3 Environmental Compensation for not managing Haz. Waste as per management as per the the HOWM Rules, 2016

As per the methodology prepared by CPCB on "Determination of Environmental Compensation for violation of Hazardous waste and other Waste (Management



and Transboundary Movement) Rules, 2016" financial penalty and Environmental Compensation have been calculated as follows;

1. Financial Penalty

The unit was found violating 07 provisions (at Sl. No. 2, 3, 5b, 6(B)d, 8, 7 and 31) of HoWM Rules, 2016 for which 07 lakhs financial penalty may be imposed.

2. Environmental Compensation

The following violations have been considered for calculation of EC a) When hazardous and others wastes is disposed at unauthorised place or handed over or sold to unauthorised party and b)Waste found stored beyond the stipulated period (refer Rule 8 of the HOWM Rules, 2008)

a) When hazardous and others wastes is disposed at unauthorised place or handed over or sold to unauthorised party

Hazardous Waste

During inspection, it was observed that about 914 Kg of ETP sludge was found stored in the covered shed which is considered to be generated during the period from 1st April, 2019 to 15th October, 2019 i.e. in 6.5 months.

Whereas, as per the information provided by the unit, annual average ETP sludge generation during 2017-18 & 2018-19 is 4.567 MT and therefore during 6.5 months ETP sludge is estimated 2968 kg.

The estimated quantity of ETP sludge disposed to unauthorized places is 2968-914 = 2054 kg ~ 2.05 tonnes in 6.5 months.

Environmental Compensation = Q x ERF x R

Q = Quantity in tonnes/year = 3.15 tonne/year

ERF = Environmental Risk Factor = 1.5

R = Environmental Compensation factor = Rs. 30,000

= 3.15 x 1.5 x 30,000 = Rs.14,17,750 ~Rs. 14.17 lakhs

Other waste

Estimated other waste stored is 551kg in 6.5 months

Environmental Compensation = Q x ERF x R

Q = Quantity in tonnes/year = 0.847 tonne/year



ERF = Environmental Risk Factor = 0.3

R = Environmental Compensation factor = Rs. 30,000

= 0.847 x 0.3 x 30,000 = Rs.7623

b) Waste found stored beyond the stipulated period (refer Rule 8 of the HOWM Rules, 2008)

Environmental Compensation for Hazardous Waste = Q x ERF x R

= 1.406 x 0.1 x 30000 = Rs. 4218

Environmental Compensation for Other Waste = Q x ERF x R

= 0.551 x 0.05 x 30000 = Rs. 826

Total amount determined for Environmental Compensation and Penalty for violation of Hazardous waste and other Waste (Management and Transboundary Movement) Rules, 2016 is [7,00,000 + (14,17,750+7,523+4,218+826)]

= Rs. 21,30,417/-.....(IV)

12.4 Total Environmental Compensation

1. As per the available methodology, Environmental Compensation has been calculated for illegal extraction of ground water, for ZLD condition violation and for not managing Haz. Waste as per management as per the the HOWM Rules, 2016 however for assessment of the compensation to be recovered for the damage caused, covering the entire period of damage needs detailed survey through expert institutes. Hence, expert institute may be engaged for the detailed study of environmental damage caused by the unit for the entire period to cover the environmental compensation from the unit.
2. Total Environmental Compensation for illegal extraction of ground water, for ZLD condition violation and for not managing Haz. Waste as per management as per the the HOWM Rules, 2016 is as below:

=(I) + (II) + (III) + (IV)

=Rs. 1,18,80,000 + Rs. 1,00,740 + Rs. 1,08,60,000 + Rs. 21,30,417

=Rs. 2,49,71,157

The unit is liable to pay total Environmental compensation amount of **Rs. 2,49,71,157/-**.



13.0 Photographs

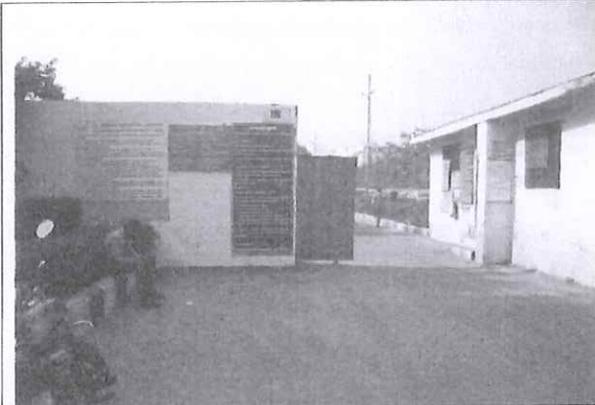


Figure 1:Entry gate of Industry



Figure 2:Unathorised borewell



Figure 3: Grinding effluent from glass mfg. section for treatment in STP

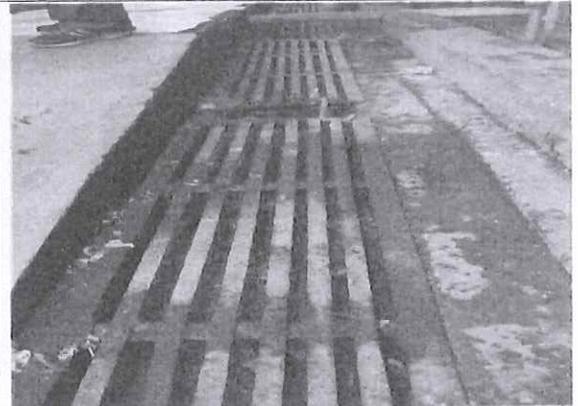


Figure 4: Accumulation of sludge in the STP inlet drain



Figure 5: Kaccha Pond located behind the unit

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Figure 6: Hazardous waste storage shed



Figure 7: ETP inlet of metal mfg. unit

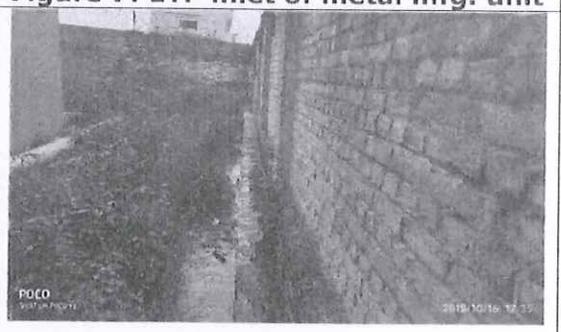


Figure 8 Leakage (bypass) from the industry

14.0 Location of the Industrial Unit

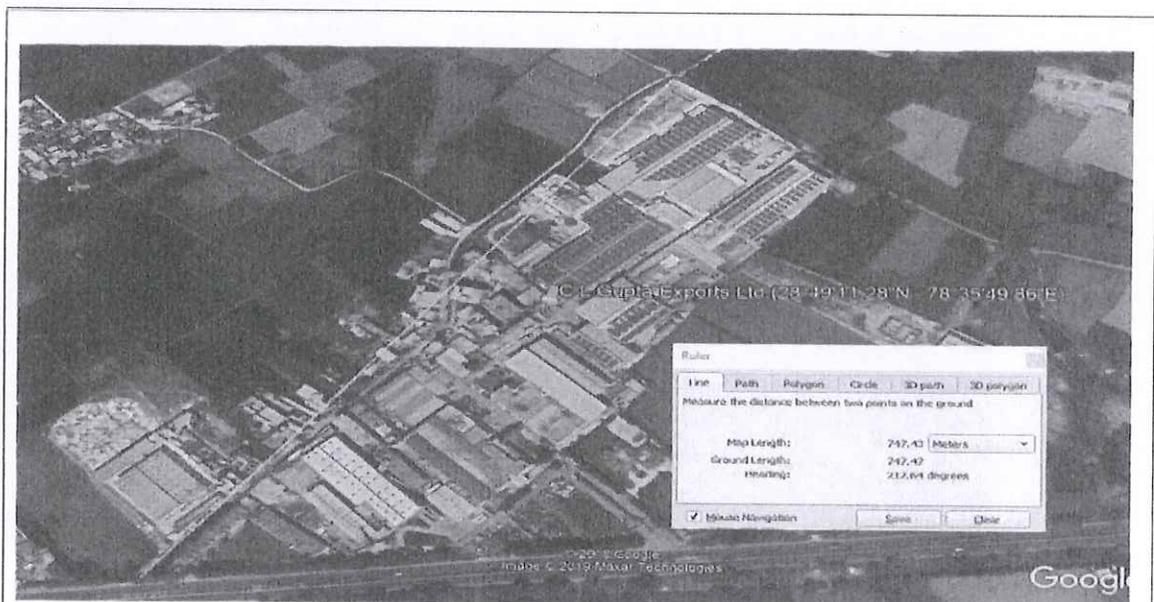


Figure 11: Location of the Industrial Unit M/s C.L. Gupta Export Ltd., Amroha, U.P

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15.0 Signature of the inspecting officials

Date of Inspection : 16.10.2019

Sr. No.	Name of the Officials	Signature
1.	Sh. M. K. Biswas Sc. 'D' CPCB, Delhi	
2.	Sh. J.P. Maurya, Regional Officer UPPCB, RO Bijnor	
3.	Sh. Anil Kumar Sharma, Assistant Env. Engineer , UPPCB, Bijnor	
4.	Sh. T.K.Pant (Sc. D), CGWB	
5.	Sh. Tejas Y. Mankikar (Sc. B), CGWB, Lucknow	

