BEFORE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 622/2024

In the matter of Varun Gulati Vs State of Haryana & Ors. in compliance to Hon'ble NGT Order dated 28.05.2024.

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Date:03.01.2025

Pardeep Singh
Regional Officer,
HSPCB, Sonipat.

VOLUME 1

INSPECTION REPORT OF CETPs (16 & 10 MLD), MEMBER INDUSTRIAL UNITS AT BARHI INDUSTRIAL AREA, SONIPAT & DRAIN NO. 6

(July 18-August 13, 2024)

IN THE MATTER OF

VARUN GULATI VS STATE OF HARYANA & ORS.

[ORIGINAL APPLICATION NO. 622/2024]

-PREPARED BY-

THE JOINT COMMITTEE OF CPCB & HSPCB

-CONSTITUTED BY-

HON'BLE NATIONAL GREEN TRIBUNAL

(ORDER DATED 28.05.2024)

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1. HON'BLE NGT ORDER DATED 28.05.2024

Hon'ble NGT in O.A. No. 622/2024 in the matter of Varun Gulati Vs State of Haryana & Ors. directed the following vide its order dated 28.05.2024 (**ANNEXURE-I**):

"6. *Having regard to nature of allegation made in the OA, we also form a Joint Committee comprising of representative of Member Secretary, Central Pollution Control Board (CPCB) and representative of Member Secretary, HSPCB, who will act as coordinating agency. The two-member Joint Committee will visit the site, ascertain the correct position in respect of direct discharge of effluents by the industries in Drain No. 6, capacity, capacity utilization and performance of the CETP and effluents received by said CETP. The Joint Committee will also ascertain Primary Effluent Treatment Plant (PETP) standards prescribed to the member units. The Committee will also collect the samples from discharge point of CETP and Drain No. 6 and also from the point where Drain No. 6 enters Delhi and meets River Yamuna through Najafgarh drain and get the samples analysis done and submit the factual and action taken report before the Tribunal within a period of three months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.*

7. *The Committee will also examine the compliance by each of the industrial units in respect of discharge of effluent in that industrial area.**"***

The Joint Committee filed the interim report dated 17.09.2024 and sought six weeks time for filing the final report. Hon'ble NGT in OA No. 622/2024 in the matter of Varun Gulati Vs State of Haryana & Ors. directed the following vide its order dated 19.09.2024 (**ANNEXURE-II**):

"2. The request made by the Joint Committee for extension of time for filing final report is allowed. Let the final report be filed by the Joint Committee within the extended period of six weeks."

The matter is listed for hearing on 08.01.2025.

2. ISSUES RAISED IN THE PETITION

The following issues are raised by the petitioner in O.A. No. 622/2024:

i. A 16 MLD Common Effluent Treatment Plant (CETP) located at Barhi industrial area is receiving higher quantity of effluents from member industries and the CETP is not properly maintained;

ii. The said CETP has been found non-complying w.r.t. prescribed norms repeatedly during inspections and has not complied with the directions/ orders/ notices issued by HSPCB;

iii. No strict action has been taken by the concerned authorities against the defaulters; and

iv. The industrial effluent is bypassed and discharged in Drain No. 6 which finally meets the River Yamuna.

3. CONSTITUTION OF JOINT COMMITTEE IN COMPLIANCE OF THE HON'BLE NGT ORDER DATED 28.05.2024

In compliance of Hon'ble NGT order dated 28.05.2024, a joint committee comprising of *an Additional Director, Central Pollution Control Board (CPCB) (i.e. representative of Member Secretary, CPCB), and Regional Officer, Sonipat, Haryana State Pollution Control Board (HSPCB) (i.e. representative of Member Secretary, HSPCB)* was constituted to verify the issues raised by the petitioner in O.A. No. 622/2024 including compliance by each of the industrial units w.r.t. discharge of effluent by the industries located in the Barhi Industrial Area.

The joint committee (i) inspected the industries located in Barhi Industrial Area in three rounds during July 18, 2024, August 7-9, 2024 & August 12-13, 2024; (ii) inspected CETPs (16 MLD & 10 MLD) located in Barhi Industrial Area on July 18, 2024; (iii) carried out pollution source mapping of Drain No. 6 during July 22-24, 2024; and (iv) interacted with the complainant in O.A. No. 622/2024 on 13 August, 2024.

The samples collected from CETPs, industries, groundwater and drains were analysed at laboratories of CPCB and HSPCB.

4. ABOUT BARHI INDUSTRIAL AREA, SONIPAT

Barhi Industrial Area, spanning over an area of 1255 acres, is divided into three phases i.e. Phase-I (275.25 acres), Phase-II (332.95 acres) and Phase-III (646.86 acres). The industrial

area comprises of 253 nos. of industries of different sectors mainly textile, food processing, electroplating & chemicals, etc. Initially, a 9 MLD CETP was installed in Phase-I, which was found in dismantled/dilapidated condition during visit (July 18, 2024). Presently, industrial area has two functional CETPs of capacity 16 MLD & 10 MLD installed in Phase-III for treatment of effluent mixed with sewage generated in all three phases. Layout of Barhi industrial area including location of CETPs is shown in Figure 1 below:

Figure 1: Layout of Barhi Industrial Area

4.1. Effluent (Including Industrial Sewage) Collection & Conveyance System in Barhi Industrial Area

Underground network of pipeline has been laid down in industrial area for collection & conveyance of primary treated effluent (including sewage generated from industrial premises) to CETPs for final treatment and disposal. Most of the industries have installed a Primary Effluent Treatment Plant (PETP) for partial treatment of effluent before discharge into CETP conveyance channel, whereas few industries of other sectors have installed evaporators after PETP to achieve Zero Liquid Discharge (ZLD).

PETP consists of physico-chemical treatment followed by tertiary filtration system. Primary treated effluent along with untreated sewage generated by industries located in Phase-II reaches to MPS (dedicated for 10 MLD CETP) via underground HSIIDC sewer line. Effluent generated by industries located in Phase-I is collected in pumping station located in the old CETP premises and then transferred to the HSIIDC sewer line of Phase-

III by pumping. Effluent generated by industries located in Phase-III reaches to effluent diversion chamber constructed before CETP (10 MLD & 16 MLD) premises, located at Phase-III, via underground HSIIDC sewer line.

At diversion chamber, provision has been made for diversion of effluent received from Phase-I & Phase-III to MPS of either CETP's, based on their treatment capacity. The 16 MLD CETP is operational since September, 2017 whereas 10 MLD CETP was commissioned in March, 2024. The layout of effluent conveyance system is depicted in Figure 2 below:

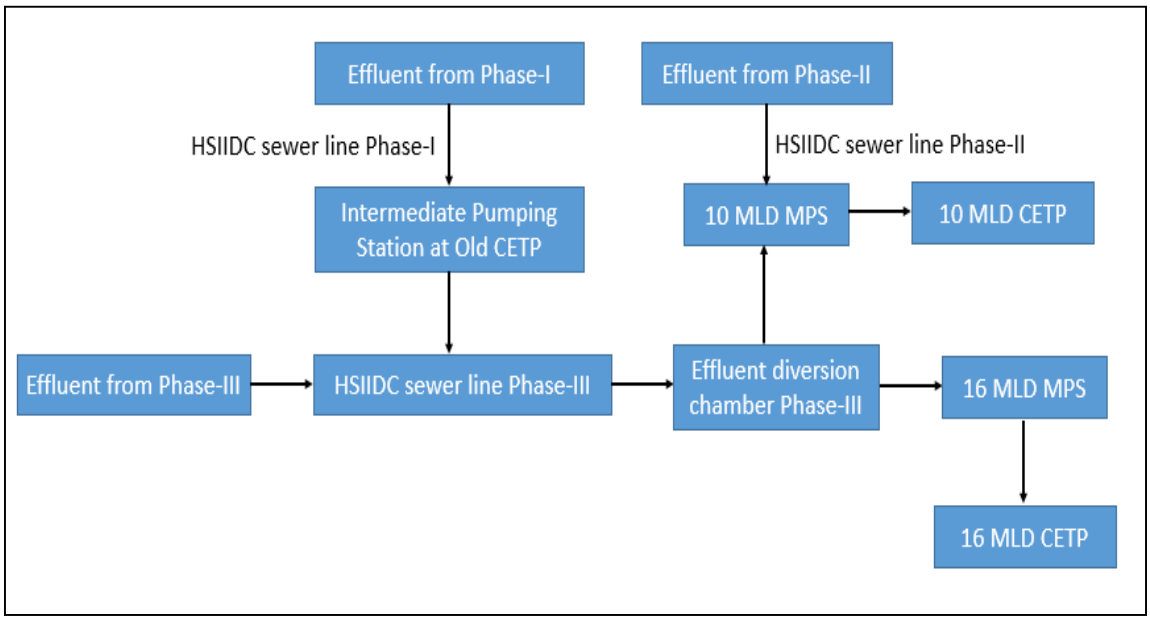


Figure 2: Layout of effluent conveyance system

MPS-10 MLD CETP

Effluent diversion chamber Phase-III

4.2. Storm Water Management in Barhi Industrial Area

Separate network of underground conveyance system has been provided for collection & transportation of storm water from Phase-II & Phase-III to storm water pumping station

located at Phase-III near CETPs. Separate network for collection & pumping of storm water from Phase-I has been provided for transferring to the main storm water pumping station located at Phase-III. Provision has been made by HSIIDC for transfer of storm water to both CETPs as well as to Drain No. 6, based on the physical appearance of storm water, or if wastewater is observed in the storm water drain during dry days, which are defined as days without rainfall. Schematic diagram of storm water management infrastructure is shown in Figure 3 below:

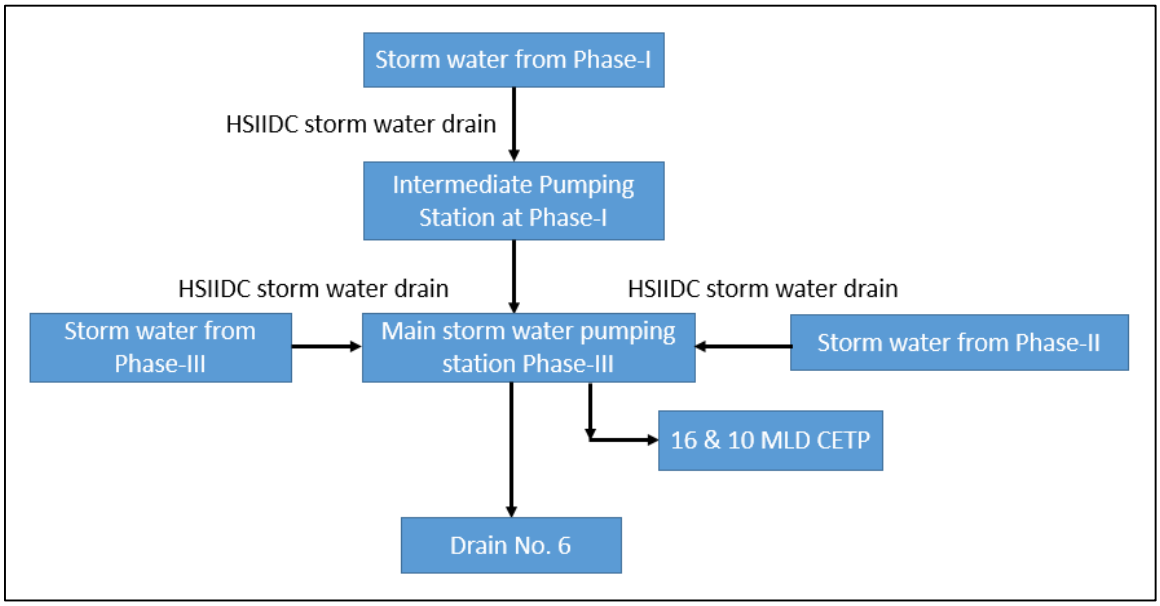


Figure 3: Schematic diagram of storm water management infrastructure in Barhi Industrial Area

Intermediate storm water pumping station at Phase-I

Main storm water pumping station at Phase-III

5. ACTIVITIES PERFORMED BY JOINT COMMITTEE

5.1. Inspection of Industries (including compliance verification of PETPs w.r.t. standards prescribed to member units)

a. HSPCB provided a list of 253 member units of CETP at Barhi, out of which only 136 member units generate industrial effluent and remaining 117 member units generate only domestic wastewater. The list of industries provided by HSPCB, is annexed as **ANNEXURE-III.**

b. Inspection of 136 effluent generating industrial units (majorly textile units i.e., 74 nos. out of 136 units) were carried out as per the list provided by HSPCB.

c. Out of 117 industries that generate only domestic sewage (herein after referred as "dry units"), inspection of 21 dry units were carried out on random basis to ascertain that these units are not using water for any industrial purpose.

d. Total 157 industrial units were inspected and 200 number of samples were collected.

e. Inspection of industries was carried out covering various aspects, including industrial processes, water consumption, Primary Effluent Treatment Plants (PETPs) installed in the industrial units, etc. Additionally, the team collected samples and gathered information regarding the following:

- Verification of legal documents required to operate the industrial unit;
- Collection of samples from PETP inlet and final PETP outlet/final discharge point to CETP sewer for compliance verification w.r.t. CETP inlet norms*;
- Collection of secondary data such as logbooks of raw material consumption, production, freshwater abstraction & consumption, effluent generation, treated effluent reuse & discharge, details of effluent management scheme, etc.;
- Assessment of groundwater withdrawal/fresh water consumption, groundwater quality, effluent management & fuel consumption in boiler;
- Assessment of hazardous waste generation & disposal practices i.e., PETP sludge; and
- Assessment of ash management i.e., ash generation and disposal.

Note: As per the letter dated 17.12.2024 sent by Regional Officer, Sonipat, HSPCB to CPCB, "CETP inlet standards as prescribed by HSPCB are applicable on all the member industries in Barhi industrial area". Copy of HSPCB letter dated 17.12.2024 is attached as* ***Annexure – III (B).*

5.2. Performance assessment of CETPs (10 MLD & 16 MLD)

i. There are two Common Effluent Treatment Plants (CETPs) of capacity 10 MLD & 16 MLD located in Barhi Industrial Area, Sonipat for treatment of effluent generated from industries operating in the Barhi Industrial Area.

ii. The Joint Committee conducted inspection of the CETPs (10 MLD & 16 MLD) on July 18-19, 2024. During this inspection, composite sampling was performed, involving continuous monitoring (i.e. composite sampling over a 24-hour period with samples

taken every two hours). This evaluation aimed to assess the performance of the CETPs and verify compliance with the stipulated discharge norms.

iii. Total 28 nos. of samples were collected during inspection of 16 MLD & 10 MLD CETPs located at HSIIDC Industrial Area, Barhi, Sonipat and were analyzed at central laboratory of CPCB Head Office, Delhi. The samples were collected from the following four locations:

a) Inlet (24 hrs. composite sampling) of each CETP;

b) Outlet (24 hrs. composite sampling) of each CETP;

c) Aeration tank of each CETP; and

d) Borewell (common for both CETPs).

5.3. Pollution Source Mapping of Drain No. 6

i. Drain no. 6 originates in Samalkha town (district Panipat) in Haryana, traverses through Sonipat district (Haryana), enters Delhi near Singhu border and joins Supplementary drain-1 which confluences into Najafgarh drain and ultimately confluences into river Yamuna at Wazirabad barrage. Origin of this drain is approximately 18 kms upstream of Barhi industrial area.

ii. Mapping of Drain no. 6 was carried out by the Joint committee during July 22-24, 2024 from origin till confluence with Supplementary drain 1 at Makhmalpur village near Budhpur Delhi covering about 67 Km length. The drain no. 6 further travels about 14 km to meet Yamuna river through Supplementary drain 1 and Najafgarh drain at downstream of Wazirabad barrage, Delhi.

iii. During mapping of Drain No. 06, samples were collected from 25 locations and analysis was carried out at the central laboratory of CPCB Head Office, Delhi.

5.4. Interaction with the Complainant

The joint committee interacted with the complainant on August 13, 2024. The complainant raised issues regarding mixing of effluent into the storm water drain which is finally discharged into Drain no. 6 without any treatment.

For verification of the issues raised by the complainant regarding contamination of storm water with industrial effluent, wastewater samples were collected from the following locations:

a. Intermediate storm water pumping station at Phase-I;

b. Main storm water pumping station at Phase-III; and

The collected samples were analysed at the central laboratory of CPCB Head Office, Delhi and the analysis results are shown in table 1 below:

Table 1: Analysis results of samples collected from Intermediate storm water pumping station at Phase-I and Main storm water pumping station at Phase-III

Parameter	Sampling location	
	Intermediate storm water pumping station at Phase-I	**Main storm water pumping station at Phase-III**
pH	7.7	7.9
Colour (Hazen)	38	95
BOD (mg/l)	428	280
COD (mg/l)	694	618
TSS (mg/l)	146	76
TDS (mg/l)	2500	2752
FDS (mg/l)	1812	2280
Antimony (mg/l)	0.265	0.124
Arsenic (mg/l)	BDL	BDL
Cadmium (mg/l)	BDL	BDL
Chromium (mg/l)	0.131	0.302
Cobalt (mg/l)	0.002	BDL
Copper (mg/l)	0.052	0.072
Iron (mg/l)	4.43	2.41
Lead (mg/l)	0.572	0.008
Manganese (mg/l)	0.36	0.848
Nickel (mg/l)	0.033	0.084
Selenium (mg/l)	BDL	BDL
Vanadium (mg/l)	0.009	0.008
Zinc (mg/l)	0.291	0.177

Analysis results of collected samples shows high BOD, COD, TDS & presence of heavy metals which indicates contamination of storm water with untreated/partially treated effluent generated from industries operating in Barhi industrial area, and furthermore validates that these industries are bypassing untreated effluent into storm water conveyance channel through underground pipelines. However, provision has been made by HSIIDC for transfer of storm water to both CETPs as well as to Drain No. 6, based on the physical appearance of storm water, or if wastewater is observed in the storm water drain during dry days, which are defined as days without rainfall. No record has been maintained by HSIIDC regarding frequency & quantity of storm water transferred to both CETPs.

6. DETAILS OF INDUSTRY INSPECTION

During visit by the joint inspection team, the details/ information were gathered w.r.t. production process, raw material consumption, production, freshwater consumption (borewell/HSIIDC supply), effluent generation, recycling & discharge, effluent treatment scheme, sludge generation, and legal documents (i.e. Consent to Operate (Air & Water), Hazardous waste authorization, and NOC for groundwater abstraction).

Inspection of total 157 industries (136-effluent generating & 21-dry) was carried out by joint inspection team and operational details are given below:

Nature of industry	Operational	Non-operational	Does not exist at given address	Dismantled	Non-cooperation	Total
Effluent generating	113*	19	02	02	00	136
Dry (only generate sewage)	17**	03	00	00	01	21
Total	130	22	02	02	01	157

*Note: *Detailed individual inspection reports of 136 nos. of industries {113 nos. of operational effluent generating industries (Textile 74 nos. & 39 other sectors) & 23 non-operational/dismantled industries} are attached separately as volume 2.*

*** Out of 17 operational dry units, one unit namely M/S Cosmic Petrochem Pvt Ltd., Plot no 216, HSIIDC Barhi, Sonipat was found to be storing wastewater in rain water harvesting tank having characteristics pH – 12.18; BOD – 5280 mg/l; COD – 23600 mg/l; TSS – 1510 mg/l; TDS – 27900 mg/l; Oil & Grease – 18.6 mg/l*

6.1. Sector wise details of operational industries

The sector-wise categorization of operational industries is given below in table 2:

Table 2: Sector-wise categorization of operational industries

Sector	Effluent generating industries	Dry industries
Textile industries	74*	01
Other sectors industries	39	16
→Chemical	7	01
→Dyes & Dyes Intermediates	3	00
→Electroplating	9	00
→Food, Dairy & Beverages	6	02
→Others (i.e., plastic waste recyclers, printing press, glass toughening, detergent/soap mfg. excluding formulation etc.)	12	09
→Tannery	02	00
→Poly coating units	00	04
Total (130)	**113**	**17**

** Textile sector is the predominant sector in Barhi Industrial Area, Sonipat*

6.2. General description of processing in Textile sector industries

Textiles can be classified into natural, semi-synthetic and synthetic fibres depending upon its source of origin and chemical composition. The most common type of fibres that are mostly used are Cotton, Wool, Silk (natural fibres), Viscose rayon (Semi-synthetic) and Polyester, Acrylic (Synthetic) but cannot be limited to it.

Textile manufacturing encompasses a variety of processes and technologies that transform raw fibers into finished fabrics. The journey begins with the production of yarn from either natural or synthetic fibers, utilizing techniques such as blending, carding, combing, drawing, and spinning. Once the yarn is created, it undergoes further transformation into textile substrates (fabric) through methods like weaving, knitting, tufting, and non-woven techniques. To prepare these substrates for clothing/ home textiles, they undergo a series of wet processing stages, including desizing, scouring, bleaching, dyeing and printing, and washing. This wet processing is an important stage in total value chain of textile industry consisting of notably water-intensive and relies on usage of both inorganic and organic chemicals; unfortunately, much of this chemical usage ends up in generated effluent as unexhausted dyes and chemicals.

There are various types of machineries fulfilling the need of batch and continuous processing that are mainly used in the textile processing sector. However, the applicability of a particular machine will fully depend upon the chemical nature and form of substrate in addition to the volume of requirement. The most commonly used textile processing machineries that were found during the inspection were Package dyeing, Cabinet dyeing, Hank dyeing, High Temperature High Pressure (HTHP) for yarn whereas Jigger, Soft flow, for fabric dyeing and Paddle dyeing machines for piece dyeing. All these machines are batch processing machines. Choice of machine depends on batch size and form of substrate. Every machine has different requirements of Material to Liquor ratio (MLR) for uniformity of treatment which ultimately defines the volume of water required for the process.

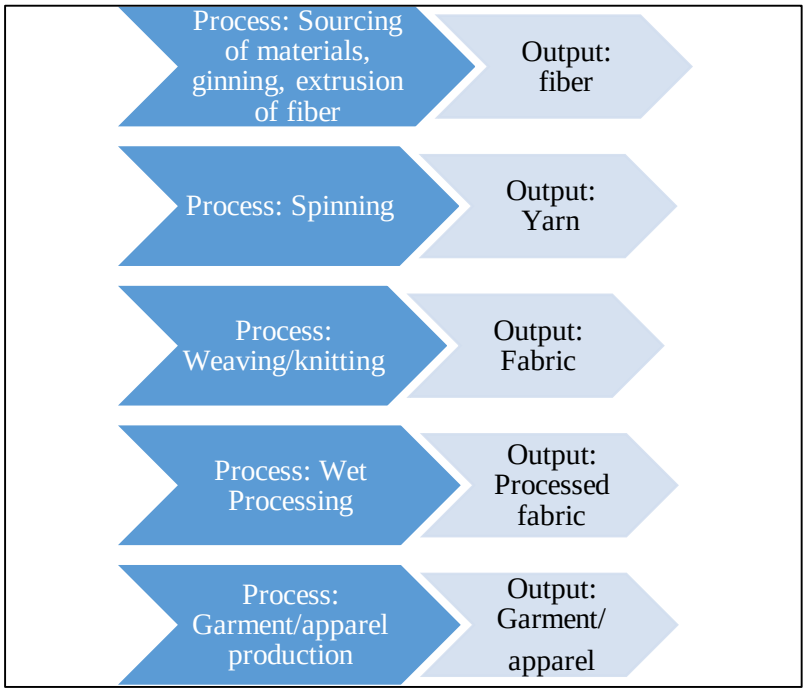


Figure 4: Processes in textile industries

i. Textile effluent characteristics

All the industries do not carry out all the wet processes mentioned above. Some industries may carry out one or two processes, other integrated industries carry out most of the finishing operations. Depending on the processes carried out, nature of dyes and other chemicals used, the volume and nature of the effluent varies among industries. It is reported that in an average industry, starch waste (arising from sizing and de-sizing operations) constitutes about 16% of the total quantity of effluent, caustic wastes (scouring process) contribute about 19% and dyeing operations generate about 52% and the remaining is due to rinsing, printing and final finishing operations. In a more generalized form, the combined effluents are highly colored, alkaline with more suspended and dissolved solids. The pollutants released in all processes are present in the combined effluent. They exert considerable amount of BOD and COD.

ii. Categorization of textile industries

Based on process/product, the textile industries operating in Barhi Industrial area can be categorized in to four types: (i) dyeing/washing of Yarn; (ii) dyeing/washing/printing of fabric; (iii) dyeing/washing of garments; and (iv) dyeing/washing of fabric & yarn both. The number of units in different categories are as follows:

S. No.	Textile units engaged in	Number of units
1.	Dyeing/washing of Yarn	25
2.	Dyeing/washing/printing of Fabric	30
3.	Dyeing/washing of Garments	17
4.	Dyeing/washing of Fabric & Yarn both	2
Total		**74**

6.3. Details of Textiles & Other sectors industries

- Comprehensive details of textile industries and other sectors industries (including compliance status) are attached as **Annexure – IV**
- Given the extensive scope of work, detailed individual industry reports are provided separately in Volume 2. This volume includes Annexures 1 to 74 for the operational textile industries, Annexures 75 to 113 for operational other sectors industries, and Annexures 114 to 136 for non-operational/dismantled industries.
- Observations & findings in operational textile and other sectors industries are mentioned in below sub-sections 6.3.1. & 6.3.2, respectively:

6.3.1. Observations/Key issues & Findings in Textile industries

a. Existing effluent treatment scheme, provision for dilution and bypass of untreated effluent:

- For treatment of effluent generated from industrial activities, industries have installed Primary Effluent Treatment Plant (PETP) which comprises of physico-chemical treatment units followed by filtration units. Schematic diagram of typical treatment scheme of these PETPs is shown in Figure 5 as below:

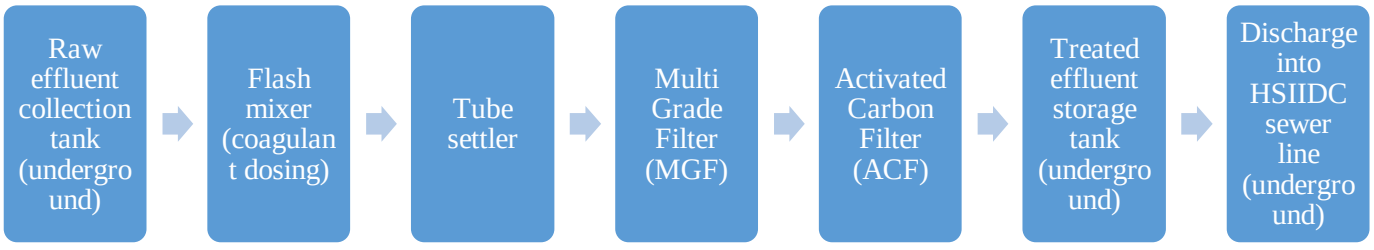


Figure 5: Schematic diagram of typical treatment scheme of PETPs in member industries

- The existing PETPs can reduce BOD upto 50%, COD upto 60% & TDS upto 25% only.

- Total freshwater consumption, effluent generation & discharge by operational textile industries is calculated as 7294.67 KLD, 6132.90 KLD & 5493.33 KLD, respectively which indicates following:

  - loss of water in processes is around 16 % against typical process losses of 15 – 20 %, and

  - loss of wastewater in PETP system is around 11 % against the typical value of 2 – 3 % which indicates that the generated effluent is being bypassed without any treatment either into the HSIIDC sewer line or into the storm water drainage channel.

- Mostly all the textile units have underground tanks for collection of treated effluent and from there the PETP treated effluent is discharged into CETP sewer line through underground pipelines/closed conduits.

- Only three textile units have been found reusing/recycling the PETP treated effluent in manufacturing operations out of total 74 units.

- Since, most of the industries do not have any provision for reuse/recycling of primary treated effluent, hence there is no use of underground collection tanks provided for storage of primary treated effluent. It is observed that these underground tanks are being used for dilution of primary treated effluent with freshwater before discharge, which also enhance the energy consumption due to unnecessary pumping.

- In some textile units, multiple outlets for effluent discharge and by-pass provision from PETP collection tank to final PETP outlet and/or to CETP conveyance system have been observed.

b. <u>Characteristics of raw effluent (PETP inlet) and primary treated effluent (PETP outlet):</u>

- Out of 74 nos. of textile industries, 01 unit was operating on dry process, in 01 unit the PETP was found non-operational, and in 01 unit cleaning of PETP with freshwater was going on, hence effluent sample collection was carried out from 71 industries only.

- High variation observed in characteristics of raw effluent generated from different categories of textile industries as mentioned in table 3 below:

Table 3: Variation in characteristics of raw effluent generated from different categories of textile industries

Product / Substrate Type	Yarn		Fabric		Garments		Typical BOD range
	BOD (mg/l)	COD (mg/l)	BOD (mg/l)	COD (mg/l)	BOD (mg/l)	COD (mg/l)	
Synthetic (Polyester/Acrylic)	43 - 785	158 - 1125	56 - 1148	303 - 3039	76 - 238	239 - 719	100 - 500
Semi-synthetic (Viscose)	130 - 1107	640 - 4495	-	-	-	-	500 - 800
Natural (Cotton)	57 - 210	416 - 980	104 - 747	411 - 1728	85 - 733	448 - 1771	700 - 1000
Blend	109 - 602	368 - 1335	120 - 190	480 - 960	133 - 209	360 - 500	500 - 800

- Out of 71 nos. of textile industries, in 60 industries, BOD value in effluent received at PETP inlet found less than 500 mg/l (prescribed inlet norm for CETPs), whereas in remaining 11 industries, BOD value in effluent received at PETP inlet found greater than 500 mg/l.

- Among 60 industries with effluent at PETP inlet exhibiting a BOD value of less than 500 mg/l, the BOD values at inlet of PETP in 37 industries found much lower against the typical BOD range of specific quality, indicating dilution at PETP inlet. Details of these industries are mentioned at **ANNEXURE-IV** attached.

- Avg. characteristics (in terms of BOD, COD, TSS & TDS) of effluent at inlet & outlet of PETPs is shown in table 4 below:

Table 4: Avg. characteristics (in terms of BOD, COD, TSS & TDS) of effluent at inlet & outlet of PETPs in textile industries

Parameters	Average values (in mg/l)	
	PETP Inlet	PETP Outlet
BOD	283.38	54.05
COD	833.32	188.8
TSS	261.56	62.49
TDS	2776.45	1718.98

- In 63 units (out of 71 units having operational PETP with discharge), high reduction in BOD (> 50%), COD (> 60%) & TDS (> 25%) was observed which seems unrealistic

with existing treatment systems (without secondary biological & TDS removal system) indicating dilution with freshwater in PETP at different stages tactfully.

c. Poor metering and record keeping:

- Absence of flow meters at freshwater source (borewell), PETP inlet, outlet, RO permeate and reject was observed in all industries which has resulted into poor/unreliable maintenance of logbooks for ETP inlet, outlet, and recirculation volumes due to which evaluation of efficiency of the treatment processes was not possible.

- Assessment of effluent discharge volume reveals that post-treatment discharge is similar (or higher) to the total freshwater consumption, despite of typical losses of around 15% & 03% in industrial processes & PETP operation, respectively, which indicates poor record keeping or there is an illegal practice followed for the extraction of ground water for which no data is recorded.

    - In 04 nos. of textile industries, effluent generation value was exceeding freshwater consumption by 10 – 70%.
    - In 06 nos. of textile industries, effluent discharge value was exceeding effluent generation by 10 – 80%.

- A comprehensive water balance could not be carried out by the joint committee due to unavailability of reliable data on freshwater consumption (for manufacturing processes, boiler, and domestic purposes), effluent generation, and discharge.

- Out of 74 industries, only 49 industries were maintaining record of PETP sludge generation. Total estimated PETP sludge quantity generated from 49 textile industries is 1.28 MT/day as against total actual PETP sludge quantity of 0.85 MT/day (as per logbook provided). Gap of 0.43 MT/day in estimated and actual PETP sludge generation quantity indicates unscientific disposal or poor record keeping.

d. Poor Operation & Maintenance of PETP:

- Notably, high TDS in outlet samples relative to inlet samples suggest insufficient retention time provided for effective chemical reaction and treatment, thus the chemical Polyelectrolyte does not get the enough dwell time in the reaction tank due to which

reaction may take place in the drain line/sewer resulting in coagulation which leads to the clogging of drain lines.

- In most of the industries, un-regulated dosing of chemicals (coagulants/flocculants) up to 1500 ppm in PETP have been observed against the typical range of 40-100 ppm.

- The poor condition of the PETP indicates irregular operation. Inadequate storage practices for chemicals and improper sludge management increases the potential for soil and groundwater contamination, while insufficient safety measures during chemical handling increases the risk of accidents.
- No colour coding of pipelines/recirculating lines.
- Shortage of qualified operators, with a single operator often responsible for operation of multiple PETPs across different industries.

e. Unavailability of legal documents:

- 62 nos. of industries do not have valid No Objection Certificate (NOC) from Haryana Water Resources Authority (HWRA) for ground water abstraction from borewells located within the premises. The unauthorized use of the borewell raises concerns regarding compliance with groundwater abstraction policies.
- 02 nos. of industries do not have valid Authorization under the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016.

f. Most of the industries have made agreement with TSDF (i.e. M/s Gujarat Enviro Protection and Infrastructure Pvt. Ltd., Haryana) for disposal of generated PETP sludge.

g. Compliance status w.r.t. PETP outlet norms:

- Out of 74 textile industries:
  - 05 industries found complying
    - → 03 w.r.t. stipulated discharge norms,
    - → 01 industry operating on ZLD, &
    - → 01 industry operating on dry process
  - 69 industries found non - complying
    - → 24 industries w.r.t. stipulated discharge norms,
    - → 43 industries for dilution,
    - → 01 industry for bypassing of untreated effluent, &
    - → 01 industry for having non-operational PETP

The list of non-complying and complying textile industries is mentioned at Table 3 of **ANNEXURE-IV** attached.

6.3.2. Observations/Key issues & Findings in Other sectors industries (namely Chemical, Dye Intermediates, Electroplating, Food, Dairy & Beverages, Tannery, etc.)

a. Most of the industries have installed PETP comprising of underground collection tank, chemical dosing, flash mixer, tube settler, Multi Grade Filter (MGF), Activated Carbon Filter (ACF), & treated water collection tank.

b. Total freshwater consumption, effluent generation & discharge by operational industries in other sectors is calculated as 291.27 KLD, 215.43 KLD & 103.64 KLD, respectively.

c. Out of 39 nos. of operational other sectors industries, PETP inlet samples could not be collected from 14 industries as 06 industries were operating on dry process, in 03 units the PETP was found non-operational during visit (due to batch mode operation of production process & PETP), and 05 units were operating on ZLD. Effluent samples were collected from remaining 25 nos. of industries discharging into CETP conveyance channel.

d. Out of 25 nos. of other sectors industries, in 19 industries, BOD value in effluent received at PETP inlet found less than 500 mg/l (prescribed inlet norm for CETPs), whereas in remaining 06 industries, BOD value in effluent received at PETP inlet found greater than 500 mg/l.

e. In most of these industries, the freshwater is only being used for washing of machineries/vessels/reactors & floor cleaning in small quantity (out of 39 industries, 33 industries were having freshwater consumption $\leq$ 10 KLD). Washing effluent thus generated ultimately reaches to PETP for treatment which are operated in batch mode (for 1-2 hours/day) due to low effluent quantity.

f. 25 nos. of other sectors industries have valid Authorization under the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 issued by HSPCB.

g. Only 06 nos. of industries have borewell, remaining use HSIIDC supply water or through tankers to meet fresh water requirements.

h. <u>Compliance status w.r.t. PETP outlet norms:</u>

- Out of 39 industries:

- 14 industries found complying
  - → 01 w.r.t. stipulated discharge norms,
  - → 07 industries operating on ZLD
  - → 06 industries operating on dry process

- 25 industries found non - complying
  - → 06 industries w.r.t. stipulated discharge norms
  - → 08 industries having non-operational PETP
  - → 01 industry bypassing untreated effluent
  - → 10 industries found non – complying for dilution

The list of non-complying and complying other sectors industries is mentioned at Table 6 of **ANNEXURE-IV** attached.

i. In 19 industries (out of total 39 industries), the characteristics of effluent received at PETP inlet meets the CETP inlet norms of BOD – 500 mg/l.

j. In 10 industries, high reduction in BOD, COD & TDS seems unrealistic with existing treatment systems (without secondary biological & TDS removal system) indicating dilution with freshwater in PETP at different stages.

k. Disparity in issuance of Consent to Operate (CTO) observed in 02 units as mentioned below:

   - M/s Jai Hanuman Laminates Pvt. Ltd. obtained CTO under pulp & paper sector for mfg. of apple & egg tray & for reuse/recycle the treated effluent (2 KLD), however the unit found engaged in lamination of ply only i.e., dry process only and as informed, pulping process is closed since more than 6 months. Accordingly, the industry shall apply to HSPCB for revision of valid CTO.

   - M/s Metro Pulp Industries obtained CTO under metal surface treatment for mfg. of safety pins & evaporation of effluent (2 KLD) in evaporator, however no metal surface treatment found to be operated in the plant (mfg. safety pins through mould press only). This unit has obtained consent in the name of M/s Metro Pulp Industries, however during visit the unit found running with name of M/s Vishwas Steel Safety Pins Pvt. Ltd. Accordingly, the industry shall apply to HSPCB for revision of valid CTO.

l. Poor record keeping have been observed in most of these industries w.r.t plant operation (i.e., raw material consumption & production), utility (i.e., process chemicals, fresh water consumption, steam consumption, fuel consumption), PETP operations (i.e., flow at inlet & outlet, chemical consumption), and waste management (i.e. ash generation & disposal, and, sludge generation & disposal).

m. No separate data have been maintained w.r.t. fresh water consumption in industrial process and general utility (domestic).

n. Skilled manpower is not deployed for operation and maintenance of PETP.

7. CAPACITY UTILIZATION & PERFORMANCE ASSESSMENT OF CETPs LOCATED AT BARHI INDUSTRIAL AREA, SONIPAT (HARYANA)

Joint inspection of CETPs (10 MLD & 16 MLD) set up in Barhi industrial Area, Sonipat was carried out by the joint inspection team on 18.07.2024. Composite sampling (24 hrs monitoring at 2 hrs interval) was carried out during July 18, 2024 (10:00 AM onwards) to July 19, 2024 (up to 09:00 AM) for performance evaluation of CETPs.

Effluent conveyance system:

Common infrastructure consisting of underground pipeline & Main Pumping Station (MPS) has been provided for collection & conveyance of trade effluent & domestic wastewater to 02 nos. of CETPs installed in HSIIDC Industrial Area, Barhi. Around 17.4 MLD of mixed effluent is received at CETP pumping station. Out of which, around 3.9 MLD of mixed effluent is transferred to 10 MLD CETP & the remaining (13.5 MLD) is being transferred to 16 MLD CETP existing in the same premises for treatment.

Figure 6: Map imagery of location of CETPs (16 & 10 MLD) and storm water pumping station

Treated effluent recycling & disposal:

Recycling: No recycling of CETP treated effluent to member industries. Negligible recycling of CETP treated effluent for landscape irrigation of green belt existing in CETP premises.

Disposal: Into Drain no. 6 after mixing of storm water channel and ultimately reaching to river Yamuna.

The detailed inspection reports of 10 MLD and 16 MLD CETPs are given in the subsequent sections 7.1 & 7.2, respectively.

7.1. Inspection report of 10 MLD CETP, HSIIDC industrial area, Barhi, Sonipat

General details & Regulatory compliance:

1.	**Name/Location of CETP (full address)**	**:**	10 MLD CETP HSIIDC Industrial Area, Barhi, Sonipat	
2.	**Coordinates**	**:**	29.103778, 77.030053	
3.	**Consent**		**Yes/No/Applied**	**Validity (Period)**
	Air /Water		Yes	01/10/2024 to 31/03/2025
	Hazardous waste authorization		No	-
	NOC from Haryana Water Resources Authority		No	-

Operation details:

4.	Year of commissioning**:** March, 2024
5.	**CETP designed parameters:** BOD-550 mg/l, COD-1550 mg/l, TSS-1200 mg/l, O&G-100 mg/l, Color-400 Hazen, pH: 5.5-9.0
6.	**Utilized Capacity:** As per operator: 5-6 MLD As per logbook data (May 1-July 17, 2024): 3.9 MLD *Remark: Operating at around 40% of its design capacity due to unavailability of trade effluent. Around 25-30% of received mixed effluent is transferred to this CETP (10 MLD) & the rest is being transferred to 16 MLD CETP existing in the same premises for treatment.*
7.	**Actual treatment during visit based on the instantaneous flow rate readings:** Inflow – 5223 KL (i.e. 5.2 MLD) & Outflow – 5441 KL (i.e. 5.4 MLD)

8.	**Fresh water source:** 02 bore wells (common for 16 MLD and 10 MLD CETPs) without any flowmeter and logbook for groundwater abstraction.
9.	**Treatment technology:** Physico-chemical treatment, Secondary biological treatment with Anoxic Tank (SBR) followed by tertiary filtration system. Dosing of chemicals (coagulants & flocculants) was being carried out as advance primary-treatment for removal of suspended organics. Secondary biological treatment in form of SBR was provided for removal of dissolved organics.
10.	**Disinfection technology:** Chlorination-based disinfection system installed but not operational as no outlet standard for TC/FC has been prescribed for CETP hence no dosing required.
11.	**Status of Online Monitoring System (OCEMS):** • OCEMS installed and found operational, reading at 12:00 P.M. on 18/07/2024:

Parameters	pH	TSS (mg/l)	BOD (mg/l)	COD (mg/l)
CETP Inlet	8.5	193	188	445
CETP Outlet	8.39	3.8	1.6	28.5

Sludge management & disposal:

12.	**Details of sludge dewatering unit:** 04 nos. of centrifuge provided for sludge dewatering
	Average quantity of sludge generated as per logbook (Kg/day): 1260.6 Kg/day (May 1, 2024 – July 17, 2024)
	Method of sludge disposal: No sludge was disposed off due to lack of agreement with authorized sludge disposal facility (TSDF). The process of the execution of the agreement with the Common TSDF is under process and samples of the sludge have also been collected by Common TSDF for finalization of the rate contact based on the characteristics of the sludge.

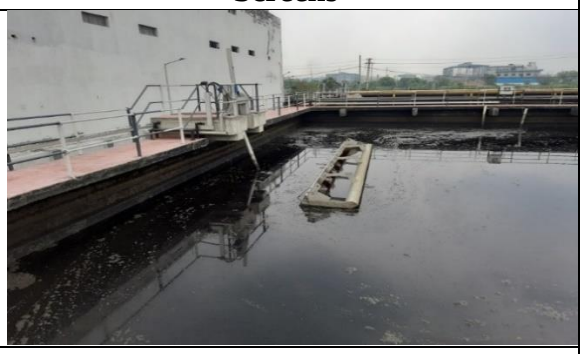
Compliance status, Recommendations & Action taken:

13.	**Compliance status:** 1. Analysis results of composite samples collected from CETP inlet shows pH-7.5 (against norm of 6-9), BOD-160 mg/l (against norm of 500 mg/l), COD-549 mg/l (against norm of 1400 mg/l), TSS-321 mg/l (against norm of 1500 mg/l), **TDS-2132 mg/l (against norm of 2100 mg/l)**, FDS-1612 mg/l, and Oil & Grease-BDL (against norm of 15 mg/l), indicates that effluent received at **CETP inlet was not meeting the inlet standards prescribed by HSPCB.** 2. The characteristics of effluent received at CETP inlet (BOD – 160 mg/l), when compared with the wastewater characteristics in storm water drain at different locations (BOD – 280 mg/l & 428 mg/l) indicates that diluted effluent is being fed into CETP. 3. Analysis results of composite samples collected from CETP outlet shows pH-8 (against norm of 6-9), **BOD-33 mg/l (against norm of 30 mg/l)**, COD-104 mg/l (against norm of 250 mg/l), TSS-75 mg/l (against norm of 100 mg/l) and **TDS-2208 mg/l (against norm of 2100 mg/l)**. Values of heavy metals found within the prescribed limits. These results indicate **trivial non-compliance w.r.t. stipulated discharge norms.**
14.	**Major issues:** 1. Non-compliance of raw effluent w.r.t. stipulated norms for CETP inlet, even though diluted effluent is being received at the CETP inlet. 2. Removal efficiencies of BOD, COD & TSS were 79.4%, 81.1% & 76.6%, respectively against the desired removal efficiency of 90%, which indicates poor performance of the treatment units. 3. Trivial non-compliance of treated effluent w.r.t. stipulated discharge norms 4. No provision for recycling of treated effluent to the member industries. 5. Dumping of sludge in lined open area. 6. No agreement with authorized sludge disposal facility.
15.	**Recommendations:** CETP operating agency is recommended to ensure following: 1. Industrial effluent must be directed into the CETP without any dilution, ensuring continuous compliance with the prescribed standards for both the inlet and outlet of the CETP.

	2. Make provision for recycling of treated effluent to the member industries. 3. Provide designated shaded place for storage of dried sludge. 4. Make agreement with authorized sludge disposal facility for scientific disposal of dried sludge. 5. Obtain Authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 from HSPCB, and NOC from HWRA regarding abstraction of groundwater from existing borewell within premises

Laboratory analysis results of CETP Inlet and Outlet (10 MLD CETP, Barhi)

S. no.	Parameter	CETP Inlet	Inlet standards prescribed by HSPCB	CETP Outlet	Discharge norms	Compliance status
1.	pH	7.5	6-9	8	6-9	Complying
2.	BOD (mg/L)	160	500	**33**	30	**Non-complying**
3.	COD (mg/L)	549	1400	104	250	Complying
4.	TSS (mg/L)	321	1500	75	100	Complying
5.	**TDS (mg/L)**	**2132**	**2100**	**2208**	**2100**	**Non-Complying**
6.	FDS (mg/L)	1612	2100	1688	2100	Complying
7.	NH_3-N (mg/L)	2	-	2	50	Complying
8.	Oil & Grease (mg/L)	BDL	15	BDL	10	Complying
9.	Chloride (mg/L)	694	-	666	1000	Complying
10.	Phosphate	0.9	-	0.4	5	Complying
11.	NO_3-N (mg/L)	6.8	-	6.7	10	Complying
12.	Sulphate (mg/L)	211	-	193	1000	Complying
13.	Boron (mg/L)	BDL	-	BDL	-	-
14.	Cr^{6+} (mg/L)	BDL	-	BDL	0.1	Complying
15.	Antimony (mg/L)	0.084	-	0.083	-	-
16.	Arsenic (mg/L)	BDL	-	BDL	0.2	Complying
17.	Cadmium (mg/L)	BDL	-	BDL	0.05	Complying
18.	Chromium (mg/L)	0.266	-	0.03	-	-
19.	Cobalt (mg/L)	0.003	-	BDL	-	-
20.	Copper (mg/L)	0.062	-	0.119	3	Complying
21.	Iron (mg/L)	6.585	-	0.758	3	Complying
22.	Lead (mg/L)	0.065	-	BDL	0.1	Complying
23.	Manganese (mg/L)	0.88	-	0.248	2	Complying
24.	Nickel (mg/L)	0.138	-	0.028	3	Complying
25.	Selenium (mg/L)	BDL	-	BDL	0.05	Complying
26.	Vanadium (mg/L)	0.013	-	BDL	0.2	Complying
27.	Zinc (mg/L)	0.311	-	0.152	5	Complying
28.	Mercury (µg/L)	BDL	-	BDL	0.01	Complying

Photographs	
	
ETP Inlet	**Screens**
	
Equalization Tank	**Decantation in SBR Tank**
	
Aeration in SBR Tank	**Flash Mixer**
	
Clarifier	**Sludge Holding Tank**
	
Collection of sludge in trolley	**Centrifuge**

Chlorine Contact Tank

PSF and ACF

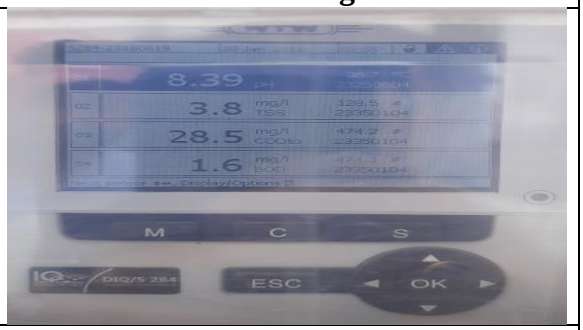
Treated Effluent

Sludge storage area (Uncovered)

Environmental laboratory

Chemical storage area

OCEMS display – CETP Inlet @ 12 P.M. on 18/07/2024



OCEMS display – CETP Outlet @ 12 P.M. on 18/07/2024

7.2. Inspection Report of 16 MLD CETP, HSIIDC Industrial Area, Barhi, Sonipat

General details & Regulatory compliance:

1.	**Name/Location of CETP**	**:**	16 MLD CETP HSIIDC Industrial Area, Barhi, Sonipat	
2.	**Coordinates**	**:**	29.10102, 77.0322	
3.	**Consent**		**Yes/No/Applied**	**Validity (Period)**
	Air /Water		Applied	Expired on 30/09/2023
	Hazardous waste authorization		Applied	Expired on 30/09/2023
	NOC from Haryana Water Resources Authority		No	-

Operation detail:

4.	Year of commissioning**:** 2017
5.	**CETP designed parameters:** BOD-750 mg/l, COD-1500 mg/l, TSS-600 mg/l, O&G-100 mg/l
6.	**Utilized Capacity:** As per operator: 12-13 MLD As per logbook data (May 1-July 18, 2024): 13.5 MLD *Remark: CETP operating at around 80% of its design capacity due to unavailability of trade effluent. Around 70-75% of received mixed effluent is being transferred to this CETP (16 MLD) & the rest is being transferred to newly commissioned 10 MLD CETP existing in the same premises for treatment*.
7.	**Actual treatment during visit based on the instantaneous flow rate readings:** Inflow – 14.8 MLD & Outflow – 16.3 MLD
8.	**Fresh water source:** 02 bore wells (common for 16 MLD and 10 MLD CETPs) without any flowmeter and logbook for groundwater abstraction.
9.	**Treatment technology:** Physico-chemical treatment, Secondary biological treatment with Anoxic Tank (SBR) followed by tertiary filtration system. Dosing of chemicals (coagulants & flocculants) was being carried out as advance primary-treatment for removal of suspended organics. Secondary biological

	treatment in form of SBR was provided for removal of dissolved organics. Gravity sand filter was provided but found non-functional during visit.
10.	**Disinfection technology:** Chlorination-based disinfection system installed but not operational as no outlet standard for TC/FC has been prescribed for CETP hence no dosing required.
11.	**Status of Online Monitoring System (OCEMS):** Installed but found out of order during visit.
12.	**Upgradation plan:** CETP is presently under up-gradation and DAF (Diffused Air Floatation) is under construction. The up-gradation work is proposed to be completed by 30.09.2024.

Sludge management & disposal:

13.	**Details of sludge dewatering unit:** 04 nos. of centrifuge provided for sludge dewatering (02 for biological sludge and 02 for primary sludge)
	Average quantity of sludge generated as per logbook (Kg/day): • Chemical sludge - 6 m^3/day (on wet basis) • Biological sludge - 6m^3/day (on wet basis)
	Method of sludge disposal: Agreement made with authorized sludge disposal facility i.e. M/s Gujarat Enviro Protection and Infrastructure Private Limited (GEPIL). CETP provided copy of Form-10 dated 07/05/2024 (31.21 MT).

Compliance status & Recommendations & Action taken:

14.	**Compliance status:** 1. Analysis results of composite samples collected from CETP inlet shows pH-7.3 (against norm of 6-9), BOD-210 mg/l (against norm of 500 mg/l), COD-616 mg/l (against norm of 1400 mg/l), **TSS-1852 mg/l (against norm of 1500 mg/l)**, TDS-1780 mg/l (against norm of 2100 mg/l), FDS-1336 mg/l and Oil & Grease-BDL (against norm of 15 mg/l), indicates that effluent received at **CETP inlet was not meeting the inlet standards prescribed by HSPCB.** 2. The characteristics of effluent received at CETP inlet (BOD – 210 mg/l), when compared with the wastewater characteristics in storm water drain at different

	locations (BOD – 280 mg/l & 428 mg/l) indicates that diluted effluent is being fed into CETP. 3. Analysis results of composite samples collected from CETP outlet shows pH-7.8 (against norm of 6-9), **BOD-94 mg/l (against norm of 30 mg/l)**, COD-213 mg/l (against norm of 250 mg/l), TSS-88 mg/l (against norm of 100 mg/l) and FDS-1432 mg/l (against norm of 2100 mg/l). Values of heavy metals found within the prescribed limits. These results indicate **non-compliance w.r.t. stipulated discharge norms**.
15.	**Major issues:** 1. Non-compliance of raw effluent w.r.t. stipulated norms for CETP inlet, even though diluted effluent is being received at the CETP inlet. 2. Removal efficiencies of BOD, COD & TSS were 55.2%, 65.4% & 95.2%, respectively against the desired removal efficiency of 90 % which indicates poor performance of the treatment units. 3. Non-compliance of treated effluent w.r.t. stipulated discharge norms. 4. No provision for recycling of treated effluent to the member industries. 5. Un-regulated dosing of coagulant & flocculent without proper mixing system. Non-functional agitation system in Flash Mixer & Clariflocculator leading to ineffective physico-chemical treatment. 6. Dumping of sludge in lined open area. 7. Non-functional gravity sand filtration system for polishing of treated effluent.
16.	**Recommendations:** 1. CETP operating agency is recommended to ensure following: a. Industrial effluent must be directed into the CETP without any dilution, ensuring continuous compliance with the prescribed standards for both the inlet and outlet of the CETP. b. Make provision for recycling of treated effluent to the member industries. c. Obtain Consent under Air/Water Acts and authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 from HSPCB, and NOC from HWRA regarding abstraction of groundwater from existing borewell within premises d. Provide designated shaded place for storage of dried sludge.

	e. Resumption of operation of non-functional units like Flash Mixer, Clariflocculator & Gravity filter. f. Upgradation of CETP to ensure compliance with respect to discharge norms. 2. HSIIDC & HSPCB along with CETP member units shall ensure compliance of CETP with respect to inlet norms via comprehensive monitoring and surveillance of member units. 3. HSIIDC may also provide the action plan for revamping and upgradation of CETP.

Laboratory analysis results of CETP Inlet and Outlet (16 MLD CETP, Barhi)

S. no.	Parameter	CETP Inlet	Inlet standards prescribed by HSPCB	CETP Outlet	Discharge norms	Compliance status
1.	pH	7.3	6-9	7.8	6-9	Complying
2.	BOD (mg/L)	210	500	**94**	30	**Non-complying**
3.	COD (mg/L)	616	1400	213	250	Complying
4.	TSS (mg/L)	**1852**	1500	88	100	Complying
5.	TDS (mg/L)	1780	2100	1948	-	Complying
6.	FDS (mg/L)	1336	2100	1432	2100	Complying
7.	NH_3-N (mg/L)	10	-	10	50	Complying
8.	Oil & Grease (mg/L)	BDL	15	BDL	10	Complying
9.	Chloride (mg/L)	476	-	542	1000	Complying
10.	Phosphate	0.8	-	0.3	5	Complying
11.	NO_3-N (mg/L)	7.9	-	8.3	10	Complying
12.	Sulphate (mg/L)	223	-	214	1000	Complying
13.	Boron (mg/L)	BDL	-	BDL	-	Complying
14.	Cr^{6+} (mg/L)	BDL	-	BDL	0.1	Complying
15.	Antimony (mg/L)	0.131	-	0.064	-	Complying
16.	Arsenic (mg/L)	BDL	-	BDL	0.2	Complying
17.	Cadmium (mg/L)	BDL	-	BDL	0.05	Complying
18.	Chromium (mg/L)	0.466	-	0.141	-	Complying
19.	Cobalt (mg/L)	0.002	-	BDL	-	Complying
20.	Copper (mg/L)	0.048	-	0.018	3	Complying
21.	Iron (mg/L)	6.455	-	2.763	3	Complying
22.	Lead (mg/L)	0.192	-	0.012	0.1	Complying
23.	Manganese (mg/L)	0.956	-	0.742	2	Complying
24.	Nickel (mg/L)	0.07	-	0.047	3	Complying
25.	Selenium (mg/L)	BDL	-	BDL	0.05	Complying
26.	Vanadium (mg/L)	0.016	-	0.009	0.2	Complying
27.	Zinc (mg/L)	0.21	-	0.132	5	Complying
28.	Mercury (µg/L)	BDL	-	BDL	0.01	Complying

Photographs of 16 MLD CETP, HSIIDC Industrial Area, Barhi, Sonipat	
	
Inlet sump	**Flow meter installed at CETP Inlet**
	
Secondary Clarifier	**Chlorine Contact Tank**
	
Collection of sludge in trolley	**Sludge dewatering unit**
	
Flow meter installed at CETP Outlet	**OCEMS installed at CETP Inlet (Defunct)**

Groundwater characteristics inside CETP premises:

Water samples were collected from bore-well located inside CETP premises and the analysis results are given in table 5 below:

Table 5: Groundwater characteristics inside CETP premises

S. No.	Parameter	Value	Drinking Water-Specification IS 10500:2012 (Permissible limit)
1.	pH	8.4	6.5-8.5
2.	COD (mg/L)	BDL	-
3.	Total alkalinity (mg/L)	87	600
4.	Total hardness (mg/L)	85	600
5.	TDS (mg/L)	564	2000
6.	Fluoride (mg/L)	**2.68**	1.5
7.	Chloride (mg/L)	11	1000

The groundwater analysis results indicated that all parameters were found within permissible limit (Drinking Water-Specification IS 10500:2012) except fluoride.

8. STATUS OF POLLUTION LOAD IN DRAIN NO. 6

The Drain no. 6 originates from Samalkha, district Panipat in Haryana, travels through Sonipat district in Haryana, enters Delhi at Singhu Border and merges with Supplementary drain-1 which confluences into Najafgarh drain which ultimately confluences into river Yamuna at Wazirabad barrage. The drain no. 6 has an approximate length of 67 kms from origin (Samalkha) to Makhmalpur village near Budhpur, Delhi where it meets supplementary drain 1 which further travels to approx. 14 km to meet river Yamuna through Najafgarh drain at downstream of Wazirabad barrage, Delhi. The Drain no. 6 is a mixed drain carrying sewage and industrial wastewater. A pictorial layout of meandering course of drain no. 06 and other sources having discharge into drain no. 6 is shown below in Figure 7:

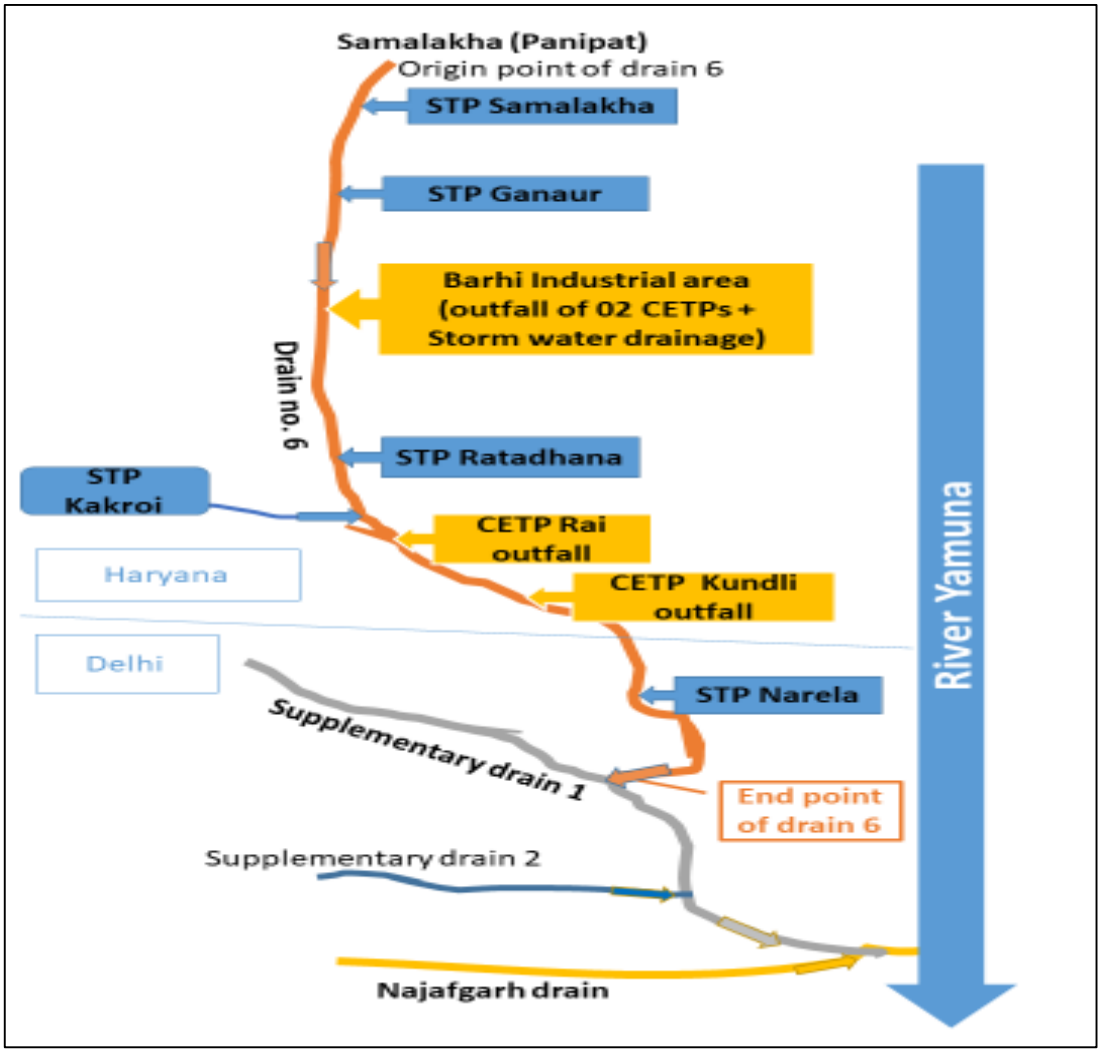


Figure 7: Pictorial layout of meandering course of drain no. 06 and other sources having discharge into drain no. 6

Mapping was carried out during 22.07.2024 to 24.07.2024. The samples were collected from 25 locations (from Origin at Samalkha till confluence into River Yamuna). The sampling locations in the entire length of the drain no. 6 are divided into 05 stretches based on geographical conditions. The Stretch 1 to 3 are in Haryana and Stretch 4 & 5 are in Delhi. The details of the stretches are as follows:

Stretch 1: Origin of Drain no. 6 from Samalkha to downstream of Ganaur STP (07 MLD), Sonipat.

Stretch 2: Drain no. 6 at upstream of CETP Barhi outlet near Rajulu Garhi village to Drain no. 6 at downstream of 30 MLD Ratadhana STP outlet.

Stretch 3: Drain no. 6 upstream of OP Jindal University on Sonipat-Narela Road (Jagdishpur village) to Drain no. 6 near Harshwardhan Colony, Kundli.

Stretch 4: Drain no. 6 near Singhu Border of Delhi to confluence of drain no. 6 with supplementary drain near Makhmalpur village, Alipur, Delhi on Budhpur-Makhmalpur Road.

Stretch 5: Confluence point of drain no. 6 with Supplementary drain 1 near Bakhtavarpur Radha Krishna Mandir on NH-1 to Najafgarh drain a/c of Supplementary drains (including drain no. 6) b/c river Yamuna (near signature bridge).

Based on the mapping and monitoring of Drain no. 6, stretch wise observations/findings are mentioned in Table 6 below:

Table 6: Stretch-wise observations/findings of Drain no. 6

S. No.	Stretch wise conclusion
1.	**Stretch 1: Origin to downstream of Ganaur STP (7 MLD), Sonipat** Stretch length – 13 km • Values of BOD (33 mg/l to 106 mg/l) & COD (120 mg/l to 411 mg/l) indicate contamination majorly with untreated sewage, however at location D2, BOD (224 mg/l) & COD (750 mg/l) indicate discharge of untreated/partially treated effluents by nearby industrial units directly into the drain no. 6.
2.	**Stretch 2: Upstream of CETP Barhi (16 & 10 MLD) to downstream of 30 MLD Ratadhana STP** Stretch length – 22 km • In this stretch, high values of BOD, COD, Ammonical Nitrogen & Fecal Coliform indicates the presence of untreated sewage. • Deterioration in characteristics of wastewater in drain after receiving discharge from barhi storm water drain & effluent from CETPs located at Barhi Industrial Area. (COD increased from 128 to 171 mg/l, TSS increased from 36 to 154 mg/l, & TDS increased from 1048 to 1472 mg/l). • Further downstream, water quality of the drain improved significantly after receiving the discharge of treated sewage of 30 MLD STP located on Ratadhana Road (BOD reduced from 186 to 69 mg/l & COD reduced from 691 to 240 mg/l).
3.	**Stretch 3: Upstream of OP Jindal University on Sonipat-Narela Road to Harshwardhan Colony, Kundli** Stretch length – 13 km • In this stretch, high values of BOD, COD, Ammonical Nitrogen & Fecal Coliform indicates the presence of untreated sewage • No industrial impact in this stretch
4.	**Stretch 4: Near Singhu Border of Delhi and Haryana at NH-1 to before confluence with supplementary drain-1 near Makhmalpur village** Stretch length – 17 km

S. No.	Stretch wise conclusion
	• In this stretch, the characteristics of wastewater in Drain no. 6 reflect the presence of medium strength sewage without any industrial impact.
5.	**Stretch 5: Confluence point of drain no. 6 & Supplementary drain-1 to Najafgarh drain a/c of Supplementary drains (i.e., b/c river Yamuna near signature bridge)** Stretch length – 16 km • In this stretch, drain no. 06 and another drain namely Supplementary Drain 2 confluences with supplementary drain 1 which ultimately discharges into Najafgarh drain which finally confluences into the river Yamuna • Supplementary drain-1 before confluence with Drain no. 6 carries mixed industrial effluent generated by Budhpur Industrial Area, Delhi having significant inorganic contamination (Colour-123 hazen, Sulphate-876 mg/l and TDS-3776 mg/l). Values of BOD & COD found as 67 mg/l & 225 mg/l, respectively. • Wastewater characteristics of supplementary drain – 2 and Najafgarh drain (before confluence with river Yamuna) reflect the presence of medium strength sewage.

Stretch wise monitoring details of Drain no. 6 is discussed separately and attached as **Annexure – V.**

9. CONCLUSION

9.1. Wastewater & Storm water management in Barhi industrial area

i. Total effluent discharge from operational textile industries – 5493.33 KLD

ii. Total effluent discharge from operational other sectors industries – 103.64 KLD

iii. Total effluent discharge from Barhi Industrial area – 5596.97 KLD

iv. Provision has been made by HSIIDC for the diversion of storm water into the pumping stations of the CETPs (10 & 16 MLD) located within the Barhi Industrial Area and into Drain No. 6. This diversion is based on the physical appearance of the storm water or if wastewater is detected in the storm water drain during dry days (days without rainfall). However, there is currently no system in place for metering or measuring the quantity of storm water transferred either to pumping station of CETPs or Drain no. 6.

v. High levels of BOD (280-428 mg/l), COD (618-694 mg/l) and TDS (2500-2752 mg/l) confirmed the contamination of storm water with untreated/partially treated industrial effluent.

vi. The combined inflow received at the CETPs (10 MLD and 16 MLD) is 17,400 KLD (including 2784 KLD of sewage) which indicates that 14,616 KLD of wastewater other than sewage is received at CETPs against the reported value of total effluent generation of 5596.97 KLD by member industries.

From above data/information, it is evident that:

- industries are discharging/bypassing unrecorded and untreated effluents into HSIIDC sewer line (i.e. CETP conveyance channel) and/or into the storm water conveyance channel.
- actual production and freshwater consumption is significantly higher than the reported values from industry logbook.
- contaminated storm water is being pumped into Drain no. 6

9.2. Compliance verification of Industries (including performance assessment of PETPs w.r.t. standards prescribed to member units)

9.2.1. Textile Sector

i. Most of the textile industries are of MSME category engaged in production of dyed yarn (natural & synthetic), fabric, and garments.

ii. All the textile industries have installed PETP for primary treatment of effluent and disposal into HSIIDC sewer line for further treatment through CETPs. Most of the PETPs were being operated by unskilled person as also reflected by poor O & M, unregulated chemical dosing, and non-compliance of PETPs.

iii. Disparity in freshwater consumption, effluent generation & discharge.

iv. In 52% of industries, value of BOD of effluent fed into PETP was much lower against the typical BOD range of specific quality which indicates dilution of raw effluent with freshwater.

v. In 46% of the industries, high reduction in BOD (> 50%), COD (> 60%) & TDS (> 25%) seems unrealistic with existing treatment systems (without secondary biological & TDS removal system) indicating dilution with freshwater in PETP at different stages.

vi. Poor metering/measurement and record keeping w.r.t. production plant process (raw material consumption, production and utilities i.e. process chemicals, freshwater, fuel), and PETP operations (in & outflow, chemical consumption, electricity consumption, sludge generation & disposal).

vii. No provision for reuse/ recycle of primary treated effluent from PETP due to lack of technical know-how of PETP operation and suitability for reuse of treated effluent back into the industrial processes.

viii. Out of 74 units, 69 units found non – complying.

9.2.2. Other Sectors

i. Most of the other sectors industries are of MSME category.

ii. In 87% of the industries, freshwater consumption was ≤ 10 KLD which was only being used for washing of machineries/vessels/reactors & floor cleaning, thus resulting in lesser quantity of effluent generation.

iii. Most of these industries have installed PETP for primary treatment of effluent and disposal into HSIIDC sewer line for further treatment through CETPs. Most of the PETPs were being operated by unskilled person as also reflected by poor O & M, unregulated chemical dosing, and non-compliance of PETPs.

iv. Intermittent operation of PETP due to batch mode operation (for 1-2 hours/day) owing to low effluent quantity.

v. Poor metering/measurement and record keeping w.r.t. production plant process (raw material consumption, production and utilities i.e. process chemicals, freshwater, fuel), and PETP operations (in & outflow, chemical consumption, electricity consumption, sludge generation & disposal).

vi. No provision for reuse/ recycle of primary treated effluent from PETP due to lack of technical know-how of PETP operation and suitability for reuse of treated effluent back into the industrial processes.

vii. Out of 39 units, 25 units found non – complying.

Disparity in issuance of Consents to industries of similar category consisting of stringent norms however industries are connected to CETP conveyance channel.

9.3. CETPs

Based on the inspection of CETPs (10 & 16 MLD) located in the Barhi Industrial Area, following conclusions are made:

i. **Overall installed treatment capacity:** 26 MLD (i.e. 10 + 16 MLD)

ii. **Capacity utilization**: 10 MLD CETP is operating at approximately 40% (3.9 MLD) of its designed capacity due to unavailability of trade effluent, while the 16 MLD CETP operates at around 85% capacity (13.5 MLD).

iii. **Effluent quality and compliance**:

- The raw industrial effluent entering both CETPs does not comply with the inlet effluent quality standards prescribed by HSPCB. The characteristics of effluent received at inlet of both the CETPs, when compared with the wastewater characteristics in storm water drain at different locations, it becomes evident that diluted effluent is being introduced into the CETPs.

- Analysis results of samples of treated effluent collected from final outlet of both the CETPs shows trivial violation w.r.t. discharge norms prescribed by HSPCB. The treated effluent of both the CETPs is discharged into Drain No. 6.

iv. **Performance efficiency**: 10 MLD CETP showed a BOD removal efficiency of 79.4%, COD removal efficiency of 81.1%, and TSS removal efficiency of 76.6%. The 16 MLD CETP showed lower BOD removal efficiency at 55.2%, COD removal efficiency of 65.4%, but higher TSS removal efficiency of 95.2%.

v. **Reuse/Recycling**: No provision for reuse/recycling of CETP treated effluent to member industries.

vi. **Upgradation of CETP:** 16 MLD CETP is under upgradation. The up-gradation work was proposed to be completed by 30.09.2024.

Above data/information indicates necessity for improvement in O&M in both the CETPs to avoid trivial violation w.r.t. discharge norms prescribed by HSPCB.

9.4. Issues raised by complainant

S. No.	Issues raised	Concluding remarks
1.	A 16 MLD CETP located at Barhi industrial area is receiving higher quantity of effluents from member industries and the CETP is not properly maintained	• The 16 MLD CETP received wastewater @ 13.5 MLD and 10 MLD CETP received wastewater @ 3.9 MLD (As per logbook data for duration May 1-July 18, 2024) • BOD removal efficiency found in 16 MLD & 10 MLD CETP is 55.2% & 80% respectively, against the desired removal efficiency of 90 – 95%.
2.	The said CETP has been found non-complying w.r.t. prescribed norms repeatedly during inspections and has not complied with the directions/ orders/ notices issued by HSPCB	• Raw effluent received at inlet of both the CETPs was not meeting the inlet standards prescribed by HSPCB, even though diluted effluent was being fed into CETPs. • Analysis results of composite samples collected from treated effluent at outlet of both the CETPs shows non-compliance w.r.t. stipulated discharge norms.
3.	No strict action has been taken by the concerned authorities against the defaulters	• HSPCB has already filed Prosecution case in special environment court Kurukshetra on 02.07.2024 against the Officers of HSIIDC Barhi and Directors of operating company. • Environmental Compensation of Rs. 2,52,00,000/- (Two Crores Fifty-Two Lakhs) has been imposed on the HSIIDC Barhi for the discharge of untreated effluent through storm water drain and violation of 16 MLD CETP vide order no. I/260323/2024 dated 05.11.2024. • Regional Officer, HSPCB, Sonipat vide no. 2432 dated 11.12.2024 has also issued show cause notice for prosecution and levying of Environmental compensation to Senior Manager, HSIIDC, Barhi and M/s Enviro Infra Engineers Pvt. Ltd. for the above mentioned non-compliance of 10 MLD CETP, Barhi, Sonipat • HSPCB has sealed the 02 no. of industries found by-passing the untreated effluent as per the details given below:

		1. M/S Cosmic Petrochem Pvt Ltd. Plot no 216 HSIIDC Barhi was sealed on 14.10.2024 in compliance of order no. HSPCB/SR/2024/1396 dated 09.10.2024. Environmental Compensation of Rs. 4,72,500/- (Four Lakh Seventy-Two Thousand Five Hundred only) has been imposed on the unit and unit has also deposited the EC amount Rs. 4,72,500/-. 2. M/S Rexolene India Manufacturing Pvt Ltd. Plot no 473-E, Ph-II, HSIIDC Barhi was sealed on 24.12.2024 in compliance of order no. HSPCB/SR/2024/2377 dated 06.12.2024. Environmental Compensation of Rs. 4,10,000/- (Four Lakh Ten Thousand only) has been recommended to the Head office against this unit. • Show Cause Notices for Closure, Prosecution and Levying of Environmental Compensation has been issued by HSPCB on 02.01.2025 to submit reply with in 15 days against 30 no. of industrial units found discharging effluent beyond prescribed discharge standards, 53 no of units found involved in the dilution in PETP, 09 number of units found non operation PETP due to their Batch processes. Further action in this regard will be taken by HSPCB after expiry of the SCN time Period.
4.	The industrial effluent is bypassed (via storm water drain) and discharged in Drain No. 6 which finally meets the River Yamuna	• HSIIDC has made provisions for the disposal of storm water into Drain No. 6, as well as to both CETPs, based on the physical appearance of storm water, or if wastewater is observed in the storm water drain during dry days (no rainfall day). • Contamination of storm water with untreated/partially treated industrial effluent is confirmed as the wastewater samples collected from the intermediate storm water pumping station located at Phase I and the main storm water pumping station located at Phase III showed high levels of BOD (280-428

		mg/l), COD (618-694 mg/l) and TDS (2500-2752 mg/l), Thus, possibility of routing of industrial effluent into Drain no. 6 cannot be ruled out.

9.5. Drain no. 6

The mapping of drain no. 6 including collection of wastewater samples from various locations along the drain revealed following:

- Drain no. 6 is majorly contaminated with untreated sewage in entire stretch (majorly at Stretch – 1, Stretch – 3 & 4)
- Deterioration in characteristics of wastewater in drain no. 6 after receiving discharge from barhi storm water drain & effluent from CETPs (located at Barhi Industrial Area) but significant improvement after receiving the discharge of treated sewage of 30 MLD STP located on Ratadhana. (Stretch – 2)
- Drain no. 06 merges with supplementary drain 1 which discharges into Najafgarh drain, ultimately having confluence with the river Yamuna. Wastewater characteristics of Najafgarh drain (before confluence with river Yamuna) reflect the presence of medium strength sewage. (Stretch – 5)

10. RECOMMENDATIONS

10.1. General recommendations for Industries

a. Installation of flow meter on sources of freshwater (i.e. Borewell/HSIIDC supply line), PETP inlet, outlet and reuse point.
b. Enhancing retention time and adjusting chemicals dosing in PETP (coagulants/flocculants) to improve treatment efficiency and achieving compliance w.r.t. stipulated regulatory standards.
c. To ensure effective and safe PETP operation, regular maintenance protocols must be established, including routine inspections, leak repairs, and proper chemical storage procedures.
d. Operate PETP properly as per SOP, optimize chemical dosing as per inlet characteristics. Recommended dosing rate: Coagulants (Lime, Alum etc.) @ 40-100 ppm & Flocculants (Poly) @1-2 ppm

e. Colour coding of lines carrying freshwater, raw effluent, treated effluent discharged/reused etc.
f. Obtain permission from CGWA/HWRA for groundwater abstraction from existing borewells.

10.2. Specific recommendations/Suggestive action plan for industries, CETPs & Drain no. 6

To facilitate industries (within cluster) to adopt cluster based approach, and continuous compliance with regulatory requirements, the HSPCB, HSIIDC, District administration & Industry associations jointly need to ensure following:

a. Identification & dismantling of provisions for bypassing of untreated effluents into CETP conveyance channel and storm water drainage system.
b. Proper segregation of lines/channels carrying primary treated effluent from PETP and storm water channels to rule out the possibility of contamination of storm water with industrial effluents.
c. Dismantling/filling/levelling of unnecessary underground effluent storage tanks.
d. Make provision of over ground discharge of PETP outlet (of individual industries) into CETP conveyance channel (i.e. HSIIDC sewer) without any storage tank.
e. Install flow measuring device in grid pattern in HSIIDC sewer line for monitoring of variable flow condition.
f. Grid sampling (including flow measurement) of storm water drains in Barhi industrial area (phase I, II & III) on random basis for qualitative and quantitative assessment of contamination by effluents generated from a particular area/zones in the cluster.
g. Frequent sampling of rain water harvesting pits installed within the individual industry premises to verify any contamination with untreated effluent.
h. Scientific disposal of solid wastes (i.e. Boiler Ash, Process & ETP sludge) generated by industrial units and verification of end-to-end waste disposal.
i. Conduct technical workshops on quarterly basis for capacity building of industry workforce in terms of technical know-how w.r.t. regulatory compliances, best environmental management practices, PETP operation, etc.

j. Industrial units to maintain a logbook that records waste quantities, types, and disposal methods. This logbook will serve as a crucial reference for waste management audits and assessments.
k. The SPCBs should supervise waste management practices within industrial units. This includes overseeing waste handling, transportation, disposal and verification through logbook & manifest system slip.
l. Data Management and Record keeping w.r.t. monitoring (including findings)/workshops/action taken etc.

10.2.1. Facilitation for reuse/recycling of treated effluent from PETP/CETPs into industrial processes especially into textile industries

The HSPCB, HSIIDC, District administration & industry associations should facilitate industries (within cluster) for adoption of cleaner technologies, improved environmental performance and regulatory compliances with the help of technical institutions of repute like IITs, ICT Mumbai, etc., and technical experts from Solidaridad, NITRA, etc. in a time bound manner.

For promoting reuse/recycling of treated effluent, following action points should be followed:

a. Categorization of textile industries based on raw material, processing activities, and product manufactured.
b. Carry out category-wise benchmarking of consumption of utilities (i.e. freshwater, energy, fuel & process chemicals), effluent generation (quantitative & qualitative).
c. Evaluate feasibility of existing PETP/extent of treatment required based on the effluent characteristics, organic and hydraulic load.
d. Explore the extent of reuse of primary treated effluent (in terms of % recycling) within different industrial processes depending on the category of industry.
e. Standardization of process wise chemical requirements in wet processing and PETP operation via Chemical Management System (CMS).
f. Conduct technical workshops on half-yearly basis for capacity building of industry workforce in terms of technical know-how w.r.t. best environmental management practices, CMS, PETP operation, etc.
g. Category-wise recommendations on adoption of cleaner technologies

h. Category-wise recommendations for improvement in manufacturing processes for reducing consumption of utilities, effluent load and enhancing environmental compliance.

i. Preparation of upgradation plan of both CETPs to meet regulatory compliances and to achieve at least 80% efficiency for removal of organic load.

j. Recommendations on suitability and extent of distribution of treated effluent from CETP for reuse among member industries (in terms of % recycling).

k. Recommendations on infrastructure development including setting up of network of pipelines for distribution of treated effluent from CETP to member industries in consultation with HSIIDC.

l. Individual industries/ industrial associations at Barhi industrial cluster shall bear the expenses incurred towards engagement of experts for implementation of action plan for reuse/recycling of treated effluent, adoption of process specific cleaner technologies, waste minimization practices, upgradation of individual PETPs, & CETPs, and capacity building of industries in terms of engagement of skilled manpower for PETP operation, establishment of common facility for testing of industrial effluents, etc.

10.2.2. Action plan for environmental management in Barhi Industrial area

S. No.	Action points	Executing agency	Nature (Mandatory/ Optional)	Time line
1.	Engagement of experts for facilitation of industries	HSPCB, HSIIDC & District administration	Mandatory	01 month
2.	Maximum diversion of effluent to 10 MLD CETP upto designed capacity till upgradation in 16 MLD CETP	HSIIDC	Mandatory	15 days
3.	Upgradation of 16 MLD CETP as per inlet characteristics: • Installation of DAF system • Upgradation of flash mixture with proper mixing arrangement • Optimize chemicals dosing of coagulants & flocculants as per CETP inlet quality	HSIIDC	HSIIDC vide letter dated 08.11.2024 submitted that they have completed the proposed upgradation activities which may be verified by HSPCB within one month	

S. No.	Action points	Executing agency	Nature (Mandatory/ Optional)	Time line
	• Replacement of diffusers in SBR basin • Installation of mechanical screen at inlet • Revamping of installed gravity sand filtration system			
4.	Improvement in efficiency of CETPs to greater than 80 % by carrying upgradation/ augmentation in existing treatment scheme and improvement in O & M	HSIIDC in consultation with expert committee	Mandatory	06 months
5.	Infrastructure development including setting up of network of pipelines for distribution of treated effluent from CETP to member industries	HSIIDC in consultation with expert committee	Mandatory	06 months
	• Minimum 30 % recycling			01 year
6.	Trial run of reuse/recycle of treated effluent from PETP/CETP	HSPCB, HSIIDC & District administration	Mandatory	03 months
7.	Dismantle the provision of dilution of PETP outlet	HSPCB, HSIIDC & District administration	Mandatory	01 month
8.	Provide provision of over ground discharge of PETP outlet in to CETP conveyance channel (i.e. HSIIDC sewer) without any storage tank			
9.	Dismantle the provision of direct bypass of effluent in to CETP conveyance channel			
10.	Segregation & discharge of treated effluent and storm water line in to HSIIDC sewer line and HSIIDC storm water line, respectively to rule out the contamination of storm water drain	All industries, HSPCB, HSIIDC & District administration	Mandatory	
11.	Recycling of primary treated effluent back in to the process as per the recommendations of expert committee	All industries, HSPCB, HSIIDC & District administration	Mandatory	1 year
12.	Issuance of consents/ notification/ direction under	HSPCB	Mandatory	03 months

S. No.	Action points	Executing agency	Nature (Mandatory/ Optional)	Time line
	Water/ Air Acts with revised norms in line with the designed CETP inlet parameter			
13.	Installation of flow meter at: • line discharging storm water into pumping station of CETPs • line carrying storm water to drain no. 6 and maintain record of the same	HSIIDC	Mandatory	03 months
14.	Installation of flow meter on sources of freshwater (i.e. Borewell/HSIIDC supply line), PETP inlet, outlet and reuse point and maintain logbooks for the same	Individual industries & industry associations	Mandatory	03 months
15.	Training of existing manpower /engagement of trained manpower for PETP operation	Individual industries & Industry association	Mandatory	03 months
16.	Setup common facility (environmental laboratory) for testing of wastewater samples in Barhi industrial area for surveillance of effluent from PETP outlet of member units, and storm water contamination	Industry associations, HSPCB, HSIIDC & District administration	Mandatory	03 months

10.2.3. Action plan for rejuvenation of Drain no. 6

For remediation/rejuvenation of Drain no. 06, it is proposed that a low cost nature based in-situ treatment system like Constructed Wetland, rock filters, etc. may be installed. Numbers of treatment units may vary based on various factors like geography of drain (flow width, depth, and bed slope), characteristics of flowing wastewater, and discharging second order drains. Accordingly, an action plan for rejuvenation of Drain no. 06 is mentioned below:

S. No.	Action points	Executing agency	Nature (Mandatory/ Optional)	Time line
1.	Design of Constructed Wetland Systems based on the topology	Irrigation department/Jal Nigam in consultation with HSPCB and expert	Optional	3-6 months

S. No.	Action points	Executing agency	Nature (Mandatory/ Optional)	Time line
	and waste water characteristics of Drain no. 6.	agency like Centre for Environmental Management of Degraded Ecosystems (CEMDE) or others		
2.	Desilting of drains up to bed level and strengthening of bunds with desilted material.	Irrigation department/Jal Nigam	Optional	Once in a year
3.	Vegetation development on embankments of restored drain.	Irrigation/Jal Nigam/ Forest department in consultation with HSPCB and expert agency like CEMDE or others	Optional	1-2 years
4.	Setting up of series of in-situ constructed wetland systems where width of drain is maximum based on flow & wastewater characteristics of drain at that location.		Optional	1-2 years
5.	Follow up monitoring of wastewater quality of drains.	HSPCB	Optional	Fortnightly

Joint Committee:

S. No.	Name and designation of committee member	Organization	Signature
1.	Mr. Pardeep Singh, Regional Officer	Regional Office, Sonipat, Haryana State Pollution Control Board	
2.	Mrs. Reena Satavan, Additional Director & Scientist 'E'	Central Pollution Control Board	

Annexure-I

Item No. 08 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 622/2024

Varun Gulati Applicant

Versus

State of Haryana & Ors. Respondent(s)

Date of hearing: 28.05.2024

CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Applicant: Ms. Mansi Chahal, Mr. S.A. Zaidi & Mr. Kapil Sagar, Advs.

ORDER

1. In this original application, plea of the Applicant is that the Barhi industrial area has around 900 industries and a Common Effluent Treatment Plant (CETP) with 16 MLD capacity has been set up at Barhi, Sonepat but the effluents received from industries of that area is much higher in quantity, therefore, the CETP is of under capacity. Further allegation of Applicant is that the CETP is not properly maintained and that the industrial effluent is bypassed and discharged in Drain No. 6 which finally meets the River Yamuna, therefore, polluting the river also. In support of such a plea, Applicant has enclosed the photographs as Annexure A1 onwards.

2. Learned Counsel for Applicant, during the course of argument, has also placed reliance upon communication sent by Haryana State Pollution Control Board (HSPCB) to the Principal Secretary, Govt. of Haryana Annexure A-3 dated 11.01.2022, wherein it was observed that presence of

effluent in storm water drain was beyond comprehension and that HSIIDC, Barhi, Sonepat had totally failed to perform its duly in this regard. The communication also mentions about the observation of NMCG team about improper functioning of CETP, Barhi and presence of dilution water into clarifier of CETP.

3. Learned Counsel for Applicant has referred to Annexure A-6 and has submitted that though there is a decision to prosecute 30 accused persons /officers/officials responsible for operation of CETP but on account of issue of sanction, the matter has not proceeded further.

4. We are of the view that the OA raises substantial issue relating to compliance of environmental norms.

5. Issue notice to the respondents. Applicant is directed to serve the respondents and file affidavit of service at least one week before the next date of hearing.

6. Having regard to nature of allegation made in the OA, we also form a Joint Committee comprising of representative of Member Secretary, Central Pollution Control Board (CPCB) and representative of Member Secretary, HSPCB, who will act as coordinating agency. The two-member Joint Committee will visit the site, ascertain the correct position in respect of direct discharge of effluents by the industries in Drain No. 6, capacity, capacity utilization and performance of the CETP and effluents received by said CETP. The Joint Committee will also ascertain Primary Effluent Treatment Plant (PETP) standards prescribed to the member units. The Committee will also collect the samples from discharge point of CETP and Drain No. 6 and also from the point where Drain No. 6 enters Delhi and meets River Yamuna through Najafgarh drain and get the samples analysis

done and submit the factual and action taken report before the Tribunal within a period of three months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.

7. The Committee will also examine the compliance by each of the industrial units in respect of discharge of effluent in that industrial area.

8. List on 19.09.2024.

9. A copy of this order be forwarded to the Member Secretaries of CPCB and HSPCB by e-mail for compliance.

Prakash Shrivastava, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

May 28, 2024
Original Application No. 622/2024
DV

Annexure-II

Item No. 22 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 622/2024

Varun Gulati Applicant

Versus

State of Haryana & Ors. Respondent(s)

Date of hearing: 19.09.2024

CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Applicant: Mr. Kapil, Advocate

Respondent: Mr. Rahul Khurana, Adv. for HSPCB

ORDER

1. In terms of order of the Tribunal dated 28.05.2024, the interim compliance report dated 17.09.2024 has been filed by the Joint Committee. The Joint Committee in that interim report has sought six weeks' time for filing the final report by observing as under:

> *"9. **CONCLUSIONS & RECOMMENDATIONS**:*
>
> *9.1. In view of the above, the joint committee requests to Hon'ble Tribunal for consideration of the following:*
>
> *9.1.1. Preparation of final report is a voluminous work as it includes the compilation of inspection reports of the 157 industrial units, assessment of PETP standards of member units of CETP Barhi, performance assessment of CETPs and quality assessment drain no. 6 based on the analysis results. Also, the analysis results are still awaited for few parameters from laboratory.*
>
> *9.1.2. For finalization of the report, the joint committee will deliberate upon the issues and accordingly action plans will be prepared for measures to be taken by industries and concerned agencies of CETPs for pollution control and remedial actions to be taken for water quality restoration in drain no.6 which is ultimately meeting River Yamuna.*

In this regard, it is humbly requested that an extension of 06 weeks time for submission of the final report may please be granted.”

2. The request made by the Joint Committee for extension of time for filing final report is allowed. Let the final report be filed by the Joint Committee within the extended period of six weeks.

3. List on 08.01.2025.

Prakash Shrivastava, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

September 19, 2024
Original Application No. 622/2024
dv..

List of units located in HSIIDC Barhi						Annexure-III
Sr. No.	Name and Address of Unit	Product	Category	Quantity of domestic effluent KLD	Quantity of Trade Effluent KLD	Grant status
1	MODERN DYEING PVT. LTD. PLOT NO. 527, HSIIDC, PHASE-II, BARHI, DISTT. SONEPAT	Garment washing	Red	2	1000	01/10/2022 - 30/09/2027
2	SHADEX CREATIONS PLOT NO 661 HSIIDC PHASE II BARHI	WASHING PROCESSING AND DYEING OF GARMENTS	Red	15	940	01/10/2022 - 30/09/2027
3	DHRUV GLOBALS LTD. PLOT NO 462 463 PHASE I BARHI SONEPAT	Dyeing of fabric	Red	18	800	01/10/2023 - 30/09/2028
4	ARTEX KNITTING INDUSTRIES PVT LIMITED PLOT NO 521A PHASE II HSIIDC INDUSTRIAL ESTATE BARHI SONEPAT	JOB WORK OF DYEING WASHING OF FABRIC	Red	5	550	01/10/2021- 30/09/2026
5	DENIM CRAZE PLOT NO 550-553 HSIIDC PH II BARHI SONIPAT	DYEING AND WASHING OF GARMENTS	Red	2	500	01/10/2021 - 30/09/2026
6	SINO INDIA TEXTILES PVT LTD PLOT NO 684 PH II BARHI SONIPAT	Printing of Fabric	Red	2	500	01/10/2022 - 30/09/2027
7	Addagio Knit Creation Pvt. Ltd., Plot No. 217 224, HSIIDC, Indl. Area, Barhi, Distt. Sonepat	DYEING AND WASHING OF GARMENTS	Red	1.5	400	22/04/2020 - 30/09/2024
8	SHREE SIDHI VINYAK TEXCOLOURS PVT. LTD. PLOT NO. 495,HSIIDC, PHASE-II, BARHI, DISTT. SONEPAT	Yarn dyeing	Red	3	400	01/10/2022 - 30/09/2027
9	Vardhman Creation Pvt Ltd Plot No 487 488 Phase II HSIIDC, Barhi Sonipat	Dyeing of Yarn and Bathmats	Red	2	400	01/10/2021 - 30/09/2026
10	M.S CREATIONS PLOT NO 561 HSIIDC PHASE II BARHI SONIPAT	WASHING AND DYEING OF GARMENTS, WASHING AND DYEING OF FEBRIC	Red	1	300	01/10/2019 - 30/09/2024
11	NEW GARMENTS PLOT NO.200,HSIIDC,BARHI DISST.SONEPAT	Jeans washing	Red	5	300	01/10/2022 - 30/09/2027
12	SONU ENTERPRISES PLOT NO.358,HSIIDC,BARHI,DISTT.SONEPAT{HR}	JEANS WASHING	Red	1	300	01/10/2021- 30/09/2024
13	SWASTIK MULTIFIBRE PVT LTD PLOT NO 391 HSIIDC PHASE 1 INDUSTRIAL ESTATE BARHI SONEPAT	Dyed Knittied fabrics	Red	0.7	300	24/01/2022 - 30/09/2026
14	TWENTY FIRST CENTURY CREATION PVT. LTD. PLOT NO. 207, HSIIDC, BARHI SONEOAT	Fabric Dyeing Finishing fabric sqm Bleaching sqm	Red	5	300	01/10/2021- 30/09/2024
15	RAJASTHAN KNITING MILLS PLOT NO.46, HSIIDC, BARHI SONEPAT	Washing of fabric Dyeing of Fabric	Red	2	300	19/06/2021- 30/09/2025
16	AKKS TEXTILES PVT LTD PLOT NO 558 PH II HSIIDC BARHI SONEPAT	Washing Dyeing Fabric	Red	2	300	19/06/2021 - 30/09/2025
17	GLOBALWASH CREATION PRIVATE LIMITED (Previously named as M/s R.D.Texo Fab Pvt. Ltd) PLOT NO 556 HSIIDC PH II BARHI SONIPAT	WASHING AND DYING OF FABRIC WASHING AND DYING OF GARMENTS	Red	1	300	22/01/2023 - 30/09/2027
18	Vardhman Gar-Tex Creators Pvt.Ltd. 420,HSIIDC,Industrial Estate, Barhi,Ganaur.	Garment Washing	Red	2	255	01/10/2020 - 30/09/2025
19	Tabi Creations Pvt. Ltd., Plot No. 540, Ph-II, Barhi, Sonepat	Yarn Dyeing	Red	0.5	250	01/10/2022 - 30/09/2027

20	SHUBHRAM HOSPITAL SOLUTIONS PVT LTD PLOT NO 485 486 HSIIDC PH II BARHI DISTT SONIPAT	Washing of linen	Red	5	245	01/10/2023 - 30/09/2025
21	Spectrum Washing Pvt. Ltd. 130, Industrial Estate, Barhi.	readymade garments washing	Red	2	240	01/10/2023 - 30/09/2028
22	SHREE JEE FABRICS PLOT NO.525B-525C, HSIIDC, Phase-II, Barhi, Sonepat, Haryana	Dyeing of fabric	Red	3	215	01/10/2022 - 30/09/2027
23	SRI RAM COTTGINS PVT. LTD PLOT NO. 501 HSIIDC INDUSTRIAL AREA BARHI SONEPAT HARYANA	DYEING OF FABRIC	Red	2	200	01/01/2022 - 30/09/2027
24	Jyoti Dhaga Udyog Pvt Ltd Plot No 406-417 HSIIDC Industrial Area Barhi Sonipat Haryana 131101	Yarn dyeing	Red	3	200	21/05/2021 - 30/09/2025
25	G C R DYEING PLOT NO 342 HSIIDC BARHI SONEPAT	Dyeing of fabrics	Red	2	200	28/06/2022 - 30/09/2025
26	Manohar Filaments Pvt. Ltd. Plot No.531-532,HSIIDC,Barhi,Part-II	Paper Cartons and Transfer Labels Hang Tags and Price Tickets Dyeing Yarn and Tape DRAW CORD AND WEAVING	Red	7	190	18/12/2022-30-09-2026
27	DENIM TOUCH PLOT NO. 600 HSIIDC BARHI SONEPAT	GARMENTS WASHING	Red	2	175	25/02/2022 - 30/09/2026
28	Such Exports Pvt. Ltd. Plot no. 179,180,184,185, HSIIDC, Industrial Estate, Barhi, Gannaur, Sonepat	Sulphur Blue	Red	2	160	01/10/2022 - 30/09/2025
29	BABBAR HOSIERY PLOT NO.83, 84INDUSTRIAL ESTATE BARHI,DISTT.SONEPAT	Fabric Dyeing	Red	5	150	04/05/2020-30/09/2024
30	FINE DYEING PVT. LTD. PLOT NO. 400,401 HSIIDC, BARHI, DISTT. SONEPAT	Dyeing of Fabric	Red	5	150	01/10/2022 - 30/09/2027
31	PP TEXOFAB PVT LTD PLOT NO 494 HSIIDC PH II BARHI SONIPAT	DYEING OF YARN DYEING OF FABRIC	Red	2	130	11/11/2022 - 30/09/2027
32	ANAND KNIT PLOT NO. 650-651 HSIIDC PHASE- II, BARHI SONEPAT HARYANA	Dyeing of fabric	Red	2	100	01/10/2022 - 30/09/2024
33	BCL FABRICS PVT. LTD PLOT NO. 667, PHASE-II, HSIIDC, BARHI, SONEPAT HARYANA	WASHING AND DYING OF FABRICS	Red	2	100	01/10/2022 - 30/09/2027
34	COLOR ZONE PLOT NO 598 PHASE II HSIIDC BARHI SONIPAT	Garment Washing	Red	2	100	01/10/2022 - 30/09/2027
35	M/S BANSAL PROCESSING HOUSE PLOT NO. 523, HSIIDC, PHASE-II, BARHI, SONEPAT	DYES FABRICS,	Red	2	100	01/10/2020 - 30/09/2025
36	M/S Savi Texfab Pvt. Ltd. plot no 544 ph-2 hsiidc barhi sonipat	Ready made garments washing	Red	1	100	01/10/2021 - 30/09/2026
37	Ram Kishan & Co. Plot no.499, HSIIDC, Phase-II, Barhi	PROCESSING OF WOVEN FABRICS,	Red	1	100	01/10/2019 - 30/09/2024
38	REXOLENE INDIA MFG PVT. LTD PLOT NO. 473E PHASE-II, HSIIDC, INDUSTRIAL ESTATE BARHI, SONEPAT, HARYANA	POLYESTER FABRIC DYEING,	Red	2	100	01/10/2022 - 30/09/2024
39	GEE AAR THEARD PVT.LTD. PLOT NO.655,HSIIDC,BARHI,DISTT.SONEPAT{HARYANA}	Dyeing of yarn	Red	2	100	01/10/2021 - 30/09/2026
40	SACHIN DYERS PLOT NO.28 HSIIDC,BARHI,DISTT.SONEPAT	DYEING OF FABRIC	Red	2	100	01/10/2021 - 30/09/2026
41	VIHAN TEXTILE PVT LTD PLOT NO 210 HSIIDC, Barhi SONEPAT	Dyeing of Fabric	Red	5	100	01/10/2022 - 30/09/2027

42	Weave N Colors Texofab Plot No 490 Phase II HSIIDC, Barhi Distt Sonipat	Handloom 3D bedsheet	Red	1	100	01/10/2022 - 30/09/2026
43	MADNI TEXTILE MILLS PVT LTD PLOT NO 387 388 PHASE 1 HSIIDC BARHI SONEPAT	DYEING PRINTING OF FABRIC	Red	2	100	01.10.2021- 30.09.2026
44	SUPER DYEING PLOT NO 498 PH-2 HSIIDC BARHI SONIPAT	DYEING OF FABRIC	Red	5	100	11/10/2022 - 30/09/2025
45	POOJA TEXTILE INDUSTRY PLOT NO 654 HSIIDC PH 2 BARHI SONIPAT	Fabric dyeing	Red	2	98	01/10/2023 - 30/09/2028
46	Brothers Stretch Yarn Pvt. Ltd. Plot No. 176, HSIIDC, Barhi Industrial Estate, District Gannaur, Sonipat, Haryana	Nylon, Polyester and Cotton Dyed Yarn	Red	3.5	90	01/10/2021 - 30/09/2026
47	Kohinoor Ribbon Factory Pvt ltd (Old name K R F Limited) Plot No. 12, Phase I, Barhi Sonepat	Dyeing of yarn Poly Bag and Printing Dyed Yarn, Sewing Thread and Woven Tapes Tape Dyed Tape Printing	Red	2	85	01/10/2023 - 30/09/2028
48	M.K Dyeing 98-99, HSIIDC Indl. Estate Barhi	HOSIERY CLOTH WASHING DYEING	Red	2	83	01/10/2020 - 30/09/2025
49	SIDHI VINAYAK APPARELS PVT LTD PLOT NO 473D HSIIDC INDUSTRIAL ESTATE BARHI SONEPAT	JOB WORK DYING WASHING OF FABRIC	Red	3	80	01/10/2023 - 30/09/2028
50	YASHAS INDUSTRIES PLOT NO 190 IE BARHI	dyeing of yarn	Red	2	80	22/07/2021 - 30/09/2024
51	Girja Dyeing PLOT NO 7 HSIIIDC BARHI SONIPAT	Dyeing of fabric	Red	1	70	01/10/2022 - 30/09/2027
52	KANODIA INTERCONTINENTAL PVT. LTD. PLOT NO. 8 AND 9 HSIIDC, BARHI, SONEPAT	Dyed yarn	Red	2	70	01/10/2019 - 30/09/2024
53	MAGNET INDUSTRIES PLOT NO 230 HSIIDC BARHI SONEPAT	Garment Washing	Red	0.7	60	14/11/2022 - 30/09/2027
54	EURO THREADS (P) LTD Plot No. 343 344, HSIIDC, Barhi	DYEING OF YARN	Red	2	60	01/10/2020 - 30/09/2025
55	M/S ARYAVART DYEING PVT. LTD. PLOT NO 352 HSIIDC ,BARHI ,TEH GANAUR, DIATT SONIPAT HR.	DYEING OF YARN	Red	1.5	60	01/10/2020 - 30/09/2025
56	Global Enterprises Plot No.656,Phase-II,HSIIDC,Barhi	Yarn dyeng of polyster	Red	2	58	01/10/2023 - 30/09/2028
57	BUDH SINGH AND BROTHERS PLOT NO 36 HSIIDC BARHI SONEPAT	ACRYLIK DYEING OF YARN	Red	0.7	50	01/10/2021 - 30/09/2026
58	DENIM Art Plot no 523 D hsiidc barhi sonipat	DYEING AND FINISHING OF READYMADE GARMNETS	Red	2	50	01/10/2022 - 30/09/2027
59	GENEROUS TEXTILES PVT LTD PLOT NO 383 HSIIDC PHASE I BARHI SONEPAT	dyeing of yarn	Red	2	50	01/10/2021 - 30/09/2026
60	M/s Eurospa Terry Towel Pvt. Ltd. Plot No. 481, Bari, HSIIDC, Phase-II, Distt. Sonepat	Dyeing of Cotton	Red	2	50	01/10/2019 - 30/09/2024
61	M/S Krishna Process (old name ORIENTAL RUG CO). PLOT NO. 480, HSIIDC, PHASE-II, BARHI	DYEING OF YARN,	Red	1	50	01/10/2020- 30/09/2025
62	NATRAJ HOME FURNISHING PVT LTD PLOT NO 666 677 HSIIDC PHASE II BARHI SONEPAT	YARN/FABRIC DYEING	Red	2	50	12/01/2023 - 30/09/2025
63	Nutex Knit Fab Plot No. 359, HSIIDC, Barhi	Hosiery Dyeing	Red	1	50	02/03/2023 - 30/09/2027

64	SHIVALIK PROCESSOR PLOT NO 416 HSIIDC, Barhi SONEPAT	Dyeing of fabric	Red	1	50	01/10/2019 - 30/09/2024.
65	BALAJI PROCESSORS PLOT NO 593 HSIIDC BARHI SONIPAT	Garments	Red	2	50	20/04/2022 - 30/09/2026
66	M/s Shivam Enterprises Plot No. 274, HSIIDC,Barhi	washing of garments	Red	2	50	01/10/2020 - 30/09/2025
67	SMITZ MARKETING PLOT NO 522A PH II HSIIDC BARHI DISTT SONIPAT	THREAD TUBES THREAD CONES DYED YARN	Red	2	50	13/12/2022 - 30/09/2026
68	ABYCONS WOOLENS PVT LTD. PLOT NO 525 HSIIDC PHASE 2 BARHI SONIPAT	PRINTING OF FABRIC (Sq. meters/day)	Red	3	50	05/04/2024 - 30/09/2028
69	ABYCONS TEXTILES PRIVATE LIMITED PLOT NO 685 PHASE 2 HSIIDC BARHI SONIPAT	Printing of fabric	Red	1	48	04/09/2020 - 30/09/2024
70	M/s Dayanidhi Textiles Pvt Ltd Plot No 491 HSIIDC Phase 2, Barhi, Distt. Sonipat, Haryana	Leather graments and Skin Leather	Red	2	48	1/10/2020- 30/09/2024
71	RAKESH TEXTILE PLOT NO.240 HSIIDC, BARHI	FABRIC OF DYEING,	Red	1	48	01/10/2021 - 30/09/2026
72	VIBRANT YARNS PLOT NO 523B HSIIDC PH II BARHI SONIPAT	POLYESTER DYED YARN	Red	1	45	09/11/2023 - 30/09/2028
73	NAGPAL TRADING COMPANY PLOT 167, HSIIDC,BARHI SONEPAT	MERCERISITY VLEACHING OF YARN	Red	1	40	01/10/2021 - 30/09/2026
74	A.S.PROCESS PLOT NO.285-300,HSIIDC,BARHI,DISTT.SONEPAT{HARYANA}	DYEING OF FABRIC	Red	4	35	01/10/2020 - 30/09/2025
75	GHANSHYAM DYES AND FABTEX PLOT NO 641 PHASE II HSIIDC BARHI SONIPAT	Dyeing of cotton fabric	Red	1	30	01/10/2022 - 30/09/2027
76	SANJEEV ENTERPRISES PLOT NO. 111 PHASE-01 HSIIDC, Barhi TEHSIL-GANAUR DISTT.-SONIPAT, HARYANA	DYEING OF YARN,	Red	0.5	30	01/10/2021 - 30/09/2026
77	SUMIT ENTERPRISES PLOT NO.178,HSIIDC,BARHI,DISTT.SONEPAT	Sulphur Green	Red	2	30	01/10/2021- 30/09/2026
78	SMITZ POLYTEX 5, BARHI, HSIIDC, Sonepat	DYEING OF YARN,	Red	1.2	25	01/10/2022 - 30/09/2027
79	Supreme Fashions 524 D & E HSIIDC, Barhi Ph II Sonipat	Finished Leather	Red	4	25	01/10/2023 - 30/09/2028
80	EOC Polymers India Pvt. Ltd. Plot No. 474A & 474B,HSIIDC Industrial Estate,Barhi Phase-I	Latex Compound And Adhesive XSBR Latex	Orange	3	20	01/04/2023 - 31/03/2028
81	KOMAL TEXTILES PLOT NO 327 HSIIDC PH I BARHI SONIPAT	DYEING OF YARN	Red	1	20	01/10/2023 - 30/09/2028
82	Kuchal Fashions Pvt. Ltd. Plot No. 331,HSIIDC,Barhi, Sonepat	DYEN YARN	Red	0.5	20	15/01/2020- 30/09/2024
83	VRISHABH INDUSTRIES PLOT NO. 663, HSIIDC, BARHI,PHASE-II, SONEPAT	Yarn Dyeing	Red	2	20	01/10/2022 - 30/09/2027
84	PAPCOAT (INDIA). PVT. LTD. PLOT NO. 247 HSIIDC PHASE I BARHI SONIPAT	ZIROCONIUM BASIC CARBONATE	Orange	1	20	19/05/2022 - 31/03/2027
85	PEECO POLYTECH PVT LTD,, PLOT NO 537 PHASE 2 BARHI SONIPAT	POLY PROPLENE GRANULES LES	Orange	2	20	27/01/2023 - 31/03/2027
86	K.M. POLY YARN PVT. LTD. PLOT NO. 512, HSIIDC, BARHI	YARN	Red	0.5	18.5	01/10/2022 - 30/09/2024

87	CENNET BIOPHARMA PVT. LTD. PLOT NO 3 PHASE III HSIIDC BARHI SONIPAT	Thiocolchicoside Hyoscine Butyl Bromide Serratiopeptidase 10 Deacetylbaccatin (10 Dab) TURMERIC EXTRACTS SEEDS	Red	3.5	18	01/04/2020-30/09/2024
88	SAMARTH INDUSTRIES PLOT NO 384 HSIIDC PH I BARHI SONEPAT	ACID DYES VIOLET AND BLUE,	Red	0.4	12	01/10/2021,-30/09/2026
89	Denimo Design Washing Private Limited Plot No.381, Phase-1, Barhi	Washing of clothes/garments	Red	2	10	01/10/2023 - 30/09/2028
90	OASIS TEXFAB INDIA PLOT NO. 500, HSIDC,PHASE-II, BARHI DISTT. SONEPAT	hook and loops	Red	4	10	01/10/2023 - 30/09/2028
91	SHREE GOPAL ENTERPRISES PLOT NO 356 HSIIDC PH I BARHI SONEPAT	DYEING OF YARN	Red	1	10	01/10/2020 - 30/09/2025
92	TSB POLYCHEM PVT LTD Plot no. 212 HSIIDC Barhi Sonipat Haryana	Plastic Dana	Orange	1	10	20/05/2024 - 31/03/2029
93	Royal Enterprises PLOT NO 555 HSIIDC PHASE II BARHI SONEPAT	METHYL COBLAMIN Bulk Drug Item	Orange	1	9	01/04/2022 - 31/03/2027
94	CAMLANO AND COMPANY PLOT NO 357 PHASE I HSIIDC INDUSTRIAL ESTATE BARHI DISTT SONIPAT	Bath Accessories	Orange	1.2	5	01/10/2020 - 30/09/2025
95	Hue Plus Industries Plot No. 429,HSIIDC,Barhi	Phthalocyanine Beta Blue, Chromocyanine Green,	Red	1	5	01/10/2020 - 30/09/2024
96	PARAS TUBETECH PVT LTD PLOT NO.459, PHASE I, HSIIDC, BARHI, SONIPAT HARYANA	CEW STEEL TUBES	Red	1.5	5	19/01/2020 - 30/09/2024
97	SIA PHARMA PVT LTD PLOT NO 170 HSIIDC PH I BARHI SONEPAT	Ointment, Capsule, Tablets,	Orange	1	5	01/04/2017 - 31/03/2027
98	Ansh beverages pvt ltd Plot- 39, ph-1, hsiidc, bari,sonipat, haryana	SOFT DRINKS JUICES	Orange	0.5	5	11/09/2021 - 30/09/2026
99	Shri Balaji Enterprises Plot no. 620 HSIIDC, Barhi Sonipat	LD Pipe Cutting washing	Orange	0.5	5	02/03/2021 - 31/03/2025
100	SEASON FARM PLOT NO. 157, HSIIDC, BARHI	Frozen Vegetables	Orange	0.5	3.5	01/04/2024 - 31/03/2029
101	Value Foods Plot No 273 Phase 1 HSIIDC, Barhi Tehsil Ganaur District Sonepat	processing of fruits and vegetable,	Orange	0.5	3	01/04/2017-31/03/2027
102	ARSHIYA DECOR PRIVATE LIMITED PLOT NO.549,HSIIDC BARHI GANAUR SONEPAT	Paper print	Orange	1	3	01/04/2022 - 31/03/2027
103	DESIGN O CREATIONS PLOT NO 175 HSIIDC PH I BARHI	FMCG display units & kitchen accessories	Red	1	3	01/04/2020-30/09/2024
104	FIRST PURE DIET MILK PRODUCTS PLOT NO. 325, PH.I, HSIIDC, INDUSTRIAL ESTATE BARHI DISTT. SONEPAT	Milk Products	Red	1	2.5	01/10/2020 - 30/09/2025
105	VINAYAK DYEING HOUSE PLOT NO 590 HSIIDC, Barhi SONIPAT	DYED YARN	Red	0.5	2.5	01/10/2022 - 30/09/2027
106	Indies Global Foods Private Limited Plot No 244, Barhi Phase - 1, HSIIDC	Ready to eat and ready to cook food	Orange	0.3	2	19/05/2018 - 31/03/2028
107	METRO PULP INDUSTRIES 415 PHASE 1 BARHI INDUSTRIAL ESTATE SONIPAT	Safety pins	Red	1.5	2	01/10/2023 - 30/09/2028
108	SUPREME SURFACTANTS P LTD PLOT NO 213 HSIIDC, Barhi SONIPAT	Surfactants	Orange	0.1	2	01/04/2019, To - 31/03/2029

109	JAINSONS INTERNATIONAL PLOT NO 525, PHASE-II, HSIIDC BARHI, SONIPAT	CATLLE,TOASTER,COOKER,OTHER ELECTRICAL APPLIANCES	Red	3.5	2	05/09/2021 - 30/09/2026
110	SHOORBHOI EXPORTS PLOT NO 440 HSIIDC PHASE I BARHI SONIPAT	MS FABRICATED STEEL STRUCTURE SCREWS NUT BOLTS	Red	0.5	2	15/11/2021 - 30/09/2026
111	BAJRANG ENGINEERING WORKS plot no.296, hsiidc, phase-I, industrial estate, barhi, sonipat haryana	S.S Sheet	Red	1	2	18/11/2019 - 30/09/2024
112	BISHA DEVELOPERS PVT LTD PLOT NO 173 HSIIDC BARHI SONIPAT	Battery Plates and Batteries	Orange	1	2	08/02/2018 - 31/03/2027
113	Smart Enterprises Plot no 96, Phase-III, HSIIDC, Barhi, Sonipat	Ceiling fans Geysers	Red	2	2	01/10/2023 - 30/09/2028
114	SMART ENTERPRISES plot no 97 ph 3 sec 23 HSIIDC BARHI SONIPAT	Ceiling Fan	Red	2	2	12/02/2021 - 30/09/2025
115	Anju International Plot no 165 hsiidc ph iii barhi	knitted items knitted fabric	Orange	1	2	01/04/2024 - 31/03/2029
116	GOEL BROS. PLOT NO 73, PHASE I, HSIIDC BARHI, SONIPAT	DOOR AND WINDOW FITTINGS	Red	1	2	11/09/2021 - 30/09/2025
117	JAI MATA PLASTIC PLOT NO 453 HSIIDC PH I BARHI SONIPAT	WASHING OF PLASTIC WASTE CUTTING	Orange	1	2	22/11/2021 - 31/03/2026
118	SHREE KRISHNA BUTTONS PLOT NO 29 HSIIDC PHASE I BARHI SONIPAT	MANUFACTURING OF BUTTONS	Red	1	2	12/06/2022 - 30/09/2026
119	TANVI ENTERPRISES PLOT NO 293 HSIIDC PH I BARHI SONIPAT	PLASTIC GRANUELS	Orange	1	2	12/12/2022 - 31/03/2027
120	JAI HANUMAN LAMINATES PVT. LTD. PLOT NO 389 HSIIDC PH I BARHI SONIPAT	APPLE AND EGG TRAY	Red	2.5	2	29/01/2023 - 30/09/2027
121	ALPHA CHEMICALS AND INTERMEDIATE Plot No 169, Phase-III, HSIIDC Barhi, Sonipat	TRIAMCINOLONE ACETONIDE INTERMEDIATE METHYPREDNISOLONE INTERMEDIATE DEFLAZACORT INTERMEDIATE	Red	1	2	01/03/2023 - 30/09/2027
122	Smart Enterprises Plot No. 99, Phase-III, HSIIDC Barhi, Sonipat	GEYSER	Red	1	2	17/05/2023 - 30/09/2027
123	Novacare Appliances Pvt Ltd Plot no 6 Phase-III, HSIIDC Barhi, Sonipat	INDUCTION RICE COOKER GAS GEYSER GAS STOVE IRON MIXER KETTLE TOASTER ROOM HEATER IMMERSION WATER HEATER	Red	1	2	14/09/2023 - 30/09/2027
124	THETWAL ENERGY PVT LTD PLOT NO 109 PHASE 1 HSIIDC BARHI SONIPAT	Bio Diesel	Red	1.5	1.5	17.02.2021 - 30.09.2025
125	B.R. Specialities LLP Plot No.407,Barhi Textile Park,Phase-I,HSIIDC	TEXTILE AUXILIARIES	Red	4	1	01/10/2023 - 30/09/2028
126	PAXY CHEM 448 PHASE-1 HSIIDC INDUSTRIAL ESTATE BARHI	Clacium Sulphate	Red	1	1	01/10/2023 - 30/09/2028
127	RAJA INDUSTRIES PLOT NO 298 HSIIDC BARHI SONIPAT	Colour Dyes	Red	1	1	01/10/2023 - 30/09/2028
128	Super Texfab Pvt Ltd 206 HSIIDC Industrial Estate PH-I Barhi Sonipat	Printing of corrugated box, Jute bag	Orange	1	1	01/04/2021-31/03/2026

129	RUBY INDUSTRIES PLOT NO 54 HSIIDC BARHI SONIPAT HARYANA	Coronet sweet candy lollipop Jelly	Green	1.5	1	26/07/2023 - 31/12/2027
130	A.S BRAWNY METAL AND ALLOYS PVT. LTD. PLOT NO. 20 HSIIDC PHASE I BARHI SONIPAT	LEAD INGOTS	Red	1	0.5	14/06/2021 - 30/09/2025
131	Amogh pharmaceuticals pvt ltd PLOT NO 308 HSIIDC PH I BARHI	Ayurvedic syrup Ayurvedic tablets and capsules Ayurvedic Powder	Green	1	0.5	03/10/2019 - 02/10/2024
132	DEEPAK ENTERPRISES PLOT NO.262,HSIIDC,BARHI,DISTT.SONEPAT{HARYANA}	ELECROPLATING	Red	0.2	0.5	01/10/2021 - 30/09/2026
133	SINO INDIA TEXTILES PVT LTD PLOT NO 687 HSIIDC PHASE II BARHI SONIPAT	Fabric	Green	1	0.5	01/01/2023 - 31/12/2027
134	SWASTIK TOUGHENED GLASS LLP PLOT NO 413 PHASE 1 HSIIDC, Barhi SONEPAT	Toughned glass	Green	1	0.5	01/04/2024 - 31/12/2026
135	Rail Coach Naveenikaran Karkhana Sonipat Oo Chief Workshop Manager, Rail Coach Naveenikaran Karkhana Sonipat, HSIIDC, Phase-III, Barhi Industrial Area, Barhi, Distt.- Sonipat, Haryana.	Rehabilitation of LHB Coaches	Orange	35	0.3	01/04/2024 - 31/03/2025
136	DHARAMPAL ALLOYS PRIVATE LTD. PLOT NO 518 HSIIDC PH II HSIIDC BARHI SONIPAT	LEAD INGOTS	Red	1	0.2	07/03/2022 - 30/09/2026
137	CHANDNI INDUSTRIES PVT. LTD PLOT NO. 503, PHASE -II, BARHI, INDUSTRIAL ESTATE SONEPAT	Playing cards and printed sheets	Orange	0.4	0.2	01/04/2024 - 31/03/2026
138	A.S. Shoe Accessories Pvt. Ltd. PLOT NO 421 HSIIDC BARHI PHASE 1 BARHI INDUSTIAL AREA SONIPAT	POLYESTER POLYOL POLYESTER PREPOLYMER CATALYST	Orange	1.5	0	01/04/2024 - 31/03/2029
139	ADELA ELECTRICALS PVT. LTD. plot no 5 Phase-III, HSIIDC Barhi, Sonipat	Power cord WIRE HARNESS	Orange	7	0	13/01/2024 - 31/03/2028
140	BABA LALDASS FABRIC COATS PVT LTD PLOT NO 522 PHASE 2 HSIIDC BARHI SONIPAT	Cotton coated fabrics	Orange	1	0	01/04/2024 - 31/03/2029
141	Cargill India Pvt, Ltd. Plot No. 403-404 HSIIDC Barhi Sonipat	Cattle feed	Orange	2.5	0	01/04/2023 - 31/03/2028
142	CENTURY LABELS PVT LTD PLOT NO 14 HSIIDC BARHI SONEPAT	Label Weaving (weaving of yarn)	Green	1	0	22/03/2023 - 31/12/2027
143	COSMIC PETROCHEM PRIVATE LIMITED PLOT NO. 216, HSIIDC, BARHI	POLYTHYLENE WAX OTHER WAX	Orange	2	0	01/04/2016 - 31/03/2026
144	DB STEELS PVT LTD 408 PHASE 1 HSIIDC BARHI GANNAUR SONEPAT	Pure Lead	Red	1	0	01/10/2019-30/09/2024
145	GAYATRI POLYCOATS PLOT NO 528 HSIIDC BARHI SONEPAT	Cotton coated fabric	Orange	0.8	0	01/04/2024 - 31/03/2029
146	JAI BHARAT EXTRUSTION PLOT NO 154 155 PHASE I HSIIDC INDUSTRIAL ESTATE BARHI DISTT SONIPAT 131101	Aluminium Billet	Orange	2.5	0	23/01/2020 - 31/03/2025
147	K.R.FABRIC PVT.LTD. PLOT NO.539,HSIIDC,BARHI,PHASE-II,SONEPAT{Haryana}	Cotton coated fabric	Orange	0.5	0	01/04/2023 - 31/03/2025
148	KALI VAHAN RUBBER UDYOG PLOT NO 390 PHASE 1 HSIIDC BARHI SONIPAT	Rubber tubes	Orange	1.5	0	01/04/2023 - 31/03/2028

149	KAPIL ENTERPRISES PLOT NO. 118 SECTOR -23 PHASE -III BARHI INDUSTRIAL AREA SONIPAT	HEX BOLT ANCHOR BOLT STUD BOLT NUTS	Orange	0.5	0	01/04/2024 - 31/03/2029
150	KAVYA ENTERPRISES PLOT NO. 53 , PHASE-I , HSIIDC Barhi , DISTT. SONIPAT Haryana	Sheet	Green	1.5	0	01/01/2024 - 31/12/2029
151	KBS INDUSTRIES PVT. LTD. PLOT NO.418, HSIIDC, BARHI	Copper Wire	Orange	1.5	0	09/06/2021- 31/03/2026
152	M/S CORPORATE ALLIANCES PLOT NO. 379, HSIIDC, PHASE-I, BARHI, SONEPAT	BREAD	Orange	1	0	01/04/2016 - 31/03/2026
153	M/S MAHALUXMI RUBBER UDYOG PLOT NO.94,95 ,106, HSIIDC, PH-I, BARHI	AGRICULTURE TUBES AUTO TUBES	Orange	1.5	0	01/04/2022 - 31/03/2027
154	M/S R.V.S AGRO PRODUCTS PLOT NO. 221, HSIIDC, PH-1, BARHI	Particle Board	Orange	2	0	01/04/2018 - 31/03/2028
155	MANIKARAN METAL ALLOYS LLP PLOT NO 112 PHASE I HSIIDC BARHI SONIPAT	Lead Ingots	Red	0.7	0	11/11/2019 - 30/09/2024
156	MBS TEXTILE PVT.LTD PLOT NO. 535 HSIIDC PHASE-II BARHI SONEPAT Haryana	Cotton Coated Fbric	Orange	1	0	01/04/2022 - 31/03/2026
157	NAVAIR INTERNATIONAL PVT LTD Plot No 399, 424, Phase-I, HSIIDC Barhi, Sonipat	Door Frames	Green	2.5	0	01/04/2022 - 31/12/2026
158	NEW HARIOM POLYCOATS PLOT NO.497,PHASE-II,HSIIDC BARHI	COTTON COATED FABRIC REXINE	Orange	3	0	01/04/2020- 31/03/2025
159	Nirmal Trans Belts Pvt. Ltd (Old name as NIRMAL UDYOG) PLOT NO. 192, HSIIDC, BARHI	V BELT	Green	1	0	01/04/2022 - 31/03/2024
160	Prasha Chemicals Pvt. Ltd. Plot No. 364,HSIIDC,Barhi	SODIUM HYPOCHLORITE,	Orange	1	0	01.04.2021- 31.03.2026
161	PRIME POLYTEX PLOT NO 489 HSIIDC PH- 2 BARHI INDUSTIAL AREA SONIPAT	EVA SHEET FABRIC LAMINATION (SQ. MTR.)	Green	1.5	0	01/04/2024 - 31/12/2025
162	R A S PACKAGING PLOT NO 542 PHASE II HSIIDC INDUSTRIAL AREA BARHI SONIPAT	PLASTIC GARMENTS ACCESSORIES (Flexible Packaging material)	Orange	1	0	01/04/2024 - 31/03/2026
163	S.S ENTERPRISES PLOT NO 419 HSIIDC PHASE 1 BARHI SONIPAT	COMPOSIT SOLVENT MIX SOLVENT THINNER CHEMICAL	Orange	0.5	0	01/04/2018 - 31/03/2027
164	SAI POLY COATS PVT. LTD. PLOT NO.529, HSIIDC, BARHI, SONEPAT	cotton cated fabric	Orange	0.8	0	01/04/2023 - 31/03/2028
165	Shiv Shakti Enterprises Plot No 252 PH-1 HSIIDC, Barhi Sonepat	Non ferrous metal ingots	Red	1	0	01/10/2022 - 30/09/2027
166	SHREE KARANGAR TEXTILEPVT. LTD. PLOT NO.683, HSIIDC, PH-II, BARHI	Textile Coated Fabric Knitting fabric	Orange	2	0	18/12/2022 - 31/03/2027
167	Shri Durga Texcoat Pvt. Ltd. Plot No. 483 & 498, Phase-II, HSIIDC, Barhi, Distt. Sonepat	Cotton coated fabric	Orange	1.5	0	01/04/2022 - 31/03/2027
168	SHRI SAI INTERNATIONAL PLOT NO 40 BARHI INDUSTRIAL AREA SONEPAT HARYANA	Polyster Resin	Orange	1	0	01/04/2023 - 31/03/2033
169	SIDHI VINAYAK FOOTCARE PVT LTD PLOT NO 547 PHASE 2 HSIIDC, Barhi SONEPAT	Cotton coated fabric	Orange	1	0	01/04/2024 - 31/03/2029
170	SYNERGY ADDITIVES PLOT NO31 HSIIDC, Barhi SONEPAT	PVC ADDITIVES FORMULATION,	Orange	0.5	0	01/04/2022 - 31/03/2032

171	TANDON SOLVENTS AND CHEMICALS PLOT NO 43 44 45 PHASE 1 HSIIDC, Barhi SONIPAT	Thinner mix solvent	Orange	0.5	0	04/11/2023 - 31/03/2028
172	TR Foundry Private Limited Plot no. 648, Phase-II, Industrial Estate Barhi	Casting of Iron	Orange	3	0	01/04/2022 - 31/03/2027
173	V.S.APPARELL PLOT NO.41,BARHI INDUSTRIAL AREA,DISTT.SONEPAT	SULPHUR BLACK SODIUM THIOSULPHATE	Red	0.5	0	01/10/2020 - 30/09/2025
174	VSN METAL WORKS PLOT NO 525 F HSIIDC PHASE 2 BARHI SONIPAT	Brass Rod	Orange	1	0	01/04/2024 - 31/03/2029
175	Wyan Industries Pvt. Ltd. (Formerly known as M.R.A Metal Pvt. Ltd.) Plot No. 1713-1714, 1716 Industrial Estate Rai, Phase-V, HSIIDC,	AUTO CLUTCH PARTS	Orange	2.5	0	1.4.2021 - 31.3.2026
176	BMDC ENTERPRISES PVT LTD PLOT NO 439, PHASE-I, HSIIDC BARHI, SONIPAT	Zinc Ingots	Orange	1	0	11/02/2019 - 31/03/2028
177	JINDAL ZINC PLOT NO 566 PHASE 2 HSIIDC BARHI SONIPAT HARYANA	ZINC INGOTS	Red	0.5	0	02/06/2020 - 30/09/2024
178	NUTEX INDUSTRIES PLOT NO.617 , HSIIDC, PHASE II, BARHI SONIPAT	Sulphur black hypo	Red	1	0	14/09/2020 - 30/09/2024
179	KETAN RIBBON PVT. LTD. PLOT NO. 492, HSIIDC, BARHI, PHASE-II	COTTON COATED FABRIC	Orange	1.4	0	01/04/2022 - 31/03/2027
180	TORCO OILS PRIVATE LIMITED PLOT NO. 454 HSIIDC PHASE -1, INDUSTRIAL ESTATE BARHI, DISTT. SONEPAT	Lube Oil Grease	Green	0.5	0	01/01/2024 - 31/12/2027
181	DAIWIK APPLIANCES CO. PLOT NO 323, PHASE-I, HSIIDC BARHI, SONIPAT, HARYANA	BRASS PARTS ITEM	Orange	1.5	0	12/11/2020 - 31/03/2030
182	CENTURION POWER CABLES PVT LTD Plot No 526, Phase-II, HSIIDC Barhi, Distt. Sonipat	ELECTRIC CABLE	Orange	0.5	0	12/11/2020 - 31/03/2025
183	TRANSPARENT METALS AND PIGMENTS PVT LTD PLOT NO 659 HSIIDC PHASE II Barhi SONIPAT	RED OXIDE GRAY OXIDE	Red	1	0	05/11/2020 - 30/09/2025
184	Aks impex Plot no 300, barhi industrial area phase 1 HSIIDC sonipat haryana	Katha	Orange	1	0	09/12/2020 - 31/03/2025
185	FUTURE POLYCOATS PVT LTD PLOTNO 42 44 PHASE 3 HSIIDC BARHI SONIPAT	REXINE FABRIC CIRCULAR KNITTING FABRIC WARP KNITTING	Orange	2	0	10/12/2020 - 31/03/2025
186	NVS INDUSTRIES Plot No 171, Phase-1, HSIIDC Barhi, Sonipat	Stainless steel items	Orange	0.5	0	30/12/2020 - 31/03/2030
187	NAVAIR INTERNATIONAL PVT LTD Plot NO 468, Phase-I, HSIIDC Barhi, Sonipat	Fire rated doors and frames	Orange	3	0	23/01/2021 - 31/03/2030
188	SURYA INDUSTRIES.. PLOT NO 427 D PHASE 1 HSIIDC BARHI SONIPAT	Tubes	Green	2	0	18/03/2021- 31/12/2025
189	RADHEY RADHEY COMPOUNDS PLOT NO 373 BARHI SONIPAT	Tyre and Tube patch cycle sheet	Green	1.5	0	30/03/2022 - 31/12/2026
190	CHEMZONE POLYRESINS PLOT NO 89 HSIIDC PH III BARHI SONIPAT	SYNTHETIC RESIN	Orange	1	0	26/04/2022 - 31/03/2026
191	A S FOOTKRAFT PLOT NO 16 HSIIDC BARHI PHASE 1 SONIPAT	EVA SHEETS	Green	1.2	0	03/05/2022 - 31/12/2026

192	V.B HOLDING PVT LTD PLOT NO 219 HSIIDC BARHI SONIPAT	Lead, Selenium, Tin, Calcium Antimony Alloy	Red	1	0	07/05/2022 - 30/09/2026
193	SHIV SHAKTI PLASTIC INDUSTRIES Plot no 506 HSIIDC Barhi Ganaur Sonipat Haryana	EVA SHEET Fabric Lamination	Green	1.5	0	26/06/2022 - 31/12/2026
194	RAINWAX POLYMER PVT LTD PLOT NO. 678 HSIIDC PHASE II BARHI SONEPAT	POLYETHYLENE WAX OTHER WAX	Orange	1	0	12/08/2022 - 31/03/2027
195	BARNALA AUXI COLOUR LLP PLOT NO 370, PHASE I, HSIIDC BARHI, SONIPAT	Dry Dyes	Red	1	0	01/10/2023 - 30/09/2028
196	BDR HABERDASHERY INDIA PVT LTD PLOT NO 62 PHASE I HSIIDC INDUSTRIAL ESTATE BARHI DISTT SONEPAT	Tape Measures Hooks SS Foils	Orange	1	0	01/04/2022 - 31/03/2032
197	Dream Home Tex Pvt Ltd Plot No 668, Phase-II, HSIIDC Barhi, Sonipat	THICKNER, SOFTNER, SILICON OIL	Orange	0.5	0	26/02/2020 - 31/03/2029
198	EUREKA SPECIALITY LABS PLOT NO 139 PHASE I INDUSTRIAL ESTATE BARHI HSIIDC GANUAR SONIPAT	Soap and detergent	Orange	2	0	01/04/2024 - 31/03/2027
199	FERRITE METAL SOLUTIONS PVT LTD Plot No-166, Phase-1,Industrial Estate, Barhi, Sonipat, Haryana	Welding Rod	Orange	2	0	01/04/2023 - 31/03/2027
200	K.K. PAPER PRODUCTS PLOT NO 664, PHASE-II, HSIIDC BARHI, SONIPAT	PAPER BAG PAPER NAPKIN PAPER PLATE PAPER CUP PRINTED WRAPPING PAPER	Orange	2.5	0	01/04/2024 - 31/03/2025
201	M C A INTERNATIONAL PLOT NO. 18, HSIIDC, BARHI	Mineral chemical	Green	2	0	07/05/2018 - 31/12/2027
202	M/S A ONE FIBERS PVT. LTD. PLOT NO. 410, PHASE-I, BARHI, SONEPAT	SCORING PAD	Orange	1	0	01/04/2023 - 31/03/2028
203	MVS INDUSTRIES Ground Floor, Plot No-460, Phase-I, Indl. Estate, Barhi, Sonepat	LPG Hose Pipe	Green	1.5	0	13/01/2019 - 31/12/2024
204	NOE TECH INTERnaTIOnaL PVT LTD PLOT NO 411 BARHI INDUSTRIAL ESTATE PHASE I GT ROAD SONEPAT	DAIRY EQUIPMENTS,	Orange	1.5	0	01/04/2016 - 31/03/2026
205	OM TRADING CO PLOT NO 20 HSIIDC BARHI	JUTE PRINTED BAGS	Orange	1	0	01/04/2016 - 31/03/2026
206	ROCKFORD ABRASIVES PLOT NO 363, PHASE-I, HSIIDC, Barhi, SONIPAT,Haryana	Polish Compounds	Green	1	0	14/01/2020 - 31/03/2029
207	SANT INDUSTRIAL CONTROLS PVT LTD PLOT NO 318 IE BARHI	Strainer Valves	Orange	1	0	01/04/2018 - 31/03/2028
208	SANT INDUSTRIES PLOT NO 317 IE BARHI	valves Strainers	Orange	1	0	01/04/2018 - 31/03/2028
209	Shatabdi Exports Pvt. Ltd. 469-473 HSIIDC, Barhi Sonipat	Mats and Rugs	Green	8	0	01/01/2022 - 31/12/2025
210	SHISHTI METALS PRIVATE LIMITED PLOT NO 474 PHASE I BARHI SONEPAT	TELECOM TOWERS SHELTERS AND OTHER FABRICATION WORK	Orange	2	0	01/04/2023 - 31/03/2028
211	YASH INTERNATIONAL PLOT NO 92 HSIIDC PHASE 1 BARHI SONIPAT	CALCIUM FILLER/FILLER MASTER BATCH	Green	1	0	01/01/2023 - 31/12/2032
212	A V Wood Coatings Pvt Ltd Plot No.226, PhaseI-I, HSIIDC Barhi	Thinner Lacquer	Orange	1	0	01/04/2024 - 31/03/2034
213	PAP COAT INDIA PVT LTD PLOT NO 246 HSIIDC PHASE I BARHI SONEPAT	Binder Printed kraft paper	Orange	0.5	0	01/04/2018 - 31/03/2028

214	Metcycle India PLOT NO 409, PHASE-I, HSIIDC BARHI, SONIPAT	FERROUS AND NON FERROUS METAL PRODUCTS	Orange	1	0	11/10/2020 - 31/03/2025
215	Green Climate Solution Pvt Ltd PLOT NO 199, PHASE-I, HSIIDC BARHI, SONIPAT	OPPER AND ALUMINIUM FROM WIRE PVC FROM WIRE ALUMINIUM AND COPPER INGOTS	Orange	1	0	10/12/2020 - 31/03/2025
216	VITAL HOME CARE PLOT NO 363, GROUND FLOOR, PHASE-I, HSIIDC BARHI, SONIPAT,HARYANA	Detergent and Detergent soap	Green	0.5	0	23/01/2021 - 31/12/2025
217	TASMAY UNICOATS PVT. LTD. PLOT NO 100 PHASE I HSIIDC INDUSTRIAL AREA BARHI DISTT SONIPAT	Latex Compounds	Green	0.5	0	05/03/2021- 31/12/2025
218	BALAJI PLASTIC INDUSTRIES PLOT NO 225, PHASE-I, HSIIDC BARHI, SONIPAT	GRANULE S (LDPE)	Orange	1.5	0	06/09/2021 - 31/03/2026
219	INDUSTRIAL ENGINEERING CORPORATION PLOT NO 17 HSIIDC PHASE I BARHI SONIPAT	S.S HOUSEHOLD ELECTRICAL ITEMS AND UTENSILS	Orange	2	0	15/01/2022 - 31/03/2026
220	KARONA AEROSOL LLP PLOT NO 525-A, PHASE-II, HSIIDC BARHI, SONIPAT	Deodrant Spray Perfume and Shaving Foam	Orange	2.5	0	18/02/2022 - 31/03/2026
221	AKSHAR MOLECULES INC. PLOT NO 427A, PHASE-I, HSIIDC BARHI, SONIPAT	CAPSULES TABLETS	Orange	1.5	0	28/02/2022 - 31/03/2031
222	AKSHAR MOLECULES Plot no. 268, Phase-I, HSIIDC Barhi, Sonipat	CAPSULES	Orange	2.2	0	29/03/2022 - 31/03/2026
223	AGROPLAST 120, BARHI INDUSTRIAL AREA PHASE-I, SONEPAT HARYANA-131101	PLASTIC PIPE FITTINGS	Orange	0.5	0	15/04/2022 - 31/12/2026
224	LAXMI TEXTILE PLOT NO 191 PHASE 1 HSIIDC BARHI SONIPAT	Knitting fabric	Green	1	0	31/05/2022 - 30/05/2027
225	RITUAL DRUGS PVT LTD PLOT NO 271-272, PHASE-I, HSIIDC BARHI, SONIPAT	CAPSULES TABLETS OINTMENT CREAM/SHAMPOO	Orange	3.5	0	20/06/2022 - 31/03/2032
226	PAXTON OVERSEAS PVT. LTD PLOT NO. 375, PHASE-I, HSIIDC, INDUSTRIAL AREA BARHI, SONEPAT, HARYANA	Knitting fabric	Green	1	0	09/07/2022 - 31/12/2029
227	SHRI VINAYAK DESIGNS PLOT NO. 220, PHASE-1, HSIIDC BARHI, SONIPAT HR. 131101	Knitted fabric	Green	1	0	31/07/2022 - 31/12/2026
228	B R INC. Plot 4 HSIIDC Barhi Sonipat	Burger boxes Compostable paper cups/bowls/buckets/lids Compostable paper straw paper cartons/food packaging products Paper bags	Orange	3	0	20/05/2024 - 31/03/2030
229	D.K POWER ENGINEERS PVT.LTD PLOT NO. 524 HSIIDC INDUSTRIAL AREA BARHI SONEPAT	NON WOVEN FABRIC NEEDLE PUNCH ALUMINIUM FOIL POLYESTER STAPLE FIBER	Green	1	0	27/09/2022 - 31/12/2026
230	RUBBER RECLAIM UDYOG. PLOT no. 302 HSIIDC BARHI SONIPAT	MESH CRUMB RUBBER	Orange	1	0	18/10/2022 - 31/03/2027

231	PAXTON OVERSEAS PVT. LTD.... PLOT NO. 511, PHASE-2, HSIIDC, INDUSTRIAL AREA BARHI, SONEPAT, HARYANA	Knitting fabric	Green	1	0	10/11/2022 - 31/12/2026
232	RAVI POLYMERS PLOT NO 461 PH I HSIIDC BARHI SONIPAT	PVC PIPE AND OTHER PVC PRODUCTS	GREEN	2	0	26/11/2022 - 31/12/2026
233	SHRI BALAJI ENTERPRISES PLOT NO. 546 HSIIDC PH II BARHI SONIPAT	RECYCLED PLASTIC GRANUELS	Orange	1.5	0	22/01/2023 - 31/03/2027
234	PARAMOUNT FOODS PLOT NO. 301, HSIIDC, PHASE-I, BARHI SONIPAT	WHITE BREAD MULTIGRAIN BREAD BROWN BREAD PAV BREAD KULCHA PIZZA BASE BURGER BUN ATTA BREAD	Green	1.5	0	18/01/2023 - 31/12/2027
235	SHRI BALAJI ENTERPRISES 432, PHASE-1, HSIIDC INDUSTRIAL ESTATE, BARHI, Baraut, Ganaur, Sonipat, Haryana, 131101	PVC COMPOUND	Orange	0.5	0	18/01/2023 - 31/03/2025
236	SHRI RAM FASHION PLOT NO 668 PHASE 2 HSIIDC INDUSTRIAL ESTATE BARHI SONEPAT HARYANA	Knitting fabric	Green	1	0	18/01/2023 - 31/12/2027
237	PRIME GEO PLAST PLOT NO 1 GROUND FLOOR MEZZAINE FOOR SECTOR 18 PHASE III BARHI SONIPAT	PLASTIC DRAINAGE BOARD PLASTIC MEMBRANE SHEET PLASTIC GARDEN NET	Green	1.5	0	20/02/2023 - 31/12/2027
238	POWER WOOD COATINGS LLP PLOT NO 26 PHASE 1 HSIIDC BARHI SONIPAT	WOOD COATINGS	Orange	1	0	24/04/2023 - 31/03/2028
239	HAITEK INDUSTRIAL FABRICS PVT LTD PLOT NO 17 PH III SEC 18 HSIIDC BARHI DISTT SONEPAT HARYANA	INDUSTRIAL FABRIC	Green	7	0	20/06/2023 - 31/12/2027
240	DELITE COLLECTIONS PVT LTD Plot No 209, HSIIDC, Ph I, Barhi, Sonepat	COTTON COATED TEXTILE FABRICS	Orange	4	0	14/07/2023 - 31/03/2032
241	MVS INDUSTRIES PLOT NO 562 PH II HSIIDC INDUSTRIAL AREA BARIH SONIPAT HARYANA	LPG HOSE PIPE AND ALL KINDS OF RUBBER HOSE REEL	Green	2.5	0	21/08/2023 - 31/12/2027
242	Ambey Polymers Plot no 521H HSIIDC Barhi Sonipat	Poly Propylene Yarn	Orange	2	0	12/10/2023 - 31/03/2028
243	NIEMLA PLOT NO 464-465 PH 1 HSIIDC INDUSTRIAL AREA BARHI DISTT SONIPAT	FABRIC	Green	4	0	14/11/2023 - 31/12/2028
244	SURYA LABORATORIES PVT. LTD PLOT NO 521 D HSIIDC PH II BARHI SONIPAT	BABY AND ADULT DIAPERS	GREEN	2	0	19/12/2023 - 31/12/2027
245	NATRAJ POLYCHEM PVT LTD plot no 18 sector 22 ph III Hsiidc barhi distt. sonipat	PLASTIC PIPE / PLASTIC DANA	Orange	2	0	26/12/2023 - 31/03/2028
246	PAPCOAT INDIA PRIVATE LIMITED PLOT NO 248 HSIIDC PH I BARHI SONIPAT	AMMONIUM ZIRCONIUM CARBONATE	Orange	1	0	28/12/2023 - 31/03/2033
247	NATRAJ HOME FURNISHINGS PRIVATE LIMITED PLOT NO 676, PHASE-II, HSIIDC BARHI, SONIPAT	CUSHIONS	GREEN	3	0	29/12/2023 - 31/12/2036
248	VARDHMAN PACK SOLUTIONS Plot no 160, Phase-I, HSIIDC Barhi, Sonipat, Haryana	FLEXIBLE PACKING POLYBAG (VIRGIN) PLASTIC GRANULES (REPROCESSED)	Orange	0.5	0	01/01/2024 - 31/03/2033

249	HARSHA INDUSTRIES PLOT NO 522B PH II HSIIDC BARHI	POWER CORD	Orange	2.5	0	09/01/2024 - 31/03/2028
250	LEADX Plot no 405 HSIIDC PHASE I BARHI SONIPAT	RED OXIDE GREY OXIDE PURE LEAD AND ALLOY LEAD INGOTS	Red	1.5	0	26/02/2024 - 30/09/2028
251	SEASONS TEXTILES LIMITED Plot No 466, Phase-I, HSIIDC Industrial Estate, Barhi, Sonipat	Furnishing Fabric	Green	4	0	11/03/2024 - 31/12/2028
252	PARIDHI INDUSTRIES PLOT NO 23 HSIIDC BARHI SONIPAT	WATER BASE EMULSION/ PRIMER	Orange	2	0	15/05/2024 - 31/03/2026
253	SARTHAK DISPLAY PVT LTD PLOT NO 156 PHASE 1 BARHI SONIPAT	RACKS	Orange	1.5	0	28/05/2024 - 31/03/2029

ANNEXURE – IV: Details of Operational textile & Other sectors industries

Details of textile industries

Comprehensive details of textile industries w.r.t. production, specific water consumption, specific effluent generation & discharge, performance assessment of PETPs of member industries, and Compliance status of industries w.r.t. discharge norms/suspected dilution are mentioned in table 1, 2 & 3 below:

Table 1: Details of Production, Specific water consumption, Specific effluent generation and discharge in textile units

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
Details of Textile unit engaged in manufacturing of Dyed Yarn										
A. **Synthetic Yarn-Polyester/Acrylic**										
1.	M/s Brothers Stretch Pvt. Ltd.	Dyeing, printing, finishing	7	1.22	43.85	41.69	41.64	4.50	2.95	• Specific fresh water consumption is too much higher against the std. for specific quality (approx. 25 KL/MT) indicating that either fresh water consumption logbook is not properly/correctly maintained or actual production is higher than the reported production
2.	M/s Yashas Industries	Dyeing	0.8	0.42*	25.36	18.55	16.88	3.44	1.49	• Not maintaining production logbook
3.	M/s Shree Gopal Enterprises	Pre-treatment and dyeing	0.495	0.42	11.23	No flowmeter at inlet	8.76	1.84	0.223	• No flow meter available at PETP inlet for quantification of effluent generation
4.	M/s Savi Texfab Pvt. Ltd.	Pre-treatment	Readymade garment	1.23	32.46	9.43	10.18	10.27	2.14	• Obtained consent for garment washing but found engaged in mfg. of dyed yarn which is violation of consent condition

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		, Dyeing, Washing	washing-3200 Nos./day							• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is only 29% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing unrecorded untreated effluent
5.	M/s Vrishabh Industries	Dyeing & Washing	0.6	0.54	32.96	14.31	14.16	No record	4.36	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is only 43% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing unrecorded untreated effluent
6.	M/s Manohar Filaments Pvt. Ltd.	Dyeing	1.5	1.20*	126.50	Logbook not maintained	99.25	3.44	18	• Logbook not maintained for effluent generation (PETP inlet) • Specific fresh water consumption is too much higher against the std. for specific quality (Approx. 25 KL/MT) indicating that either fresh water consumption logbook is not properly/correctly maintained or actual production is higher than the reported production

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
7.	M/s Oasis Texfab India	Pre-treatment, Dyeing, Finishing, Garment washing	2.5	1.46	8.87	3.34	4.46	No record	0.84	• Specific fresh water consumption is too much lower against the std. for specific quality (Approx. 25 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 38% of fresh water consumption indicating poor maintenance of logbook, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing unrecorded untreated effluent
8.	M/s Vibrant Yarns	Dyeing	1.5	0.075	58.8 (HSIIDC supply)	31.86	ZLD (35.44 recycled)	1.5	1.5	• Specific fresh water consumption is too much higher against the std. for specific quality (Approx. 25 KL/MT)
9.	M/s Krishna Process (old name Oriental Rug Co)	Bleaching and Yarn dyeing	1	1	53.62	31.67*	30.72	14	Sample not collected, hence cannot be estimated	• Specific fresh water consumption is too much higher against the std. for specific quality (Approx. 25 KL/MT) • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 59% of fresh water consumption, which indicates that fresh water consumption/effluent discharge logbook is not properly/correctly maintained

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
10.	M/s Smitz Polytex	Pre-treatment & dyeing	25	NA	NA	NA	NA	No record	Cannot be estimated	• Not maintaining data/logbook of Production, fresh water consumption, effluent generation & effluent discharge
11.	M/s Budh Singh And Brothers	Dyeing	1	0.96	50 (estimated from consent)	NA	NA	No record	Cannot be estimated	• Not maintaining data/logbook of Production, fresh water consumption, effluent generation & effluent discharge.
12.	M/s Euro Threads (P) Ltd.	Dyeing	05	2	16	13.6	13.19	No record	6.25	• Specific fresh water consumption is too much lower against the std. for specific quality (Approx. 25 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained
13.	M/s Vinayak Dyeing House	Dyeing, washing, finishing	0.75	0.4	6	5.1* (No flowmeter installed)	4.947*	0.8	1.15	• Specific fresh water consumption is too much lower against the std. for specific quality (Approx. 25 KL/MT), indicating that fresh water consumption logbook is not properly/correctly maintained • No flow meter available at PETP inlet for quantification of effluent generation
B. Semi Synthetic Yarn-Viscose										
14.	M/s Generous Textiles Pvt. Ltd.	Pre-treatment and dyeing	0.5	0.37	34.58	19.78	23.12	7.48	11.84	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 57% of fresh water consumptions, and also the discharge value is higher than effluent generation, which indicates that fresh water consumption/effluent

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
										generation/effluent discharge logbook is not properly/correctly maintained
15.	M/s Komal textiles	Desizing, Scouring, Dyeing	0.3	0.15	20	17	16.47	No record	3.69	• Specific fresh water consumption is quite lower against the std. for specific quality (Approx. 25 KL/MT), indicating that fresh water consumption logbook is not properly/correctly maintained
C. Natural Yarn-Cotton										
16.	M/s Kanodia Intercontinental Pvt. Ltd.	Dyeing	0.2	4.05	34.78	17.66	15.6	66	Cannot be estimated	• Actual production is higher than consented production value • Specific fresh water consumption is much lower against the std. for specific quality (Approx. 50 KL/MT) • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 51% of fresh water consumptions, which indicates that fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained
17.	M/s GEE AAR Thread Pvt. Ltd.	Dyeing & Washing	0.495	0.4	146.25	123.04	120.64	No record	4.81	• Specific fresh water consumption is too much higher against the std. for specific quality (Approx. 50 KL/MT), indicating that either fresh water consumption logbook is not

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
										properly/correctly maintained or actual production is higher than the reported production • Accordingly, specific effluent generation and specific effluent discharge are also too much higher indicating poor record keeping
18.	M/s Kuchal Fashions Pvt. Ltd.	Desizing, Washing, Dyeing, Softening	0.1	0.023	169.98	144.46	140.14	0.74	2.94	• Specific fresh water consumption is too much higher against the std. for specific quality (Approx. 50 KL/MT), indicating that either fresh water consumption logbook is not properly/correctly maintained or actual production is higher than the reported production
19.	M/s Sanjeev Enterprises	Dyeing	0.6	0.25	34.8	51.6	50.4	4.6	Cannot be estimated	• Effluent generation & discharge is higher than fresh water consumption, indicating that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or production is higher than the reported value
20.	M/s Viscot Industries	Pre-treatment & dyeing	0.6	0.41	26.53	26.48	25.68	7.30	3.80	• Specific fresh water consumption is too much lower against the std. for specific quality (Approx. 50 KL/MT), indicating that fresh water consumption logbook is not properly/correctly maintained
D. Natural & Synthetic Yarn -Cotton & Polyester										

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
21.	M/s Tabi Creations Pvt. Ltd.	Pre-treatment, Dyeing, Yarn washing	4	2.7	45.98	27.98	26.81	5.23	8.14	• Specific fresh water consumption is too much lower against std. for specific quality (80-85 KL/MT) & specific effluent generation is also very low indicating that fresh water consumption/effluent generation logbook is not properly/correctly maintained
22.	M/s Shree Sidhi Vinayak Texcolors Pvt. Ltd.	Bleaching, Dyeing and washing	6	5.5	63.02	56.51	52.51 (2.9 recycled)	71.18	51.91	-
23.	M/s Vardhman Creation Pvt. Ltd.	Weaving, Bleaching, Dyeing, and washing	2	2.07	75.12	67.93	63.5	3	10.09	• Sludge record is not maintained properly
24.	M/s Kohinoor Ribbon Factory Pvt. ltd (Old name K R F Limited)	Dyeing & printing	Poly Bag & Printing-0.3 MT/d; Dyed Yarn, Sewing Thread & Woven Tapes- 1	Dyed yarn-1.4 MT/d	16.21	9.71	9.5	No record	1.32	• Specific fresh water consumption is too much lower against std. for specific quality (80-85 KL/MT) & specific effluent generation is also very low indicating that fresh water consumption/effluent generation logbook is not properly/correctly maintained

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
			MT/d; Tape Dyed- 0.1 MT/d; Tape Printing- 0.02 MT/d							
E. Blend Yarn- Viscose + Polyester + Cotton										
25.	M/s Jyoti Dhaga Udyog Pvt. Ltd.	Pre-treatment and dyeing	Viscose Polyster & cotton yarn-4 MT/d; Art silk yarn-1.4 MT/d	1.53	48.1	46.35	42.85	9.38	6.139	• Specific fresh water consumption is lower against std. for specific quality (65-70 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained
Details of Textile unit engaged in manufacturing of Dyed Fabric										
A. Synthetic Fabric-Polyester/Acrylic										
26.	M/s Such Exports Pvt. Ltd.	Dyeing, washing, finishing	4	3.787	24.88	23.56	24.58	27.58	7.80	-
27.	M/s Twenty First Century Pvt. Ltd.	Pre-treatment (Bleachin	5500 sq/meter (0.398 MT/d)	5.10*	39.52	42.73	43.38	No record	56.69	• Effluent discharge is higher than fresh water consumption & effluent generation, indicating that fresh water consumption/effluent

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		g) and dyeing								generation/effluent discharge logbook is not properly/correctly maintained • Actual production is much higher than consented production
28.	M/s Vihan Textile Pvt. Ltd.	Pre-treatment, dyeing	5	4.6	13.72	13.52	13.26	42.80	11.58	• Specific fresh water consumption is much lower against std. for specific quality (25 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained
29.	M/s Super Dyeing	Dyeing, Garment washing	5000 No./day	2.16	14.95* (no flowmeter at HSIIDC supply line)	6.38	11.35	10	0.51	• Specific fresh water consumption is much lower against std. for specific quality (25 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is @ 43 % of fresh water consumptions, which indicates that effluent generation/effluent discharge logbook is not properly/correctly maintained
30.	M/s Fine Dyeing Pvt. Ltd.	Pre-treatment and dyeing	5000 no./day	4.923	12.13	8.16	10.87	14.47	5.22	• Specific fresh water consumption is very low against std. for specific quality (25-30 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Discharge value higher than effluent generation indicates poor record keeping

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
31.	M/s Shivalik Processor	Pre-treatment and dyeing	Dying of fabric(m^2)-8000 cases /day	4.2	Actual data not provided (Estimated – 33 KL/MT)	5.81	41.82	18.06	2.36	• Not maintaining data/logbook of fresh water consumption • Actual Effluent generation value is quite low w.r.t reported production & specific effluent discharge, which indicates that effluent generation/effluent discharge logbook is not properly/correctly maintained
32.	M/s Abycons Textiles Pvt. Ltd.	Dyeing, Printing, Finishing	2.8	2.03	31.97	17.84	17.49	15.18	8.04	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 56% of fresh water consumptions, which indicates that fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained
33.	M/s Global Enterprises	Dyeing, Finishing	Yarn dyeing- 3 MT/d, Polyester dyeing – 1 MT/d	3.63	11.8	8.63	8.46	31.32	15.02	• Specific fresh water consumption is very low against std. for specific quality (25-30 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Accordingly, specific effluent generation is also quite lower
34.	M/s Abycons Woolens Pvt. Ltd.	Pre-treatment, Dyeing, Finishing,	40,000 nos./day	0.976	80.51	68.43*	36.68	23.21	36.78	• Not maintaining data/logbook for effluent generation as no flow meter installed • Specific fresh water consumption is very high against std. for specific quality (25-30 KL/MT) indicating that either fresh water consumption

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		Printing, Washing								logbook is not properly/correctly maintained or actual production is higher than reported production • Effluent discharge is very low against fresh water consumption (@ 45 %), indicating that either fresh water consumption/effluent discharge logbook is not properly/correctly maintained or unit is bypassing unrecorded untreated effluent
35.	M/s Bansal Processing House	Dyeing, Washing	25000 sq. meter/day	1.87	21.68	18.3	19.15	21.42	11.72	• Discharge value higher than effluent generation indicates poor record keeping • Sludge disposal record not maintained properly
36.	M/s Sri Ram Cottgins Pvt. Ltd.	Pre-treatment, Dyeing and Finishing	8	7	13.87	11.78* (No flowmeter at inlet)	8.75	No record	5.66	• No flow meter available at PETP inlet for quantification of effluent generation • Specific fresh water consumption is low against std. for specific quality (25-30 KL/MT) indicating that either fresh water consumption logbook is not properly/correctly maintained or actual production is higher than reported production
37.	M/s Smitz Marketing	Dyeing	163.2	0.544	28.47	25.42	25.44	22	Inlet sample not collected, hence	-

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
									cannot calculated	
38.	M/s Siddhi Vinayak Apparels Pvt. Ltd.	Dyeing and washing	20,000 nos./day & 50,000 MT/d (Production & raw material quantity not properly mentioned)	15.3	5.42 (Estimated from consent)	NA	NA	No record	Sample not collected, hence cannot be calculated	• Not maintaining data/logbook of fresh water consumption, effluent generation & effluent discharge
39.	M/s Rexolene India Manufacturing Pvt. Ltd.	Pre-treatment, Dyeing, Finishing	14	11.77	2.94	1.36	1.32	11.98	Cannot be estimated as unit was bypassing PETP	• Specific fresh water consumption is too lower against std. for specific quality (25-30 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Similarly, effluent generation/discharge are also very low, indicating poor record keeping of effluent generation/discharge
40.	M/s PP Texofab Pvt. Ltd.	Weaving, Dyeing, Finishing	6	1.54	68.63	74.94	69.29	2.73	15.75	• Specific effluent generation is higher than specific fresh water consumption, indicating that either fresh water consumption/effluent generation/effluent discharge logbook is not properly maintained or actual production is higher than the reported production

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
										• Sludge disposal record not maintained properly
41.	M/s Sino India Textiles Pvt. Ltd.	Washing, Desizing, Printing	100000 mtr/day	22.67	18.63	14.41	13.98	20	38.38	• Specific fresh water consumption is quite low against std. for specific quality (25-30 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained
42.	M/s Anand knit	Pre-treatment, Dyeing, Washing, Finishing	6	3	17.33	12.99	12.60	34	33	• Specific fresh water consumption is quite low against std. for specific quality (25-30 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained
B. Natural Fabric-Cotton/Hosiery										
43.	M/s Ram Kishan and Co.	Dyeing, Printing, Finishing, Garment washing	2.50	1.8	34.95	28.45	27.88	No record	11.82	• Specific fresh water consumption is too lower against std. for specific quality (60-70 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Similarly, effluent generation/discharge are also very low, indicating poor record keeping of effluent generation/discharge
44.	M/s Madni Textile Mills Pvt Ltd	Pre-treatment and dyeing	Dying Printing of fabric - 5 MT/d	1.2	56.14	21.15	20.55	83.89	17.86	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 38% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
										maintained or unit is bypassing untreated effluent
45.	M/s Dhruv Globals Ltd.	Pre-treatment, Dyeing, Washing, Finishing	8	9.06	64.5	61	60.7	98.87	219.44	• Actual production is higher than consented production • Sludge disposal record not maintained properly
46.	M/s Natraj Home Furnishing Pvt. Ltd.	Dyed home furnishing items	3.2	0.306	144.86	90.46	103.51	24.05	15.313	• Very high specific fresh water consumption against std. for specific quality (60-70 KL/MT) • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 62% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
47.	M/s Shree Jee Fabrics	Dyeing, Finishing, Garment washing	8	1.97	56.36	58.5	47.88	No record	21.62	• Effluent generation is more than freshwater consumption which indicates poor record keeping for freshwater consumption/effluent generation
48.	M/s Eurospa Terry Towel Pvt. Ltd.	Bleaching, dyeing, printing	1.5	1	43.33	36.83*	31.47	6.57	3.52	• Not maintaining data/logbook of effluent generation

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		and scouring								
49.	M/s Girja Dyeing	Pre-treatment & dyeing	1	0.97	50.41	26.4	24.3	No record	7.59	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 52% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
50.	M/s Rajasthan Kniting Mills	Pre-treatment , dyeing & finishing	Washing of fabric-3 MT/d; Dyeing of fabric-3 MT/d	1.34	43.2	28.5	27.1	3.5	8.76	• Specific fresh water consumption is lower against std. for specific quality (60-70 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 66% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
51.	M/s Babbar Hosiery	Dyeing	2.625	1.3	125.6	50.8	48.9	11	36.45	• Specific fresh water consumption is too much higher against std. for specific quality (60-70 KL/MT) indicating that either fresh water

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
										consumption logbook is not properly/correctly maintained or actual production is higher than the reported production • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is only 40% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
52.	M/s M.K Dyeing	Pre-treatment & dyeing	Not mentioned	1.1	54.28	31.9	30.6	9.4	Could not be estimated	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 59% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
53.	M/s Rakesh Textile	Desizing, Bleaching, Washing, Dyeing	0.3	0.243	74	62.9	61	1.48	4.64	• Sludge disposal record not maintained properly
C. Blend Fabric-Natural + Synthetic										

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
54.	M/s BCL Fabrics Pvt. Ltd.	Pasting of fabrics	500000 cases/day	1.057	6.28	2.56	2.83	4.91	1.74	-
55.	M/s Pooja Textile Industry	Pre-treatment, Dyeing, Washing, Finishing	30,000 meters/day (5 MT/d)	4	19.2	17	16.5	4.5	45.5	• Specific fresh water consumption is very low against std. for specific quality (70-80 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Sludge disposal record not maintained properly
Details of Textile unit engaged in manufacturing of Dyed Garment (Denim/Shirt/Trouser)										
A. Synthetic Garment-Polyester/Acrylic										
56.	M/s Addagio Knit creation Pvt. Ltd.	Dyeing and washing	50,000 Nos./day	0.975	38.28	18.31	18.41	3.00	4.26	• Specific effluent generation & discharge are also too much lower than fresh water consumption, indicating that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
57.	M/s Magnet Industries	Washing and dyeing	600 cases/day	1.136	23.18	39.13	20.53	No record	12.81	• Effluent generation is higher than fresh water consumption, indicating that either fresh water consumption/effluent generation/effluent discharge logbook is not properly maintained or actual production is higher than the reported production • Specific effluent discharge is quite low against effluent generation & fresh water consumption.

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
58.	M/s. Denim Art	Dyeing, Washing & finishing	1.0	0.6	71.52	64.4	62.47	10	5.23	-
B. Natural Garment-Cotton										
59.	M/s Nagpal Trading company	Dyeing and bleaching	120	NA	NA	NA	NA	No record	Cannot be calculated	• Not maintaining data/logbook of production, fresh water consumption, effluent generation & effluent discharge.
60.	M/s Sonu Enterprises	Pretreatment, Dyeing, Garment washing	Jeans washing - 500 cases/ day	1.39	91.6	82.79	80.24	No record	24.57	-
61.	M/s Denimo Design Washing Private Limited	Garment washing	Washing of cloth/garments - 1000 no./day	0.67	32.93	9.64	9.35*	2.55	0.864	-
62.	M/s Vardhman Gar-Tex Creators Pvt.Ltd.	Garment washing	Denim washing - 25000 piece/ month	0.584	76.55	74.58	73.03	3.74	8.75	-
63.	M/s Modern Dyeing Pvt. Ltd.	Pre-treatment (Desizing	Dyeing & washing of readymade	2.94*	76.4	70	66.53	30	219.38	• Sludge disposal record is not maintained properly

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		, Bleaching, Enzyme wash), Dyeing, Washing, Finishing	Garments- 20,000 Nos./day							
64.	M/s Global Wash Creation Pvt. Ltd.	Pre-treatment, Dyeing, Washing, Finishing	Washing & Dyeing of Fabric& garments - 5000 Nos./day for each	5.23	12.56	53.19	10.66 (42.7 recycled- 90 % recycling)	37.95	28.39	-
65.	M/s Shivam Enterprises	Desizing, Bleaching, Washing	Details not mentioned in consent	0.55	22.98	15.72	15.25	2	2.3	• Specific fresh water consumption is too much lower against std. for specific quality (70-75 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Effluent generation is also lower against product details
66.	M/s Color Zone	Pre-treatment,	1500 Nos/day	0.7	46.6	31.87	21.38	5.8	5.2	• Specific fresh water consumption is too much lower against std. for specific quality (70-75 KL/MT) indicating that fresh water

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		Dyeing, Washing, Finishing	(1.05 MT/d)							consumption logbook is not properly/correctly maintained • Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is 68% of fresh water consumptions, which indicates that fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained
67.	M/s Denim Touch	Pre-treatment, Dyeing, Washing, Finishing	4000 Nos./day (2.8 MT/d)	1.05	78*	66	65	No record	26.6	-
C. Blend Garment – Cotton + Polyester										
68.	M/s Denim Craze	Pre-treatment, Dyeing, Washing, Finishing	Dyeing & washing of Garments-1,00,000 Nos./day	1.24	83.59	69.97	70.64	2.49	11.75	Sludge disposal record is not maintained properly
69.	M/s M. S Creations	Pre-treatment, Dyeing,	Washing & Dyeing of Garments-	1.6	84.03	72.57	73.13	20.26	14.91	-

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
		Washing, Finishing	5000 Nos./day							
70.	M/s Shubhram Hospital Solutions Pvt. Ltd.	Washing & drying of clothes	50	45	3.92 KL/MT (fresh water) 1.51 KL/MT (recycled water from PETP through RO)	4.94	2.36	No record	5.95	• Specific fresh water consumption is too much lower against std. for specific quality (60-70 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained
71.	M/s Spectrum Washing Pvt. Ltd.	Washing	6000 Nos.	1.08 (1548 Nos./day)	44.14	21.57	18.14	No record	2.44	• Effluent generation should be approx. 85% of fresh water consumption, however in this case effluent generation is only 49% of fresh water consumptions, which indicates that either fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained or unit is bypassing untreated effluent
72.	M/s Shadex Creations	Washing, Bleaching, Dyeing	20,000 cases/day	No record	No record	No record	No record	No record	Cannot be estimated	• Not maintaining data/logbook of production, fresh water consumption, effluent generation & effluent discharge
Details of Textile unit engaged in manufacturing of Dyed Yarn & Dyed Fabric										

Sr. No.	Name of industry	Process details	Production (MT/day)		Specific freshwater consumption on the basis of borewell logbook/estimated values (KL/MT)	Specific effluent generation (KL/MT)	Specific effluent discharge (KL/MT)	PETP sludge generation (Kg/day)		Remarks
			Consented	Actual				Actual	Estimated	
A. Blend Yarn & Fabric – Cotton + Acrylic/Polyester										
73.	M/s Nutex Knit Fab	Pre-treatment and dyeing	Hosiery cloth Knitting and Dying-3 MT/d	1.36	31.25	27.5	23.92	No record	4.37	• Specific fresh water consumption is too much lower against std. for specific quality (approx. 70 KL/MT) indicating that fresh water consumption logbook is not properly/correctly maintained • Similarly, specific effluent generation & discharge are also low against process details.
74.	M/s Swastik Multifibre Pvt Ltd	Pre-treatment and dyeing	Dyed Knitted Fabric - 1.5 MT/d	1.59	64.73	80.69	40.61	19.72	2.47	• Effluent generation is higher than fresh water consumption, indicating that fresh water consumption/effluent generation/effluent discharge logbook is not properly/correctly maintained • Specific effluent discharge quantity is half of the specific effluent generation, which indicates either poor maintenance of logbooks for fresh water consumption/effluent generation/effluent discharge or bypass of untreated effluent

Table 2: Performance assessment of PETPs of member textile industries

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
Details of Textile unit engaged in manufacturing of dyed yarn										
A. Synthetic Yarn-Polyester/Acrylic										
1.	M/s Brothers Stretch Pvt. Ltd.	785	4 (99.5%)	1006	37 (96.3%)	61	30 (50.8%)	1424	820 (42.4%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
2.	M/s Yashas Industries	90	3 (96.7%)	286	46 (83.9%)	164	27 (83.5%)	1352	992 (26.6%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
3.	M/s Shree Gopal Enterprises	178	22 (87.6%)	996	82 (91.7%)	77	31 (59.7%)	1060	824 (22.2%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
4.	M/s Savi Texfab Pvt. Ltd.	43	36 (16.2%)	158	79 (50%)	78	30 (61.5%)	544	824	Inlet BOD is too much lower against typical range of 100-500 mg/l, indicating dilution at PETP inlet
5.	M/s Vrishabh Industries	170	95 (44.1%)	840	480 (42.8%)	475	225 (52.6%)	2120	1440 (32%)	-
6.	M/s Manohar Filaments Pvt. Ltd.	417	49 (88.2%)	1125	260 (76.9%)	164	34 (79.2%)	3320	2572 (22.5%)	• High value of TDS at PETP outlet • High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
7.	M/s Oasis Texfab India	266	31 (88.3%)	772	160 (79.2%)	236	195 (17.3%)	1260	920 (26.9%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
8.	M/s Vibrant Yarns	270	BDL (100%)	432	BDL (100%)	167	10 (94%)	1716	12 (99%)	Unit has installed RO and found operating on ZLD
9.	M/s Krishna Process (old name Oriental Rug Co)	Sample was not collected as no wet work was being carried out on the day of inspection. Only yarn winding was being done, thus no effluent generation, therefore ETP was non-operational.								• Maintenance work was going on. • Boiler was found cold.
10.	M/s Smitz Polytex	344	53 (84.6%)	1066	406 (61.9%)	88	144	3368	2104 (37.5%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
11.	M/s Budh Singh And Brothers	116	13 (88.8%)	192	99 (48.4%)	44	37 (15.9%)	1476	868 (41.2%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
12.	M/s Euro Threads (P) Ltd.	125	56 (55.2%)	624	284 (54.5%)	255	65 (74.5%)	1540	1080 (29.8%)	-
13.	M/s Vinayak Dyeing House	175	13 (92.5%)	840	80 (90.4%)	380	48 (87.3%)	2190	1220 (44.2%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
B. Semi Synthetic Yarn-Viscose										
14.	M/s Generous Textiles Pvt. Ltd.	1107	78 (92.9%)	4495	285 (93.6%)	1621	204 (87.4%)	4444	2924 (34.2%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
15.	M/s Komal textiles	130	3 (97.7%)	640	36 (94.3%)	295	12 (95.9%)	3050	1550 (49.1%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
C. Natural Yarn-Cotton										
16.	M/s Kanodia Intercontinental Pvt. Ltd.	104	40 (61.5%)	416	193 (53.6%)	65	138	4428	7584	• High value of TDS at PETP outlet • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
17.	M/s GEE AAR Thread Pvt. Ltd.	125	85 (32%)	720	440 (38.8%)	435	95 (78.1%)	11380	5330 (53.1%)	• High value of TDS at PETP outlet • Dilution cannot be ruled out for 53% reduction in TDS • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
18.	M/s Kuchal Fashions Pvt. Ltd.	210	8 (96.2%)	980	40 (95.9%)	670	16 (97.6%)	1150	1320	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
19.	M/s Sanjeev Enterprises	187	32 (82.9%)	613	160 (73.9%)	102	179	1528	2904	• High value of TDS at PETP outlet • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
20.	M/s Viscot Industries	57	2 (96.5%)	438	12 (97.2%)	126	34 (73%)	3752	1140 (69.6%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
D. Natural & Synthetic Yarn-Cotton & Polyester										
21.	M/s Tabi Creations Pvt. Ltd.	249	6 (97.6%)	368	29 (92.1%)	109	20 (81.6%)	1952	812 (58.4%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
22.	M/s Shree Sidhi Vinayak Texcolors Pvt. Ltd.	602	29 (95.2%)	1256	71 (94.3%)	155	20 (87.1%)	4612	1632 (64.6%)	• Unit has biological treatment in PETP • High reduction in pollution parameter (TDS) indicating dilution with freshwater in PETP at different stages
23.	M/s Vardhman Creation Pvt. Ltd.	238	8 (96.6%)	685	32 (95.3%)	65	10 (84.6%)	1760	1052 (64.6%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
24.	M/s Kohinoor Ribbon Factory Pvt ltd (Old name K R F Limited)	552	6 (98.9%)	1335	19 (98.5%)	110	11 (90%)	2484	856 (65.5%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
E. Blend Yarn- Viscose + Polyester + Cotton										
25.	M/s Jyoti Dhaga Udyog Pvt. Ltd.	109	14 (87.1%)	376	46 (87.7%)	95	38 (60%)	2416	1792 (25.8%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
Details of Textile unit engaged in manufacturing of dyed fabric										
A. Synthetic Fabric-Polyester/Acrylic										
26.	M/s Such Exports Pvt. Ltd.	327	184 (43.7%)	907	561 (38.1%)	195	111 (43%)	8004	7280 (9%)	High value of TDS in treated & untreated effluent.

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
27.	M/s Twenty First Century Pvt. Ltd.	398	6 (98.4%)	1256	28 (97.7%)	463	36 (92.2%)	2216	1268 (42.8%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
28.	M/s Vihan Textile Pvt. Ltd.	344	15 (95.6%)	733	119 (83.7%)	196	44 (77.5%)	1464	1216 (16.9%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
29.	M/s Super Dyeing	765	3 (99.6%)	3039	49 (98.3%)	169	133 (21.3%)	984	824 (16.2%)	High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
30.	M/s Fine Dyeing Pvt. Ltd.	170	42 (75.3%)	727	229 (68.5%)	127	34 (73.2%)	1112	1004 (9.7%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
31.	M/s Shivalik Processor	56	14 (75%)	303	91 (69.9%)	50	23 (54%)	1092	916 (16.1%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 100 to 500 mg/l, indicating dilution at PETP inlet
32.	M/s Abycons Textiles Pvt. Ltd.	95	7 (92.6%)	472	40 (91.5%)	210	24 (88.6%)	2260	510 (77.4%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
33.	M/s Global Enterprises	175	115 (34.3%)	880	576 (34.5%)	420	45 (89.3%)	2190	1550 (29.2%)	-
34.	M/s Abycons Woolens Pvt. Ltd.	340	4 (98.8%)	1950	8 (99.6%)	980	14 (98.6%)	2172	608 (72%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
35.	M/s Bansal Processing House	1148	165 (85.6%)	1660	333 (79.9%)	313	60 (80.8%)	1152	996 (13.5%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
36.	M/s Sri Ram Cottgins Pvt. Ltd.	465	12 (97.4%)	1493	48 (96.7%)	57	21 (63.1%)	1316	676 (48.6%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
37.	M/s Smitz Marketing	**PETP (Tube settler) cleaning wastewater:** BOD – 5 mg/l; COD – 31 mg/l; TSS – 12 mg/l; TDS – 860 mg/l								• PETP was under maintenance due to operational issues in PETP inlet (feed) pump and cleaning of tube-settler was going on with fresh water
38.	M/s Siddhi Vinayak Apparels Pvt. Ltd.	PETP was non-operational, hence samples not collected								• Industry operational & PETP intentionally non-operational

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
39.	M/s Rexolene India Manufacturing Pvt. Ltd.	• **Rain water harvesting pit:** pH: 7.1, **BOD: 316 mg/l**, **COD: 660 mg/l**, TSS: 52 mg/l, TDS: 760 mg/l • **Effluent bypass:** pH: 8.43, **BOD: 120 mg/l**, **COD: 600 mg/l**, TSS: 68 mg/l, TDS: 1650 mg/l								• Sample from PETP outlet was not collected as unit was found to be bypassing the untreated effluent. • Contamination in rain water harvesting pit
40.	M/s PP Texofab Pvt. Ltd.	266	48 (81.9%)	855	195 (77.2%)	162	42 (74%)	3764	2128 (43.4%)	• Unit has biological treatment in PETP • High reduction in pollution parameter (TDS) indicating dilution with freshwater in PETP at different stages • High TDS at PETP outlet
41.	M/s Sino India Textiles Pvt. Ltd.	406	10 (97.5%)	616	80 (87%)	119	46 (61.3%)	636	1320	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
42.	M/s Anand knit	115	12 (89.5%)	576	60 (89.6%)	340	30 (91.2%)	3980	3310 (16.8%)	• High TDS at PETP outlet • High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
B. Natural Fabric-Cotton/Hosiery										
43.	M/s Ram Kishan and Co.	747	243 (67.4%)	1728	430 (75.1%)	338	160 (52.6%)	4284	1160 (72.9%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
44.	M/s Madni Textile Mills Pvt Ltd	610	38 (93.7%)	947	245 (74.1%)	110	24 (78.1%)	1752	3568	• High TDS at PETP outlet • High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
45.	M/s Dhruv Globals Ltd.	597	72 (87.9%)	905	189 (79.1%)	376	99 (73.6%)	2672	2000 (25.1%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
46.	M/s Natraj Home Furnishing Pvt. Ltd.	190	92 (51.5%)	960	496 (48.3%)	515	95 (81.5%)	2180	2320	• High TDS at PETP outlet • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
47.	M/s Shree Jee Fabrics	284	63 (77.8%)	755	302 (60%)	182	130 (28.5%)	2344	2816	• High TDS at PETP outlet • High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
48.	M/s Eurospa Terry Towel Pvt. Ltd.	203	10 (95%)	411	32 (92.2%)	55	13 (76.3%)	2328	1608 (30.9%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
49.	M/s Girja Dyeing	104	188	674	575 (14.7%)	423	197 (53.4%)	6552	5480 (16.3%)	• High TDS at PETP outlet • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
50.	M/s Rajasthan Kniting Mills	210	38 (81.9%)	801	197 (75.4%)	273	62 (77.3%)	2584	1464 (43.3%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
51.	M/s Babbar Hosiery	221	11 (95%)	877	46 (94.7%)	540	12 (97.8%)	3096	1132 (63.4%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
52.	M/s M.K Dyeing	183	106 (42%)	437	263 (39.8%)	109	130	4736	1440 (69.6%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
53.	M/s Rakesh Textile	135	45 (66.7%)	680	232 (65.8%)	255	20 (92.1%)	1930	2890	• High TDS at PETP outlet • High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700 to 1000 mg/l, indicating dilution at PETP inlet
C. Blend Fabric-Natural + Synthetic										

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
54.	M/s BCL Fabrics Pvt. Ltd.	120	9 (92.5%)	480	64 (86.7%)	265	22 (91.7%)	1250	750 (40%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
55.	M/s Pooja Textile Industry	190	65 (65.8%)	960	372 (61.2%)	645	39 (93.9%)	2240	1920 (14.3%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
Details of Textile unit engaged in manufacturing of dyed garment (Denim/Shirt/Trouser)										
A. Synthetic Garment-Polyester/Acrylic										
56.	M/s Addagio Knit creation Pvt. Ltd.	112	32 (71.4%)	301	94 (68.7%)	245	30 (87.7%)	2584	1328 (48.6%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
57.	M/s Magnet Industries	238	39 (83.6%)	719	117 (83.7%)	266	10 (96.2%)	9188	1208 (86.8%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
58.	M/s. Denim Art	76	25 (67.1%)	239	216 (9.62%)	193	58 (69.9%)	876	808 (7.76%)	• Inlet BOD is too much lower against typical range of 100-500 mg/l, indicating dilution at PETP inlet
B. Natural Garment-Cotton										
59.	M/s Nagpal Trading company	132	165	474	398 (16%)	254	101 (60%)	3824	3336 (12.7%)	• High TDS at PETP outlet • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
60.	M/s Sonu Enterprises	535	67 (87.5%)	1072	134 (87.5%)	178	86 (51.7%)	1276	1236 (3.1%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
61.	M/s Denimo Design Washing Private Limited	248	64 (74.2%)	602	204 (66.1%)	76	37 (51.3%)	1292	908 (29.7%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
62.	M/s Vardhman Gar-Tex Creators Pvt.Ltd.	477	136 (71.5%)	1241	407 (67.2%)	286	112 (60.8%)	1700	1620 (4.7%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
63.	M/s Modern Dyeing Pvt. Ltd.	733	85 (88.4%)	1771	146 (91.7%)	1096	103 (90.6%)	12552	1372 (89%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages
64.	M/s Global Wash Creation Pvt. Ltd.	386	4 (98.9%)	863	60 (93%)	130	28 (78.4%)	964	1004	• Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet • Unit has ETP with biological treatment system i.e., MBR
65.	M/s Shivam Enterprises	85	13 (84.7%)	448	56 (87.5%)	245	15 (93.8%)	2520	850 (66.2%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
66.	M/s Color Zone	88	32 (63.6%)	448	160 (64.3%)	260	54 (79.2%)	12150	1070 (91.2%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
67.	M/s Denim Touch	125	6 (95.2%)	648	36 (94.4%)	425	21 (95%)	1360	910 (33%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 700-1000 mg/l, indicating dilution at PETP inlet
C. Blend Garment – Cotton + Polyester										
68.	M/s Denim Craze	213	69 (67.6%)	340	261(23.2%)	108	36 (66.7%)	856	1032	• Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
69.	M/s M.S. Creations	154	43 (72%)	372	119 (68%)	139	57 (59%)	2088	1544 (26%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet

Sr. No.	Name of industry	Inlet BOD (mg/l)	Outlet BOD (mg/l) (% reduction)	Inlet COD (mg/l)	Outlet COD (mg/l) (% reduction)	Inlet TSS (mg/l)	Outlet TSS (mg/l) (% reduction)	Inlet TDS (mg/l)	Outlet TDS (mg/l) (% reduction)	Remarks (In primary treatment, BOD reduction of 45 - 50%, COD reduction of 50 - 60% & TDS reduction of 15 to 25% may be achieved)
70.	M/s Shubhram Hospital Solutions Pvt. Ltd.,	209	41 (80.3%)	500	127 (74.6%)	67	33 (50.7%)	1200	952 (20.6%)	• Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet • Unit has biological treatment in PETP
71.	M/s Spectrum Washing Pvt. Ltd.	133	45 (66.1%)	360	120 (66.7%)	198	126 (36.3%)	1636	1024 (37.4%)	• High reduction in pollution parameters indicating dilution with freshwater in PETP at different stages • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
72.	M/s Shadex Creations	183	125 (31.7%)	404	220 (45.5%)	335	88 (73.7%)	1924	2080	• Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
Details of Textile unit engaged in manufacturing of dyed yarn & dyed fabric										
A. Blend Yarn & Fabric – Cotton + Acrylic/Polyester										
73.	M/s Nutex Knit Fab	152	122 (19.7%)	341	289 (15.2%)	46	37 (19.5%)	1756	1884	• Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet
74.	M/s Swastik Multifibre Pvt Ltd	208	363	675	785	32	74	1116	2296	• High TDS at PETP outlet • Inlet BOD is too much lower against typical range of 500-800 mg/l, indicating dilution at PETP inlet

Table 3: Compliance status of industries w.r.t. discharge norms/suspected dilution

Sr. No.	Name of Industry	Valid Ground water NOCs (Yes/No/Applied)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Compliance status w.r.t discharge norms/suspected dilution
Details of Textile unit engaged in manufacturing of dyed yarn					
Synthetic Yarn-Polyester/Acrylic					
1.	M/s Brothers Stretch Pvt. Ltd.	No	Yes	Yes	Non-Complying (Dilution)
2.	M/s Yashas Industries	No	Yes	Yes	Non-Complying (Dilution)
3.	M/s Shree Gopal Enterprises	No	Yes	Yes	Non-Complying (Dilution)

Sr. No.	Name of Industry	Valid Ground water NOCs (Yes/No/Applied)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Compliance status w.r.t discharge norms/suspected dilution
4.	M/s Savi Texfab Pvt. Ltd.	Yes	Yes	Yes	Non-Complying (Discharge norms, dilution at PETP inlet & engaged in mfg. of product other than that mentioned in consent)
5.	M/s Vrishabh Industries	No borewell	Yes	Yes	Complying
6.	M/s Manohar Filaments Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & Dilution)
7.	M/s Oasis Texfab India	No (Not provided)	Yes	Yes	Non-Complying (Discharge norms & dilution)
8.	M/s Vibrant Yarns	No borewell	Yes	Yes	Complying (ZLD)
9.	M/s Krishna Process (Old Name Oriental Rug Co)	Applied	Yes	Yes	Complying (Dry)
10.	M/s Smitz Polytex	NA	Yes	Yes	Non-Complying (Discharge norms & dilution)
11.	M/s Budh Singh And Brothers	Applied	Yes	Yes	Non-Complying (Dilution)
12.	M/s Euro Threads (P) Ltd.	Applied	Yes	Yes	Complying
13.	M/s Vinayak Dyeing House	No	Yes	Yes	Non-Complying (Dilution)
A. Semi Synthetic Yarn-Viscose					
14.	M/s Generous Textiles Pvt. Ltd.	No	Yes	Yes	Non-Complying (Discharge norms & dilution)
15.	M/s Komal textiles	Applied	Yes	No	Non-Complying (Dilution)
B. Natural Yarn-Cotton					
16.	M/s Kanodia Intercontinental Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
17.	M/s GEE AAR Thread Pvt. Ltd.,	Yes	Yes	Yes	Non-Complying (Discharge norms & dilution)
18.	M/s Kuchal Fashions Pvt. Ltd.	No borewell	Yes	Yes	Non-Complying (Dilution)
19.	M/s Sanjeev Enterprises	No	Yes	No	Non-Complying (Discharge norms & dilution)
20.	M/s Viscot Industries	Applied	Yes	Yes	Non-Complying (Dilution)
C. Natural & Synthetic Yarn-Cotton & Polyester					
21.	M/s Tabi Creations Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Dilution)
22.	M/s Shree Sidhi Vinayak Texcolors Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
23.	M/s Vardhman Creation Pvt. Ltd.	Yes	Yes	Yes	Non-Complying (Dilution)
24.	M/s Kohinoor Ribbon Factory Pvt ltd (Old name K R F Limited)	Applied	Yes	Yes	Non-Complying (Dilution)
D. Blend Yarn- Viscose + Polyester + Cotton					
25.	M/s Jyoti Dhaga Udyog Pvt. Ltd.	No	Yes	Yes	Non-Complying (Dilution)
Details of Textile unit engaged in manufacturing of dyed fabric					
A. Synthetic Fabric-Polyester/Acrylic					

Sr. No.	Name of Industry	Valid Ground water NOCs (Yes/No/Applied)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Compliance status w.r.t discharge norms/suspected dilution
26.	M/s Such Exports Pvt. Ltd.	No	Yes	Yes	Non-Complying (Discharge norms)
27.	M/s Twenty First Century Pvt. Ltd.	Yes	Yes	Yes	Non-Complying (Dilution)
28.	M/s Vihan Textile Pvt. Ltd.	No	Yes	Yes	Non-Complying (Dilution)
29.	M/s Super Dyeing	No	Yes	Yes	Non-Complying (Discharge norms & Dilution)
30.	M/s Fine Dyeing Pvt. Ltd.	No	Yes	Yes	Non-Complying (Dilution)
31.	M/s Shivalik Processor	No	Yes	Yes	Non-Complying (Dilution)
32.	M/s Abycons Textiles Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Dilution)
33.	M/s Global Enterprises	Applied	Yes	Yes	Complying
34.	M/s Abycons Woolens Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Dilution)
35.	M/s Bansal Processing House	Applied	Yes	Yes	Non-Complying (Dilution)
36.	M/s Sri Ram Cottgins Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Dilution)
37.	M/s Smitz Marketing	No borewell	Yes	Yes	Non-Complying (Dilution)
38.	M/s Siddhi Vinayak Apparels Pvt. Ltd.	Applied	Yes	No	Non-complying (non-operational PETP)
39.	M/s Rexolene India Manufacturing Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Bypass)
40.	M/s PP Texofab Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
41.	M/s Sino India Textiles Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
42.	M/s Anand knit	No	Yes	Yes	Non-Complying (Discharge norms & dilution)
B. Natural Fabric-Cotton/Hosiery					
43.	M/s Ram Kishan and Co.	No	Yes	Yes	Non-Complying (Dilution)
44.	M/s Madni Textile Mills Pvt Ltd	No	Yes	Yes	Non-Complying (Discharge norms & dilution)
45.	M/s Dhruv Globals Ltd.	Applied	Yes	Yes	Non-Complying (Dilution & exceedance in consented production)
46.	M/s Natraj Home Furnishing Pvt. Ltd.	Yes	Yes	Applied	Non-Complying (Discharge norms & dilution)
47.	M/s Shree Jee Fabrics	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
48.	M/s Eurospa Terry Towel Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Dilution)
49.	M/s Girja Dyeing	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
50.	M/s Rajasthan Kniting Mills	Applied	Yes	Yes	Non-Complying (Dilution)
51.	M/s Babbar Hosiery	Applied	Yes	Yes	Non-Complying (Dilution)
52.	M/s M.K Dyeing	Applied	Yes	Yes	Non-Complying (Discharge norms & Dilution)
53.	M/s Rakesh Textile	No	Yes	Yes	Non-Complying (Discharge norms & dilution)
C. Blend Fabric-Natural + Synthetic					

Sr. No.	Name of Industry	Valid Ground water NOCs (Yes/No/Applied)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Compliance status w.r.t discharge norms/suspected dilution
54.	M/s BCL Fabrics Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Dilution)
55.	M/s Pooja Textile Industry	Applied	Yes	Yes	Non-Complying (Dilution)
Details of Textile unit engaged in manufacturing of dyed garment (Denim/Shirt/Trouser)					
A. Synthetic Garment-Polyester/Acrylic					
56.	M/s Addagio Knit creation Pvt. Ltd.	No	Yes	Yes	Non-Complying (Dilution)
57.	M/s Magnet Industries	No	Yes	Yes	Non-Complying (Dilution)
58.	M/s. Denim Art	No	Yes	Yes	Non-Complying (Dilution)
B. Natural Garment-Cotton					
59.	M/s Nagpal Trading Company	No	Yes	Yes	Non-Complying (Discharge norms & dilution)
60.	M/s Sonu Enterprises	No	Yes	Yes	Non-Complying (Dilution)
61.	M/s Denimo Design Washing Private Limited	No	Yes	Yes	Non-Complying (Dilution)
62.	M/s Vardhman Gar-Tex Creators Pvt.Ltd.	No	Yes	Yes	Non-Complying (Dilution)
63.	M/s Modern Dyeing Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
64.	M/s Global Wash Creation Pvt. Ltd.	No borewell	Yes	Yes	Non-Complying (Dilution)
65.	M/s Shivam Enterprises	Applied	Yes	Yes	Non-Complying (Dilution)
66.	M/s Color Zone	No	Yes	Yes	Non-Complying (Dilution)
67.	M/s Denim Touch	No	Yes	Yes	Non-Complying (Dilution)
C. Blend Garment – Cotton + Polyester					
68.	M/s Denim Craze	Applied	Yes	Yes	Non-Complying (Dilution)
69.	M/s M.S. Creations	Applied	Yes	Yes	Non-Complying (Dilution)
70.	M/s Shubhram Hospital Solutions Pvt. Ltd.,	Yes	Yes	Yes	Non-Complying (Dilution)
71.	M/s Spectrum Washing Pvt. Ltd.	Applied	Yes	Yes	Non-Complying (Discharge norms & dilution)
72.	M/s Shadex Creations	No	Yes	Yes	Non-Complying (Discharge norms & dilution)
Details of Textile unit engaged in manufacturing of dyed yarn & dyed fabric					
A. Blend Yarn & Fabric – Cotton + Acrylic/Polyester					
73.	M/s Nutex Knit Fab	No	Yes	Applied	Non-complying (Dilution)
74.	M/s Swastik Multifibre Pvt Ltd	No	Yes	Yes	Non-Complying (Discharge norms & dilution)

Details of Other sector industries

There are 38 operational industries which belong to different sectors other than textile are mentioned in table 4 below:

Table 4: No. of industries other than textile

Sr. No.	Sector	Number of units
1.	Electroplating	8
2.	Chemical	7
3.	Dyes & dyes intermediates	3
4.	Food, Dairy & Beverages	6
5.	Tannery	02
6.	Others	08
a.	Printing press (Printing on paper/Jute bag)	03
b.	Button making & washing	01
c.	Mfg. of synthetic detergents and soaps (excluding formulation)	01
d.	Ply lamination	01
e.	Glass toughening	01
f.	Mfg. of safety pins and stationary clips	01
7.	Reprocessing of waste plastic including PVC	04
Total		**38**

Comprehensive details of these 38 operational units as per the inspection carried out by Joint committee is mentioned in **Table 5 & 6** below:

Table 5: Detail of others category units regarding groundwater NOC, Water/Air consents, Hazardous waste authorization and production

Sr. No.	Name of the unit	Valid Ground water NOCs (Yes/No)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Production		Remarks
					Consented	Actual	
Electroplating (08 units)							
75.	M/s Novacare Appliances Pvt. Ltd.	No borewell, HSIIDC supply water only	Yes	Applied	Electrical appliances i.e., Oven, heater etc.- 7350 nos. day	Not maintained since unit was running on trial on the day of inspection	Unit has obtained CTO to partially reuse for rinsing & partially evaporate the PETP treated effluent.
76.	M/s Paras Tubetech Pvt. Ltd.	No borewell, supply through tankers	Yes	Yes	CEW Steel tube-18 MT/day	450 MT/month	Unit has obtained CTO to reuse/recycle the PETP treated effluent in mfg. process.
77.	M/s Smart Enterprises, Plot no 96, Phase-III	Yes	Yes	No	Geyser- 1000 nos./day, Ceiling fans-1500 Nos./day	Geyser- 822	Unit has obtained CTO to evaporate the PETP treated effluent through evaporator.
78.	M/s Smart Enterprises, Plot No. 99, Phase-III, HSIIDC Barhi, Sonipat	No borewell, HSIIDC supply water only	Yes	Yes	Geyser-8000 nos./day	2732 nos./day	Unit has obtained CTO to partially reuse for rinsing & partially evaporate the PETP treated effluent.
79.	M/s Bajrang Engineering Works	No	Yes	Yes	S S Sheet-3.8 MT/day	0.5 MT/day	Unit has obtained CTO to reuse/recycle the PETP treated effluent in mfg. process.
80.	M/s Deepak Enterprises	No borewell, HSIIDC supply water only	Yes	Yes	Electroplating-300 cases/day	Record not maintained	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
81.	M/s Design O Creations	Yes	Yes	Yes	FMCG Display units & Kitchen accessories-450 Numbers/day	250 Numbers/day	Unit has obtained CTO to partially reuse & partially evaporate the PETP treated effluent.
82.	M/s Goel Bros.	No	Yes	Yes	Door & window fittings – 10000 Nos./day	Record not maintained	Unit found operational, but PETP found non-operational. Unit has obtained CTO to reuse & evaporate the PETP treated effluent through evaporator.

Sr. No.	Name of the unit	Valid Ground water NOCs (Yes/No)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Production		Remarks
					Consented	Actual	
83.	M/s Shoorbhoi Exports Pvt. Ltd	No borewell, HSIIDC supply water only	White category consent		• The unit has shut down and dismantled its metal surface treatment process and now doing dry process (making bolt after cutting iron rods). • ETP, Pickling, electroplating process were found dismantled. However, stack still not dismantled.		
Chemical (07 units)							
84.	M/s Cennet Biopharma Pvt. Ltd.	No	Yes	Yes	Pharmaceuticals (Basic drugs mfg.)-0.2062 MT/day	0.045	Unit has obtained CTO to partially reuse & partially evaporate the PETP treated effluent.
85.	M/s B.R. Specialties LLP	No borewell, HSIIDC supply water only	Yes	Yes	Textile Auxiliaries-20 MT/day	Record not maintained	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
86.	M/s Paxy Chem	No	Yes	No	Calcium sulfate-1 MT/day	Record not maintained	Unit has obtained CTO to partially reuse & partially evaporate the PETP treated effluent.
87.	M/s EOC Polymers India Pvt. Ltd.	No	Yes	Yes	1. XSBR Latex-110 MT/day, 2. Latex Compound and Adhesive-60 MT/day	100 MTD	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
88.	M/s Amogh Pharmaceuticals	No	Yes	Yes	Ayurvedic syrup – 30,000 nos./day Ayurvedic tablets & capsules – 8,000 cases/day	Syrup – 254.43 litre/day; Tablets – 45570 nos./day Capsules – 11709 nos./day	Unit has obtained CTO to evaporate the PETP treated effluent through evaporator.
89.	M/s Papcoat (India). Pvt. Ltd.	No	Yes	Yes	Ziroconum basic carbonate-1.75 MT/day	0.875 MT/day	Unit has obtained CTO to reuse/recycle the PETP treated effluent in mfg. process.

Sr. No.	Name of the unit	Valid Ground water NOCs (Yes/No)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Production		Remarks
					Consented	Actual	
90.	M/s SIA Pharma Pvt. Ltd.	No borewell, HSIIDC supply water only	Yes	Applied for renewal	Product name/quantity not mentioned in CTO	Record not maintained	Unit engaged in pharma formulation (Dry process only-no water usage/effluent generation) Product name/quantity not mentioned in CTO
Dyes & dyes intermediates (3 units)							
91.	M/s Samarth Industries	Yes	Yes	Yes	Blue & Violet dye-0.4 MT/day	0.146	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
92.	M/s Sumit Enterprises	No	Yes	Yes	Oil orange-150	Record not maintained	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
93.	M/s Raja Industries	No borewell	Yes	Yes (as informed by HSPCB officials during visit)	Colour dyes – 01 MT/day	0.44 MT/day	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
Food, Dairy & Beverages/Food Processing (6 units)							
94.	M/s Ansh Beverages Pvt. Ltd	Applied	Yes	Yes	Soft drinks-30000 Nos./day	24,000 Nos./day	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
95.	M/s Season farm, Plot No. 157, HSIIDC, Barhi, Sonipat	No	Yes	No	Frozen vegetables-1	2776 kg/day	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
96.	M/s First Pure Diet Milk Products	No borewell	Yes	Yes	Milk Products-4 MT/day	0.4 MT/day	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
97.	M/s Indies Global Foods Private Limited	No borewell	Yes	Yes	Ready to eat and ready to cook food -2.5 MT/day	01 MT/day	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
98.	M/s Value Foods	No	Yes	Yes	Not mentioned in consent	0.5 MT/day	Product name/quantity not mentioned in CTO. No record maintained w.r.t. production, freshwater consumption, effluent generation & discharge.
99.	M/s Ruby Industries, Plot No. 54	No	Yes	No	Coronet sweet-0.8 MT/day, Candy-0.8 MT/day,	Coronet sweet-0.8 MT/day, Candy-0.8 MT/day,	Unit has obtained CTO to evaporate the PETP treated effluent through evaporator.

Sr. No.	Name of the unit	Valid Ground water NOCs (Yes/No)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Production		Remarks
					Consented	Actual	
					Lollipop-0.8 MT/day, Jelly-0.7 MT/day	Lollipop-0.8 MT/day, Jelly-0.7 MT/day	
Tannery (2 units)							
100.	M/s Dayanidhi Textiles Pvt. Ltd.,	Applied	Yes	Yes	Leather garments and skin leather-2500 No./day	Record not maintained	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
101.	M/s Supreme Fashions	No	Yes	No	Wet Blue Skins and Hides, 5000 Numbers/Day	742 pcs/day (avg.)	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
Others (8 units)							
102.	M/s Arshiya Decor Private Limited	No	Air consent-Yes, Water consent-No	Yes	Paper Print-3 MT/day	Record not maintained	Water consent expired on 31.03.2022. As informed, CTO-renewal is not available on OCMMS but unit has submitted fees. Unit also provided copy of fees receipt as a proof. As per previous CTO unit has permission to discharge the PETP treated effluent to CETP, Barhi.
103.	M/s Shree Krishna buttons Pvt. Ltd.	No	Yes	No	Buttons-8,64,000 Nos./day	3000 Buttons/day	By pass observed (Unit has obtained CTO to recycle/reuse the PETP treated effluent in process)
104.	M/s Super Texfab Pvt. Ltd.	No	Yes	No	Printed box Corrugated: 7000 Nos./d Jute Bag: 5000 Numbers/ day	Record not maintained	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi.
105.	M/s Supreme Surfactants Pvt. Ltd.	No	Yes	No	Surfactants-9.5	Record not maintained	Unit has obtained CTO to discharge the PETP treated effluent to CETP, Barhi, but parameters not mentioned in the CTO
106.	M/s Chandni Industries Pvt. Ltd.	No	Yes	Yes	Playing cards and printed sheet – 1MT/day	Record not maintained	Unit has obtained consent to evaporate trade effluent through solar evaporation pond.

Sr. No.	Name of the unit	Valid Ground water NOCs (Yes/No)	Valid Water and Air consent (Yes/No)	Valid Hazardous Waste Authorization (Yes/No)	Production		Remarks
					Consented	Actual	
107.	M/s Jai Hanuman Laminates Pvt. Ltd.	No	Yes	No	Apple & Egg tray-25,000 Nos./day	Unit found engaged in lamination of ply	Unit has obtained CTO for mfg. of apple & egg tray, however the unit found engaged in lamination of ply i.e., dry process only.
108.	M/s Swastik Toughened Glass LLP	No borewell, HSIIDC supply water only	Yes	Yes	Toughened glass-400 no/day	Record not maintained	Unit has obtained consent to evaporate trade effluent through electricity operated evaporator.
109.	M/s Metro Pulp Industries	No	Yes	No	Safety pins-0.170 MT/day	Record not maintained	Unit has obtained CTO for metal surface treatment with the name of M/s Metro Pulp Industries for mfg. safety pins and stationary clips. But unit found running under the name of M/s Vishwas Steel Safety pins Pvt. Ltd. and consent of the same not provided.
Reprocessing of waste plastics including PVC (4 units)							
110.	M/s Peeco Polytech Pvt Ltd.	Applied	Yes	Yes	Reprocessing of waste plastic including PVC-14 MT/day	14	Unit has obtained CTO to recycle/reuse the PETP treated effluent in process
111.	M/s Jai Mata Plastic	No	Yes	No	Reprocessing of waste plastics including PVC-5 MT/day	Record not maintained	Unit has obtained CTO to reuse the PETP treated effluent in process/evaporation.
112.	M/s Shri Balaji Enterprises	Applied	Yes	Yes	Reprocessing of waste plastic including PVC-1 MT/day	1.5	Unit has obtained CTO to reuse the PETP treated effluent in process/evaporation.
113.	M/s TSB Polychem Pvt. Ltd.	Yes	Yes	Yes	Plastic Granules-12.5	Record not maintained	Unit has obtained CTO to recycle/reuse the PETP treated effluent in process

Table 6: Compliance status of Other sector units

Electroplating (08 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
75.	M/s Novacare Appliances Pvt. Ltd.	Physico-Chemical→ Tertiary filtration system→Solar Evaporator	pH	2.96	8.12	Complying (ZLD)
			BOD	35	6	
			COD	408	104	
			TSS	245	42	
			O & G	-	BDL	
			Total Cr	-	0.39	
76.	M/s Paras Tubetech Pvt. Ltd.	Physico-Chemical →Tertiary filtration system→ Reuse/recycle in plant *Remark: PETP found damaged*	pH	1.51	**1.67**	Non-Complying (Discharge norms)
			BOD	36	28	
			COD	484	388	
			TSS	175	54	
			Total Cr	-	0.17	
77.	M/s Smart Enterprises, Plot no 96, Phase-III, HSIIDC, Barhi	Physico-Chemical→ Tertiary filtration system→Evaporator	pH	2.42	7.3	Complying (ZLD)
			BOD	29	BDL	
			COD	368	56	
			TSS	315	11	
			TDS	3670	1260 (66% Reduction)	
			O & G	13.8	BDL	
			Total Cr	3.48	0.02	
78.	M/s Smart Enterprises, Plot No. 99, Phase-III, HSIIDC Barhi	Physico-Chemical→ Tertiary filtration system→Evaporator	pH	1.49	7.05	Complying (ZLD)
			BOD	32	BDL	
			COD	420	40	
			TSS	345	14	
			O & G	12.6	BDL	
			Total Cr	4.15	0.03	
79.	M/s Bajrang Engineering Works	Physico-Chemical→ Tertiary filtration system→RO	pH	2.07	8.52	Complying (ZLD)
			BOD	85	BDL	

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
		RO Permeate→Process RO Reject→Wet scrubber/toilet flushing/floor washing	COD	548	44	
			TSS	360	24	
			TDS	1280	520 (59% reduction)	
			O & G	-	BDL	
			Total Cr	-	BDL	
			Zn		0.116	
			Fe		0.04	
80.	M/s Deepak Enterprises	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	1.68	2.95	Non-complying (Discharge norms & Dilution)
			BOD	92	BDL	
			COD	1280	88	
			TSS	625	115	
			TDS	2620	8390	
			O & G	-	BDL	
			Total Cr	-	3.44	
81.	M/s Design O Creations	Physico-Chemical→ Tertiary filtration system→Evaporator	Unit found operational, but PETP found non-operational, hence sampling was not done.			Non-complying (PETP found non-operational)
82.	M/s Goel Bros.	Physico-Chemical→ Tertiary filtration system→Evaporator	Unit found operational, but PETP found non-operational, hence sampling was not done.			Non-complying (PETP found non-operational)
83.	M/s Shoorbhoi Exports Pvt. Ltd	Unit found engaged in dry process only, no effluent generation from the process. No PETP/Evaporation system found installed, during visit.				Complying (Dry)

Chemical (07 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
84.	M/s Cennet Biopharma Pvt. Ltd.	Physico-Chemical→ UASBR → MBBR rector→Tertiary filtration system→UF→RO RO Permeate→Cooling tower RO Reject→Evaporator	Unit found operational, but PETP found non-operational, hence sampling was not done.			Non-complying (PETP found non-operational)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	Inlet	Outlet	
85.	M/s B.R. Specialties LLP	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	7.8	9.2	Non-complying (Discharge norms & Dilution)
			BOD	2075	442 (78.70% reduction)	
			COD	4676	1392 (70.23% reduction)	
			TSS	692	73 (89.45% reduction)	
			TDS	3520	2200 (37.50% reduction)	
			O & G	-	BDL	
			SAR	-	4	
86.	M/s Paxy Chem	Collection tank→reuse/recycle in plant or Evaporate in Evaporator	Unit found operational, but evaporator found non-operational, hence sampling was not done.			Non-complying (PETP/evaporator found non-operational)
87.	M/s EOC Polymers India Pvt. Ltd.	Physico-Chemical →Tertiary filtration system→ HSIIDC sewer line→CETP Barhi	pH	8.29	8.86	Non-complying (Discharge norms & Dilution)
			BOD	1300	650	
			COD	12780	9760	
			TSS	350	120	
			TDS	5350	3730	
			O & G	-	7.4	
			Fe	-	Not detected	
			Zn	-	Not detected	
88.	M/s Amogh Pharmaceuticals	Collection tank → Evaporator	pH	8.21	Evaporator found operational during visit thus the outlet effluent sample could not be collected.	Complying (ZLD)
			BOD	04		
			COD	24		
			TSS	20		
			TDS	510		
89.	M/s Papcoat (India). Pvt. Ltd.	Physico-Chemical→ Activated Carbon Filter→ Softener→ Treated effluent recycled back to process	pH	12.14	8.54	Non-Complying (Dilution)
			BOD	75	BDL	
			COD	376	16	
			TSS	255	11	
			TDS	5120	990 (80.67% reduction)	
			O & G	BDL	BDL	
90.	M/s SIA Pharma Pvt. Ltd.	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer	Unit engaged in pharma formulation (Dry process only-no water usage/effluent generation)			Complying (Dry)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	Inlet	Outlet	
		line→CETP Barhi (PETP found non-operational & not in use since long)				

Dyes & dyes intermediates (3 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	Inlet	Outlet	
91.	M/s Samarth Industries	Physico-Chemical→Aeration tank→Secondary Clarifier→Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	2.3	8.3	Non-Complying (Dilution)
			BOD	139	5 (96.4% reduction)	
			COD	204	30 (85.29% reduction)	
			TSS	29	17	
			TDS	3148	1176 (62.64% reduction)	
			O & G	-	BDL	
92.	M/s Sumit Enterprises	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	4.2	**4.3**	Non-complying (Discharge norms)
			BOD	282	283	
			COD	972	798	
			TSS	170	292	
93.	M/s Raja Industries	Physico-Chemical→ Activated Carbon Filter→ Evaporator (Evaporator found non-operational during visit)	pH	10.12	7.46	Complying
			BOD	170	95	
			COD	840	480	
			TSS	475	225	
			TDS	2120	1440	
			O & G	-	BDL	
			Sulphide	8	1.2	

Food, Dairy & Beverages/Food Processing (6 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
94.	M/s Ansh Beverages Pvt. Ltd	Bar Screen → O&G chamber → Equalization Tank → Primary Clarifier → Secondary Clarifier → Chlorine Contact Tank → Multigrade Filter → Activated Carbon Filter → Discharge	pH	6.6	5.4	Non-complying (Discharge norms)
			BOD	1857	1363	
			COD	2927	2741	
			TSS	55	87	
			TDS	2872	1612 (43.87% reduction)	
			O & G	-	BDL	
95.	M/s Season farm, Plot No. 157, HSIIDC, Barhi, Sonipat	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	Non-complying (Unit was operational, but PETP found non-operational)			Non-complying (PETP found non-operational)
96.	M/s First Pure Diet Milk Products	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	5.52	7.37	Non-Complying (Dilution)
			BOD	175	28 (84% reduction)	
			COD	880	148 (83.18% reduction)	
			TSS	425	44 (89.65)	
			TDS	1290	775 (39.92)	
			O & G	24.8	6.4	
97.	M/s Indies Global Foods Private Limited	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	7.06	7.15	Non-Complying (Dilution)
			BOD	145	22 (84.83% reduction)	
			COD	712	128 (82.02% reduction)	
			TSS	325	12 (96.31% reduction)	
			TDS	1930	1280 (33.68% reduction)	
			O & G	23.8	6.2	
98.	M/s Value Foods	Physico-Chemical→ Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	7.64	7.71	Non-Complying (Dilution)
			BOD	82	5 (93.9% reduction)	
			COD	408	40 (90.20% reduction)	
			TSS	215	22 (89.77% reduction)	
			TDS	1590	1380 (13.21)	

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
99.	M/s Ruby Industries, Plot No. 54	Screen → Flash Mixer → Clariflocculator → PSF → ACF → Evaporator	Non-complying (Unit was operational, but PETP found non-operational)			Non-complying (PETP found non-operational)

Tannery (2 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
100.	M/s Dayanidhi Textiles Pvt. Ltd.,	Physico-Chemical→ Aeration tank→Tube settler→Tertiary filtration system→Adsorption vessel→HSIIDC sewer line→CETP Barhi	Non-complying (Unit was operational, but PETP found non-operational) Total chromium – 153.2 mg/l found in effluent stored in underground tank in basement, no chrome recovery system			Non-complying (PETP found non-operational)
101.	M/s Supreme Fashions	Physico-Chemical→Aeration tank→Clarifier→Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	6.9	8.2	Non-Complying (Dilution)
			BOD	212	1 (99.53% reduction)	
			COD	569	21 (96.31% reduction)	
			TSS	66	BDL (100)	
			TDS	1856	808 (56.47% reduction)	
			O & G	-	BDL	
			Sulphide	-	30	

Others (08 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
102.	M/s Arshiya Decor Private Limited	Physico-Chemical →Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	6.6	8.4	Non-Complying (Dilution)
			BOD	1260	177 (85.95% reduction)	
			COD	2947	264 (91.04% reduction)	
			TSS	456	141 (69.08% reduction)	
			TDS	1312	2696	

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	**Inlet**	**Outlet**	
			SAR	4	3	
103.	M/s Shree Krishna buttons Pvt. Ltd.	Screen → Equalization Tank → Clariflocculator → PSF → ACF → Discharge into HSIIDC sewer line	**<u>Bypass sample</u>** pH: 7.5, BOD: 68, COD: 411, TSS: 1284, TDS: 1868			Non-complying (Non-operational PETP and bypass observed)
104.	M/s Super Texfab Pvt. Ltd.	Physico-Chemical →Tertiary filtration system→HSIIDC sewer line→CETP Barhi	pH	7.3	7	Non-Complying (Dilution)
			BOD	111	4 (96.4% reduction)	
			COD	496	19 (96.16% reduction)	
			TSS	433	11 (97.45% reduction)	
			TDS	1476	1368 (7.32)	
			O & G	-	BDL	
105.	M/s Supreme Surfactants Pvt. Ltd.	Physico-Chemical→ Tertiary filtration system→Reuse/recycle in plant and some amount to HSIIDC sewer line→CETP Barhi	pH	6.4	8	Non-Complying (Dilution)
			BOD	2343	3 (99.87% reduction)	
			COD	10948	38 (99.65% reduction)	
			TSS	561	26 (95.37% reduction)	
106.	M/s Chandni Industries Pvt. Ltd.	Unit found engaged in dry process only, no effluent generation from the process. No PETP/Evaporation system found installed, during visit.				Complying (Dry)
107.	M/s Jai Hanuman Laminates Pvt. Ltd.	PETP found installed but observed to be non-operational since long. Unit obtained CTO for mfg. of apple & egg tray, however the unit found engaged in lamination of ply only i.e., dry process only, pulping process has been closed since more than 6 months.				Complying (Dry)
108.	M/s Swastik Toughened Glass LLP	Unit obtained CTO for mfg. of toughened glass (dry process only) and no effluent generation from the process. No PETP/evaporator found installed at site, during visit.				Complying (Dry)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	Inlet	Outlet	
109.	M/s Metro Pulp Industries	Unit has obtained CTO for metal surface treatment with the name of M/s Metro Pulp Industries for mfg. of safety pins and stationary clips. But unit found running under the name of M/s Vishwas Steel Safety pins Pvt Ltd. and consent of the same not provided. No effluent generation from process, hence sample not collected				Complying (Dry)

Reprocessing of waste plastics including PVC (04 units)

Sr. No.	Name of the unit	PETP scheme of the unit	Laboratory analysis results of samples collected from PETP			Compliance status w.r.t discharge norms/suspected dilution
			Parameter	Inlet	Outlet	
110.	M/s Peeco Polytech Pvt Ltd.	Physico-chemical→ Tertiary Filtration system →Advance tertiary treatment (UF→RO)→recycling back into the process	pH	7.8	7.7	Complying (ZLD)
			BOD	62	10	
			COD	352	64	
			TSS	205	13	
			O & G	-	BDL	
111.	M/s Jai Mata Plastic	Physico-Chemical→ →Tertiary filtration system→Reuse/recycle in process/Evaporator	Unit was operational, but PETP found non-operational, hence sample not collected. Also bypass provision observed in PETP			Non-complying (PETP found non-operational)
112.	M/s Shri Balaji Enterprises	Physico-Chemical→ →Tertiary filtration system→HSIIDC sewer line→CETP Barhi (No evaporator found installed at site & the unit found reusing/recycling entire treated effluent in plant)	Sample could not be collected due to lack of effluent. Unit found reusing/recycling entire treated effluent in plant			Complying (ZLD)
113.	M/s TSB Polychem Pvt. Ltd.	Physico-chemical→Tertiary filtration system→ reuse in mfg. process	pH	7	7.8	Non-Complying (Dilution)
			BOD	610	33	
			COD	3066	113	
			TSS	1222	21	
			O & G	-	BDL	

ANNEXURE – V: Pollution source mapping of Drain no. 6

In compliance of Hon'ble NGT order dated 28.05.2024 in O.A. No. 622/2024 in the matter of Varun Gulati Vs State of Haryana & Ors., the joint committee carried out mapping (including collection of wastewater samples) of drain no. 06 from origin (Samalkha, district Panipat in Haryana) to confluence with Supplementary drain 1 near Bakhtavarpur Radha Krishna Mandir on NH-1 (including collection of samples from Najafgarh drain a/c of Supplementary drains b/c river Yamuna) to ascertain the impact of sources of pollution in terms of discharge of sewage and industrial effluents into drain no. 6. The details of sampling points in different stretches of drain no. 6 is provided below in Table 1:

Table 1: Stretch-wise sampling locations of drain no. 6 from Samalkha (Panipat) to Wazirabad (Delhi)

S. No.	Stretch	Sampling locations	Waterbody	Latitude	Longitude	Location code
1.	**Stretch 1 (Haryana) Approx. 13 km**	Drain no. 6 near railway flyover of Chulkana Road, Samalkha	Drain no. 6	29.233289	77.004224	D1
2.		Drain no. 6 near Downstream Haryana organics, Chulkana Road	Drain no. 6	29.215494	76.997186	D2
3.		Drain no. 6 near Village BhouraRasulpur	Drain no. 6	29.178515	76.986630	D3
4.		Drain no. 6 near Village Gumar	Drain no. 6	29.131608	76.997361	D4
5.		Drain no. 6 downstream to Ganaur STP (07 MLD)	Drain no. 6	29.117825	77.002935	D5
6.	**Stretch 2 (Haryana) Approx. 22 km**	Drain no. 6 at Upstream of CETP Barhi outlet near Rajulu village	Drain no. 6	29.106427	76.996210	D6
7.		Barhi CETP outlet before discharge in drain no. 6 near Rajulu village	Drain no. 6 and CETP Barhi(16 MLD & 10 MLD) outlet	29.100534	76.994908	D7
8.		Drain no. 6 downstream of CETP Barhi near Ralu village	Drain no. 6	29.096278	76.996746	D8
9.		Drain no. 6 near Jawahari village (entry to Sonipat city)	Drain no. 6	29.027203	77.016483	D9
10.		Drain no. 6 near Beej (seed) market bridge	Drain no. 6	28.999209	77.022873	D10

S. No.	Stretch	Sampling locations	Waterbody	Latitude	Longitude	Location code
11.		Drain no. 6 at upstream of 30 MLD Ratadhana STP outlet	Drain no. 6	28.95986	77.04416	D11
12.		Drain no. 6 near Ratadhana village on Sonipat-Narela Road, downstream of Ratadhana STP outlet	Drain no. 6	28.953864	77.042414	D12
13.	**Stretch 3 (Haryana) Approx. 13 km**	Storm water drain (carrying sewage of 25 MLD STP, Kakroi road, Sonipat)	Storm water drain	28.937885	77.044384	D13
14.		Drain no. 6 post siphon of drain 8 at AkbarpurBarota, Sonepat	Drain no. 6	28.911003	77.06605	D14
15.		Drain no. 6 at exit point from drain 8 at PiyauManiyari b/c of pipeline from CETP Kundli	Drain no. 6	28.883770	77.108489	D15
16.		Drain no. 6 at confluence point of CETP Kundli pipeline in Drain no. 6 at PiyauManiyari, Kundli	Drain no. 6 & CETP Kundli outlet	28.883482	77.108649	D16
17.		Drain No.6 at Harshwardhan colony/Paper Mill colony d/s 500 m to CETP Kundli discharge at PiyauManiyari	Drain6	28.880090	77.10909	D17
18.	**Stretch 4 (Delhi) Approx. 17 km**	Drain no. 6 near Singhu Border entry point in Delhi	Drain no. 6	28.851269	77.125380	D18
19.		Drain No. 6 at NH-1 at Alipur flyover before confluence supplementary 1 drain at PallaBakhtavarpur Road	Drain no. 6	28.802507	77.142697	D19
20.		Supplementary drain 1 (near Radha Krishna hanuman Mandir) at Culvert b/c of drain no. 6	Supplementary drain 1	28.782730	77.141685	D20
21.		Drain no. 6 just before b/c with Supplementary drain at Budhpur-Makhmalpur road, Delhi	Drain no. 6	28.78278	77.144267	D21

S. No.	Stretch	Sampling locations	Waterbody	Latitude	Longitude	Location code
22.	**Stretch 5 (Delhi) Approx. 16 km**	Supplementary 2 drain (from Mungeshpur drain) from HaiderpurBadli before joining supplement 1 drain near Mukarba Chowk	Supplementary drain 2 (Mungeshpur drain)	28.735599	77.155228	D22
23.		Najafgarh drain b/c of supplementary drain-1 (near Delhi Transco office)	Najafgarh drain	28.709164	77.225598	D23
24.		Supplementary drain 1 b/c Najafgarh drain near Nehru Nagar, Delhi	Supplementary drain 1	28.711262	77.227345	D24
25.		Najafgarh drain a/c of supplementary drains and drain no. 6 b/c river Yamuna (near signature bridge)	(Najafgarh drain	28.708276	77.230258	D25

The sampling locations are depicted on map below in Figure 1:

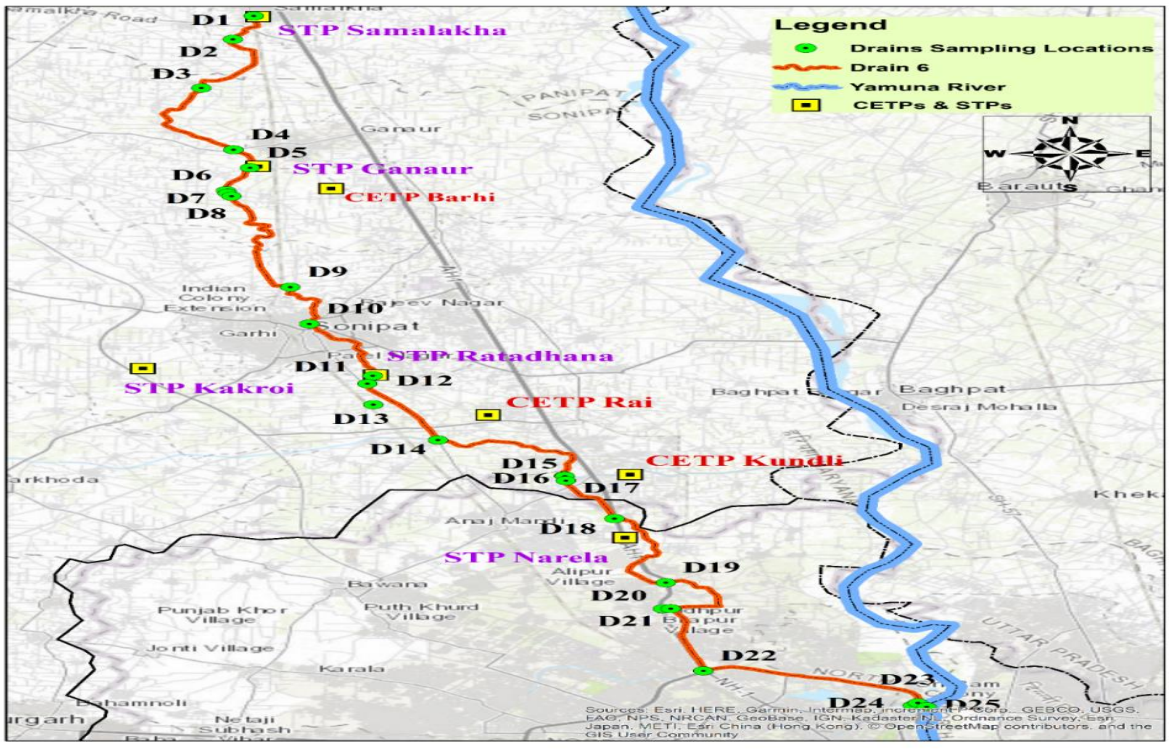


Figure 1: Map showing monitoring locations on Drain No. 6 and its adjoining drains

Stretch 1: Origin of Drain no. 6 from Samalkha town to downstream of Ganaur STP (7 MLD), Sonipat

Stretch 1 of Drain No. 6 was monitored from its origin at Samalkha town (Panipat) up to the downstream point to Ganaur STP (7 MLD), Sonipat. During monitoring of this stretch which is approximately 13 Km in length (D1 to D5), samples were collected from 5 locations i.e., from Railway flyover of Chulkana Road till downstream of 7 MLD Ganaur STP. Lab results of stretch 1 are tabulated below:

Location code	Colour	pH	COD	BOD	TSS	TDS	Cl-	NO_2-N	NO_3N	NH_3N	SO_4	TKN	TC	FC	Flow (MLD
D1	130	7	411	106	125	1264	141	0.03	BDL	30	203	35	24*10^8	14*10^7	0.51
D2	533	7.1	750	224	306	1460	225	0.13	BDL	33	70	46	-	-	-
D3	95	7.4	203	81	128	1224	238	0.03	BDL	39	112	45	-	-	-
D4	104	7.6	193	66	111	1264	190	0.03	BDL	30	68	35	11*10^6	12*10^5	39.5
D5	40	7.6	120	33	32	1104	228	0.3	0.7	21	134	26	17*10^4	11*10^4	53.76

All values in mg/l except for Colour in CU, pH, TC/FC in MPN/100ml

Based on analysis results and location-wise observations made during the monitoring of Drain No. 6 in stretch 1 are as follows:

i. Drain no. 6 near railway flyover of Chulkana Road, Samalkha, Panipat (0 km) – D1

- Flow of the drain was measured as 0.51 MLD and light grey colored of water in the drain was observed. Also, Samalkha Sewage Treatment Plant(STP) (05 MLD) was located near the sampling point, however, no discharge of STP outlet was observed in the drain at the time of visit.
- Three nos. of industries namely, M/s VSP Enterprises Pvt. Ltd. Unit-II, Gandhi Adarsh college, village - Kiwana Tehsil - Samalkha, Distt - Panipat, Haryana (India), M/s Nestle India Ltd. Patti Kalyana Kiwana, Road, Samalkha, Haryana 132101 and M/s Haryana Organics (A unit of Globus Spirits Limited), Chulkana - Samalkha Road, Samalkha, Haryana 132101 were located on the embankment of the drain, in the downstream of this location.
- Outlet from M/s Nestle India Ltd. was observed in the drain however, no discharge in the drain was observed at the time of visit.
- Values of BOD (106 mg/l) and COD (411 mg/l) suggests domestic waste water characteristic of drain which is due to sewage generation from nearby Samalkha township area.

Figure 2: Drain no. 6 near Samalkha, Panipat

ii. Drain No. 6 near Downstream of M/s Haryana Organics, Chulkana Road (D2)

- Downstream location of M/s Haryana Organics (A unit of Globus Spirits Limited), Chulkana - Samalkha Road, Samalkha, Haryana 132101), was filled with silt and sludge with meagre flow.
- Also, septic condition was observed due to the stagnant condition of waste water in the drain.
- From Lab Analysis data, it has been observed that there was significant amount of increase in values of BOD (224 mg/l) & COD (750 mg/l) at the downstream of Haryana Organics which indicates industrial effluent impact on Drain No. 6.

Figure 3: Drain no. 6 at downstream Haryana Organics, Samalkha

iii. Drain no. 6 near Village BhouraRasulpur (D3)

- Village BhouraRasulpur is located at the upstream of this sampling location.
- Black coloured wastewater was observed at this sampling location.
- Solid waste and floatable materials were found dumped in the drain.

- Agricultural field were observed on both side of the drain at village BhouraRasulpur.
- Lab results (BOD – 81 mg/l & COD – 203 mg/l) indicate domestic waste water characteristic of drain.

iv. Drain no. 6 near Village Gumar (D4)

- Villages namely Kheri Gujjar, Khijjarpur and Ahir, Gumar were located at the upstream of this location.
- At this location, the color of the drain was dark black and solid waste and floatable materials were found dumped in the drain. Agricultural field were observed on both side of the drain.
- Screens may be installed by the village authority before the drains originating from the nearby villages.
- Lab results (BOD – 66 mg/l & COD – 111 mg/l) indicate domestic waste water characteristic of drain.

v. Drain no. 6 downstream to 7 MLD Ganaur STP (D5)

- At this location, the flow of the drain no. 6 was measured as 53.76 MLD.
- The villages Gumar and Ganuar were located at the upstream of this location. The sewage of Gumar village is discharged directly into drain no. 6.
- Treated sewage from Ganaur STP is being discharged in to the drain no. 6, therefore, drain samples were collected from the downstream location of the Ganaur STP (07 MLD), Sonipat (coordinate of sampling location at downstream to Ganaur STP: 29.117825, 77.002935).
- Silt deposition was also observed in the Drain no. 6 at this location.
- It is observed that there was decrease in values of BOD (33 mg/l) & COD (120 mg/l) which is due to dilution caused by release of treated effluent from Ganaur STP.

Stretch 2: Drain no. 6 at upstream of CETP Barhi outlet near RajuluGarhi village to Drain no. 6 at downstream of 30 MLD Ratadhana STP outlet

In this stretch, Drain no. 6 receives treated effluent from 16 and 10 MLD CETPs located at Barhi Industrial Area and treated wastewater from 30 MLD STP, Rathdhana Road, Sonipat.

It was observed that in this entire stretch of about 22 Kms, a total of 28 point sources exist in Sonipat district that discharge untreated wastewater into drain no. 6. Out of these, 17 are local municipal drains coming from Sonipat town (out of which only 01 drain was found tapped); and

11 are drains from 08 villages namely, Bhoura Rasulpur, Kheri Gujjar (02 Locations), Ahir Mazra, Gumar (02 Locations), Agwanpur, Bhogipur (2 Locations), Tharya, Jawhri. It was also observed that a distillery unit namely M/s Frost Falcon Distilleries is located at the upstream location (approximately 2.5 km) of the Drain no. 6 at Jawahari village (entry to Sonipat town).

During monitoring of this stretch (D6-D12), samples were collected from 7 locations i.e. from upstream of outlet of CETP Barhi near Rajulu Garhi village till downstream of Ratdhana STP at Ratdhana village. Lab analysis results of this stretch are tabulated below:

Location code	Colour	pH	COD	BOD	TSS	TDS	Cl^-	NO_2^- N	NO_3N	NH_3N	SO_4	TKN	TC	FC	Flow (MLD)
D6	46	7.5	128	27	36	1048	180	0.02	BDL	25	95	39	-	-	-
D7	87	7.6	195	36	54	2092	561	0.03	7.08	14	256	17	-	-	-
D8	59	7.6	171	19	154	1472	390	0.02	3.82	16	307	26	-	-	-
D9	62	7.2	353	183	177	1560	304	0.02	1.38	21	265	28	28*10^7	17*10^6	69.12
D10	545	7.1	331	111	85	1472	418	0.17	0.79	21	121	25	35*10^9	28*10^9	76.97
D11	294	7.1	691	186	81	1432	418	0.1	0.91	29	176	32	22*10^8	24*10^7	-
D12	385	7	240	69	138	1380	371	0.12	0.8	28	135	30	14*10^6	17*10^5	-

All values in mg/l except for Colour in CU, pH, TC/FC in MPN/100ml

Based on analysis results and the location-wise observations were made during the monitoring of Drain no. 6 in stretch 2 are as follows:

i. Drain no. 6 at Upstream of CETP Barhi outlet near Rajulu Garhi village (D6)

- Agwanpur, Sonipat village was located at the upstream of this location.
- This sampling location signifies the control location w.r.t discharge of CETPs located at Barhi Industrial area, Sonipat.
- The observed value of BOD at this location was 27 mg/l.

ii. Barhi CETP outlet before discharge in drain no. 6 near Rajulu village (D7)

- This sampling location is the outfall of CETPs at Barhi HSIIDC (16 and 10 MLD).
- Samples were directly collected from the outfall pipe on drain no. 6 near Rajulu Garhi village, with BOD value – 36 mg/l.

iii. Drain no. 6 downstream of CETP Barhi near Rajulu Garhi village (D8)

- Village Rajulu Garhi was located at the downstream of discharge point of CETP Barhi.
- At upstream of this location, flow of Drain no. 6 is supplemented by treated effluent from 16 & 10 MLD CETP.

- The BOD value of drain at this location was 19 mg/l which may be because of the high volume flow from CETP Barhi outfall causing a dilution effect.
- Thereafter, Drain no. 6 then flows to Sonipat town downstream of this point.

iv. Drain no. 6 near Jawahari village (entry to Sonipat city) (D9)

- Drain no. 6 enters in to city Sonipat from Jahari village. The flow was measured as 69.12 MLD at this location.
- The colour of the drain was black. Deposition of silt was observed in the drain.
- Solid waste and floatable materials were found dumped in the drain at this location.
- From lab analysis data, it has been observed that there was significant increase in values of BOD i.e. 183 mg/l and COD i.e. 353 mg/l at the entry point of Sonipat city suggests domestic waste water characteristics which might be due to discharging of sewage from nearby areas of Sonipat town.

v. Drain no. 6 near Beej (seed) market bridge (D10)

- Huge quantity of solid waste and floatable materials were found dumped in Drain no. 6 on Beej market bridge, Sonipat. The colour of the drain effluent was black.
- Many other small drains carrying sewage from the different areas/colonies were directly discharging into the drain no. 6 at upstream of this location.
- The drain was covered in a concreted structure.
- The flow of the drain no. 6 was measured as 76.97 MLD.
- There are 28 no. of point sources of untreated discharge exist in the Drain no. 6 from Sonipat town**.**
- Highest value of coliform bacteria in this stretch was found at this location indicating a high volume of domestic sewage in the drain no. 6.

vi. Drain no. 6 at upstream of 30 MLD Ratadhana STP outlet (D11)

- Ratadhana STP is located downstream of the Sonipat town area on Sonipat-Narela Road.
- Many pumps were seen pumping drain water to nearby agriculture fields from Drain no. 6.
- At Upstream of sampling location, the drain is carrying mixed type of effluent from Sonipat town and industries located upstream of town. Drain was under-construction (covering from top) from Sonipat town up to this point.
- Stagnancy and lean flow with high quantity of sludge observed at the location with black-coloured drain water with an oily layer on the surface of drain.
- High values of BOD, COD, TSS and TKN observed at this location.

vii. Drain no. 6 near Ratadhana village on Sonipat-Narela Road, downstream of Ratdhana STP outlet (D12)

- This location is downstream of the Ratadhana 30 MLD STP and Sonipat town.
- This area is thinly populated and drain no. 6 is covered beyond this point up to near OP Jindal University.
- The value of BOD at this location was 69 mg/l which is lower than at u/s of Ratadhana STP where BOD was observed at 186 mg/l.
- Discharge from 30 MLD STP Ratadhana at upstream of this point causes dilution of the drain water causing observed lower value of BOD and fecal coliform compared with upstream of Ratadhana STP.

Stretch 3: Drain no. 6 at upstream of OP Jindal University on Sonipat-Narela Road to Drain no. 6 near Harshwardhan Colony, Kundli

In this stretch, Drain no. 6 receives discharge of treated wastewater from 25 MLD STP, Kakroi Road, Sonipat through a storm water drain. It also receives discharge of treated effluent from 10 MLD CETP, Rai, Sonipat and 10 MLD CETP, located in Kundli at Sonipat city. Another discharge point from of sewage/storm water pumped from Kundli industrial area also mix with drain no. 6 at Piyau Maniyari after its flows towards Delhi separating from parallel line with drain 8. Effluent from nearby residential areas in Sonipat and Kundli also have discharge in this stretch.

During monitoring of this stretch which is approximately 13 Km in length, samples were collected from 5 locations i.e. from Storm water drain at Kakroi road Sonipat till Harshwardhan colony/Paper Mill colony d/s 500 m to CETP Kundli discharge at Piyau Maniyari. Lab analysis results of this stretch are tabulated below:

Location Code	Colour	pH	COD	BOD	TSS	TDS	Cl-	NO_2^- N	NO_3N	NH_3N	SO_4	TC	FC	TKN
D13	29	7.6	39	3	31	1024	266	0.01	BDL	10	258	84*10^5	21*10^5	13
D14	38	7.1	218	84	101	752	228	0.02	BDL	27	164	35*10^9	46*10^8	28
D15	115	7.3	197	45	88	984	285	0.02	0.5	31	202	-	-	32
D16	71	7.1	217	72	124	1840	418	BDL	BDL	26	434	-	-	28
D17	142	7.3	222	105	114	1304	323	0.03	BDL	34	238	-	-	36

All values in mg/l except for Colour in CU, pH, TC/FC in MPN/100ml

Following major observations were made during the monitoring of Drain no. 6 in stretch 3:

i. Storm water drain (carrying treated sewage of 25 MLD STP, Kakroi road, Sonipat) (D13)

- A storm water drain carrying discharge of treated effluent from Kakroi STP (approx. 11 km from sampling point) and flow from the drain was used for irrigation purposes in nearby agricultural fields, meets drain no. 6 at approx. 300 meter downstream of the sampling point near Jagdishpur village.
- Significant amount of flow was observed near the culvert and backflow from Drain no. 6 to this storm water drain at the confluence point.
- Backflow of drain no. 6 observed in the storm water drain may be due to the higher flow in drain no. 6.
- As informed by the villagers, the water from storm water drain is used for irrigation in nearby areas. Largely flows through farm lands from Kakroi STP to confluence point with drain no. 6 near Jagdishpur village.

ii. Drain no. 6 post siphon of drain 8 at Akbarpur Barota, Sonipat (D14)

- At Akbarpur Barota village, drain no. 6 crosses Drain no. 8 through a siphon, has a considerable amount of flow.
- Thereafter, Drain no. 6 was lined and flows parallel along Drain no. 8 till Piyau Maniyari, Kundli.
- At upstream of 500 meters from this sampling location, effluent from CETP Rai, Sonipat was discharging into Drain No. 6, and drain was covered up to the Western Peripheral Road.
- The analysis results of the sample from this sampling point show BOD – 84 mg/l which is higher than the value at d/s of Ratadhana STP (69 mg/l), which may be because of discharge of treated effluent from CETP Rai, upstream of this sampling point.
- Drain no. 6 starts flowing parallel to drain 8 from this point up to Kundli. Storm water and other wastewater from Akbarpur Barota were received in drain no. 6. Akbarpur Barota is an Industrial area.

iii. Drain no. 6 at exit point from drain 8 at Piyau Maniyari b/c of CETP Kundli outlet (D15)

- Drain no. 6 diverts its parallel path from Drain no. 8 and channelizes towards Kundli - Narela from this point downwards. Drain No. 8 flows towards Palla and meets the Yamuna river.
- It carries Industrial effluent from the Nathupur industrial area and domestic sewage from nearby areas.

- At downstream of the sampling location, CETP Kundli was discharging effluent into it through a pipeline. Also, sewage from the Kundli industrial area is pumped to this point of Drain no. 6.
- Drain no. 6 changes direction towards the Singhu border from this point and meets CETP Kundli outlet at downstream of the sampling location.

iv. Drain no. 6 at confluence point of CETP Kundli pipeline in Drain no. 6 at Piyau Maniyari, Kundli (D16)

- This point is the diversion point of drain no. 6 towards Kundli after flowing parallel to drain 08 downstream of Barota.
- Samples were collected at PiyauManiyari just after CETP Kundli outlet and domestic sewage discharge from Kundli area into Drain No. 6.
- Two sewer line from CETP Kundli and one domestic sewer line from Kundli area running parallel along drain no. 8 discharging into sampling location.
- Discharge from CETP Kundli reaches drain no. 6 and solid waste and sludge observed in drain no. 6 downstream of this point.

v. Drain No.6 at Harshwardhan colony/Paper Mill colony d/s 500 m to CETP Kundli discharge at Piyau Maniyari (D17)

- This sampling point receives discharge from drain no. 6 and is supplemented by discharge from Kundli CETP and sewage pumping station in Kundli industrial area.
- Drain No. 6 is receiving sewage from nearby slum areas and Cattle farming activities.
- Downstream of discharge from CETP Kundli and sewage pumped from Kundli Industrial area. Highest BOD -105 mg/l in stretch 3.

Stretch 4: Drain No. 6 near Singhu Border of Delhi and Haryana at NH-1 to drain no. 6 confluence with supplementary drain1 near Makhmalpur village on Palla-Bakhtavarpur Road)

In this stretch of Drain no. 6 enters Delhi at Singhu border carrying waste water both Industrial and domestic from Panipat and Sonipat district of Haryana flowing through industrial clusters in Haryana in Kundli and Rye. This stretch of drain no. 6 starting from Singhu border ends near Makhmalpur village on Palla Bakhtavarpur Road, Bhiarogarh near Budhpur, Delhi where drain no. 6 meets supplementary drain 1. During monitoring of this stretch which is approximately 17 Km in length, samples were collected from 4 locations i.e. from Singhu

Border to near Makhmalpur village on Palla Bakhtavarpur Road. Drain no. 6 receives discharge from 10 MGD Narela STP, Delhi in this stretch which may be one of the causes of the drop in BOD value of drain no. 6 to 19 mg/l in comparison to the upstream location value of 60 mg/l. The analysis results of this stretch are tabulated below:

Location code	Colour	pH	COD	BOD	TSS	TDS	Cl^-	NO_2N	NO_3N	NH_3N	SO_4	TC	FC	TKN
D18	107	7.4	258	62	345	1104	418	0.02	0.91	34	356	-	-	37
D19	23	7.5	136	60	112	1616	714	BDL	0.89	29	148	22*10^4	27*10^3	30
D20	123	7.2	225	67	142	3776	932	0.03	BDL	22	876	28*10^6	17*10^5	26
D21	60	7.6	119	19	106	1256	418	BDL	0.64	25	410	92*10^3	92*10^3	28

All values in mg/l except for Colour in CU, pH, TC/FC in MPN/100ml

Following major observations were made during the monitoring of Drain no. 6 in stretch 4:

i. Drain no. 6 near Singhu Border entry point in Delhi (D18)

- Samples were collected from culvert at NH-1 near Singhu border just after entering Delhi, downstream of Rai and Kundli industrial area in Sonipat.
- This point was located at approx. 4 km downstream of Piyau Maniyari in Kundli where drain no. 6 separates from drain 8.
- Drain no. 6 receives discharge from CETP Kundli & CETP Rai upstream of this point. High colour value observed.
- A channel meets drain no. 6 at downstream of Harshwardhan colony near Kundli border, coming from Delhi (western side), team could not reach the confluence point of the channel with drain no. 6 because of rain.

ii. Drain No. 6 at NH-1 at Alipur flyover before confluence with Supplementary 1 drain at Palla Bakhtavarpur Road (D19)

- At upstream of sampling location (7.16 km downstream of Singhu Border at Alipur flyover before confluence with Supplementary 1 drain at Palla Bakhtavarpur Road), Drain No. 6 carries industrial effluent and domestic sewage from nearby areas.
- At downstream drain No. 6 is merging with Supplementary drain 1 at near Budhpur village, Delhi, Bankoli industrial area is located downstream of this point on Drain no. 6.
- This location is at downstream of Narela STP which resulted in dilution of Drain no. 6.

iii. Supplementary drain 1 (near Radha Krishna Hanuman Mandir) at Culvert b/c of Drain no. 6. (D20)

- Drain no. 6 meets supplementary drain at 400 meter downstream of this point and flows up to Wazirabad to meet Najafgarh drain.
- Industrial area of Budhpur, Delhi is located near the supplementary drain upstream of the sampling point.
- Highest value of sulphate found in Supplementary drain 1 at this location before confluence of drain no. 6.

iv. Drain no. 6 just before b/c with Supplementary drain at Budhpur-Makhmalpur road, Delhi (D21)

- Samples were collected from drain no. 6 at Budhpur-Makhmalpur road, Delhi near Radha Krishna hanuman Mandir just before its confluence with supplementary drain.
- Makhmalpur village is located upstream of the sampling point and extended channel opposite side of culvert on drain no. 6 was found without flow with rainwater deposition at Makhmalpur village.
- Huge amount of biomedical waste dumping was observed along the banks of drain.

Figure 4: Biomedical waste dumping on the embankment of Drain no. 6

- Drain No. 6 had a BOD of 19 mg/l near Makhmalpur village, just before its confluence with Supplementary Drain 1. The decrease in BOD at this location, compared to Alipur (D19), may be attributed to the mixing of treated sewage from the Narela STP and the relatively sparse population in the upstream catchment of Drain No. 6, which allows for the natural degradation of organic pollutants.

- The coliform bacteria levels at this point in Drain No. 6 were also found to be lower, with TC and FC as 92×10^3 MPN/100 ml. This suggests a dilution of drain effluent compared to upstream locations and a higher proportion of domestic wastewater.

Stretch 5: Confluence point of drain no. 6 with Supplementary drain 1 near Bakhtavarpur Radhakrishan Mandir on NH-1 to Najafgarh drain a/c of Supplementary drains (including drain no. 6) b/c river Yamuna (near signature bridge)

This stretch signifies the stretch of supplementary drains from confluence point of drain no. 6 near Makhmalpur into Supplementary 1 drain, and confluence of supplementary drain 2 near Mukarbachowk with supplementary drain 1 which further flows to river Yamuna through Najafgarh drain near Wazirabad. Najafgarh drain and supplementary drain 2, also carries waste water from Western and Northern areas of Delhi through local drains including Mangeshpur drain as well as from Najafgarh drain's catchment area in Haryana state. This monitored stretch of drain is approximately 14 km and samples from 04 points are collected from this stretch from different water bodies including Najafgarh drain. The details of samples are as follows -

Location Code	Colour	pH	COD	BOD	TSS	TDS	Cl-	NO_2N	NO_3N	NH_3N	SO_4	TC	FC	TKN
D22	5	7.2	205	104	359	820	323	BDL	BDL	11	70	79*10^5	79*10^5	22
D23	48	7.3	186	14	87	1088	371	0.01	BDL	28	307	31*10^5	21*10^5	36
D24	45	7.4	167	66	363	1524	325	BDL	BDL	21	207	35*10^4	35*10^4	26
D25	62	7.3	159	50	257	1356	285	0.02	BDL	23	183	17*10^5	11*10^5	33

All values in mg/l except for Colour in CU, pH, TC/FC in MPN/100ml

i. Supplementary 2 drain (from Mungeshpur drain) from Haiderpur Badli before joining supplement 1 drain near Mukarba Chowk (D22)

- Supplementary 2 (Mungeshpur drain) at Mukarba Chowk carries domestic sewage from Rohini and nearby areas finally discharging into Supplementary 1.
- This drain after confluence with supplementary drain1 near Mukarba chowk flows to river Yamuna through Najafgarh drainnear Wazirabad.

ii. Najafgarh drain b/c of supplement 1 drain (near Delhi Transco office) (D23)

- Najafgarh drain carries waste water from large part of Delhi and many parts of Haryana.
- At 500 m downstream of sampling location supplementary 1 drain is merging into Najafgarh drain.

iii. Supplementary drain 1 b/c Najafgarh drain near Nehru Nagar, Delhi (D24)

- Supplementary drain 1 at coordinates N 28.711262 E 77.227345 near Wazirabad old bridge just before confluence with Najafgarh drain was a mixed drain carrying industrial effluent from Bharogarh and other industrial areas in NCR and domestic sewage from nearby areas with a huge amount of flow.
- At upstream of sampling location Supplementary drain 2 is merging at Mukarba Chowk. while at downstream it is finally discharging into Najafgarh drain.
- During monitoring, Sewage was observed blackish in color and having foul smell.

iv. Najafgarh drain a/c of supplementary drains and drain no. 6 b/c river Yamuna (near signature bridge) (D25)

- Najafgarh drain enters Delhi from Najafgarh area and traverse a distance of approx. 55 km before final confluence with river Yamuna. It carried domestic sewage generated from South west, West and North west Delhi.
- At upstream of sampling location distance of around 300 m supplementary 1 drain carrying waste water of drain no. 6, is merging with Najafgarh drain.
- During monitoring, Sewage was observed blackish in color along with foul smell.