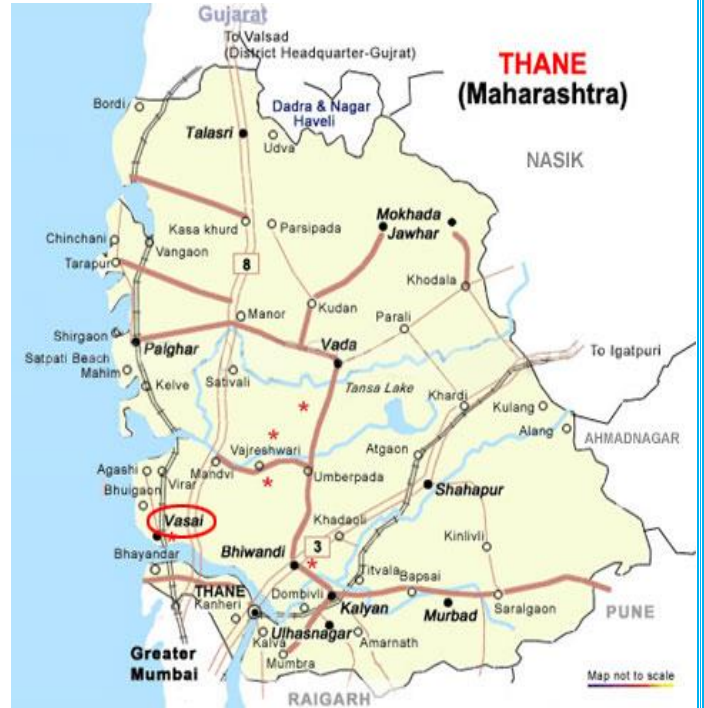
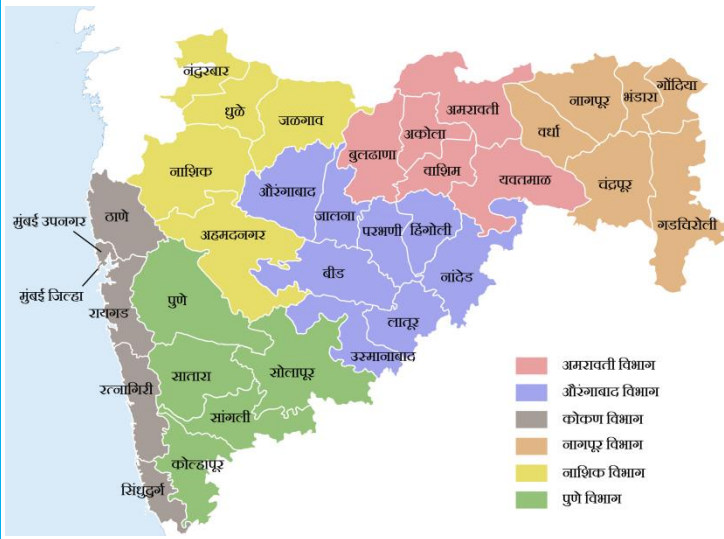
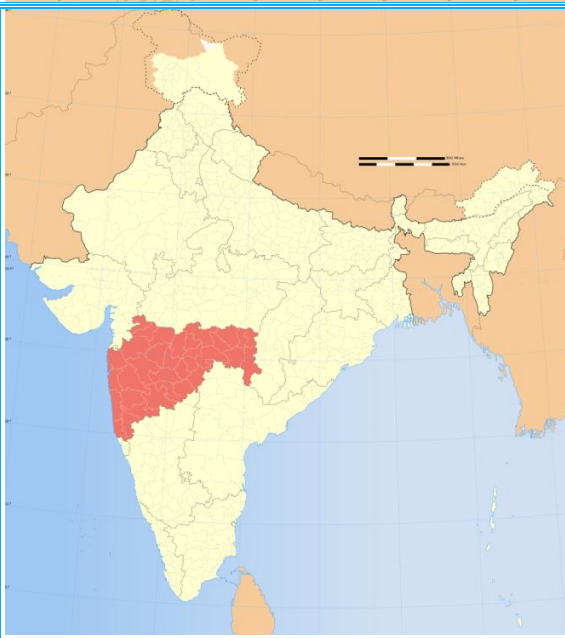


R-2 Revised Action Plan for Industrial Cluster in Critically Polluted Areas

तारापुर Tarapur



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

July, 2020

A. PREAMBLE:

In 2009, the Ministry of Environment & Forests (MoEF), Govt. of India in association with Central Pollution Control Board (CPCB), New Delhi and Indian Institute of Technology (IIT), New Delhi have carried out an environmental assessment of industrial clusters across the country named Comprehensive Environmental Pollution Index (CEPI) with the aim of identifying polluted industrial clusters & prioritizing planning needs for intervention to improve the quality of environment in these industrial clusters and the nation as a whole. For this, CPCB has selected 88 industrial clusters in country out of which 43 Nos. of industrial clusters in 16 states.

The industrial clusters/areas having aggregated CEPI scores of 70 and above were considered critically polluted clusters/areas and those with scores above 60 were classified as Severely Polluted; further detailed investigations were carried out in terms of the extent of environmental damage and formulation of appropriate remedial action plan.

Again in year 2017-2018 CPCB carried out monitoring and found that, number of identified polluted areas in country went upto 100. The said number included 38 Critically Polluted (CEPI Score above 70), 31 Severely Polluted (CEPI Score between 60-70) and remaining 31 as Other Polluted (CEPI Score below 60).

In identified 100 polluted areas Maharashtra having 9 Nos. of area namely Tarapur (CEPI Score 93.69), Chandrapur (CEPI Score 76.41), Aurangabad (CEPI Score 69.85), Dombivali (CEPI Score 69.67), Nashik (CEPI Score 69.49), Navi Mumbai (CEPI Score 66.32), Chembur (CEPI Score 54.67), Pimpri-Chinchwad (CEPI Score 52.15) & Mahad (CEPI Score 47.12).

Government of Maharashtra, under Chairmanship of Principal Secretary, Environment Department, GoM constituted State Level Committee and one local committee at Regional Officer level at each regions. Also Member Secretary of Board conducted several review meetings with all stakeholders at a regular interval to review the status of implementation of CEPI action plans.

Board has prepared comprehensive action plan for Nashik CEPI area (Satpur & Ambad MIDC), which help to reduce CEPI score below 60.

B. Tarapur:

1. Area details including brief history (background information):

Tarapur is a census town in Palghar district (earlier Palghar was taluka and has recently notified as district) in the Indian state of Maharashtra. It is an industrial town located some 45 km north of Virar, on the Western Railway line of Mumbai Suburban Division (Mumbai Suburban Railway). Tarapur can be reached from Boisar, the nearest railway station. It is 20 km off National Highway NH8.

Tarapur in houses major industrial estates of Maharashtra Industrial Development Corporation, Tarapur Industrial Estate, accommodate include bulk drug manufacturing units, specialty chemical manufacturing units, steel plants and some textile plants.

Unlike other industrial estates, this industrial estate has a pleasant look due to the roads crossing at right angles and lots of small gardens adjacent to the boundary walls of the industrial units. The locations near Mumbai Port/ Mumbai Harbor (BPT) and JNPT as well as proximity to Trans Thane Creek (TTC) MIDC, Vapi GIDC add a great value to this industrial estate. It is located on the most important rail-route, Mumbai to Delhi and the Mumbai-Ahemdabad Highway, a part of the Golden Quadrilateral project.

Government of Maharashtra has established Industrial Estate at Boisar Tarapur in the year 1972. This estate is known as MIDC Tarapur. This is one of the largest chemical industrial estate in the State of Maharashtra. MIDC is located 100 km away from Mumbai on the Western Railway track and 18 km away from Mumbai-Ahemdabad National Highway No. 8 in the District of Thane. The total developed area of Tarapur MIDC is 1035 hectares. The area available for industrial plots is 852.74 hectares. The area under open space 85.27 hectares. The area under amenity space is 42.64 hectares. Population in & around Industrial Area of 75 villages as per census 2001 is 1,84,345.

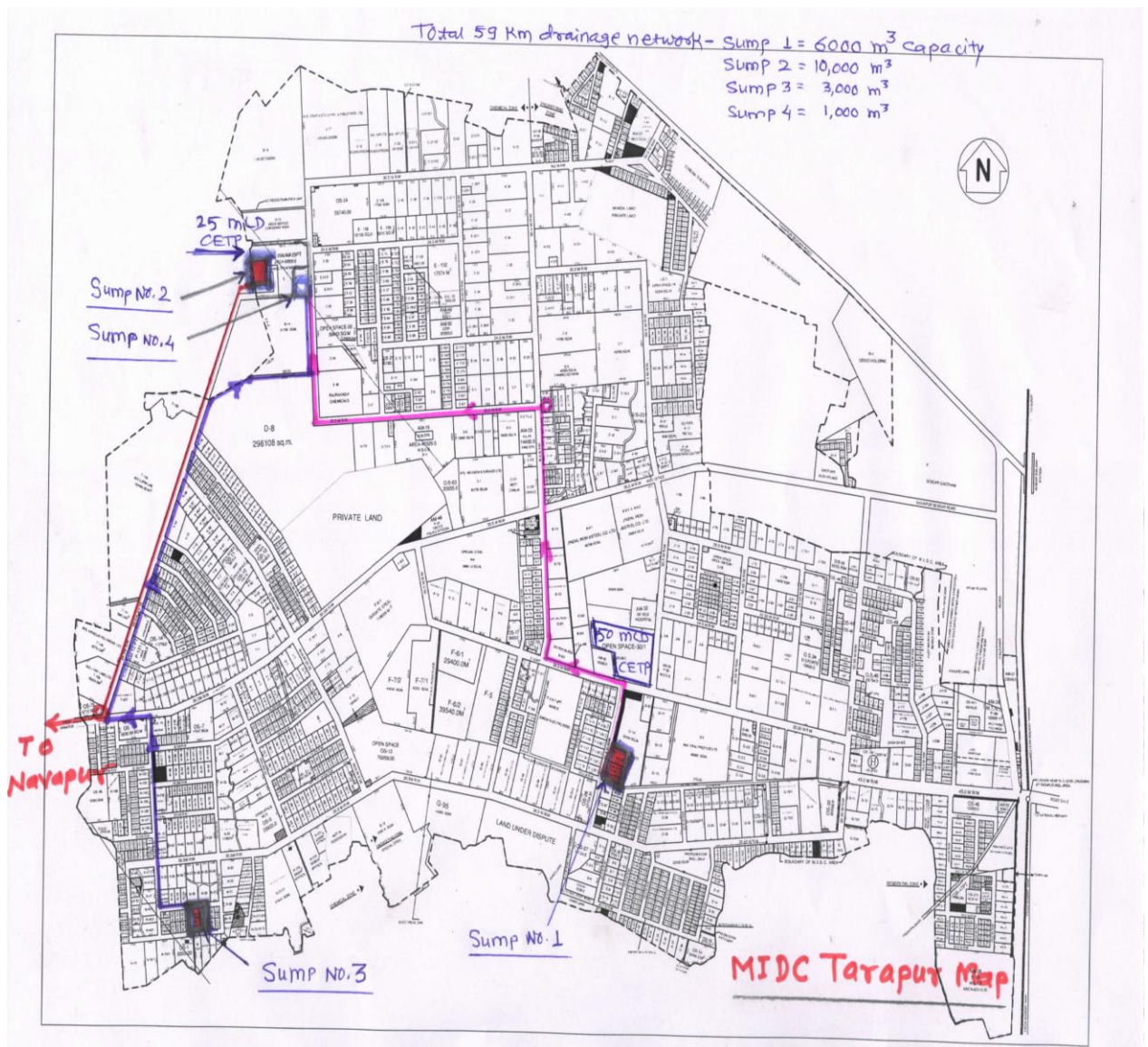
2. Location:

The industrial area is established in Taluka & District Palghar of Maharashtra State. It lies in zone III as per seismic map of India. Tarapur is geographically located at 17°42'N 75°28'E 17.7°N 75.47°E. It has an average elevation of 456 meters (1496 feet). The nearest Railway station is Boisar on Mumbai Ahmedabad/ Delhi rail route, which is about 4 km from industrial area. It is at an elevation of average 10 m above the MSL. All the villages around is connected by excellent network of roadways. Nearest highway is NH-8 connecting Mumbai to Ahmedabad. Tarapur MIDC is approximately 130 kms from Mumbai and 17 kms off the national highway NH-8.

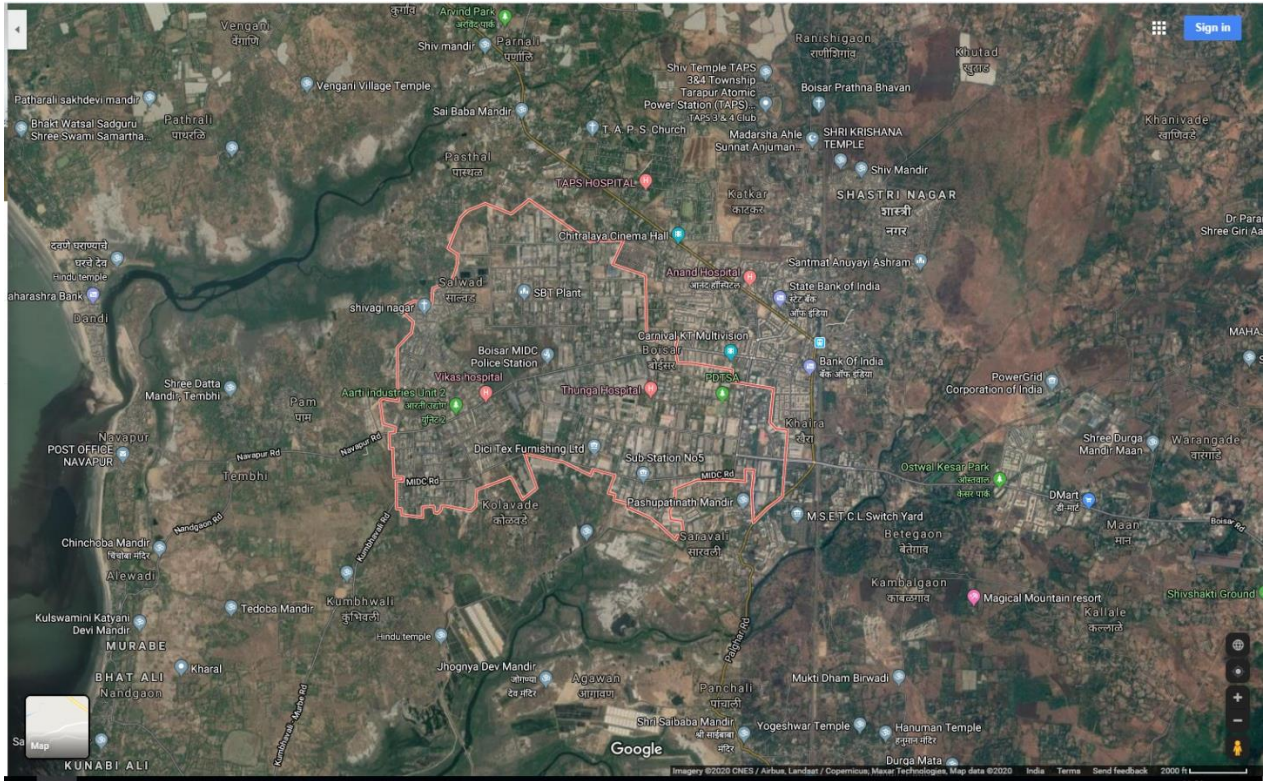
3. MAP of MIDC Tarapur:



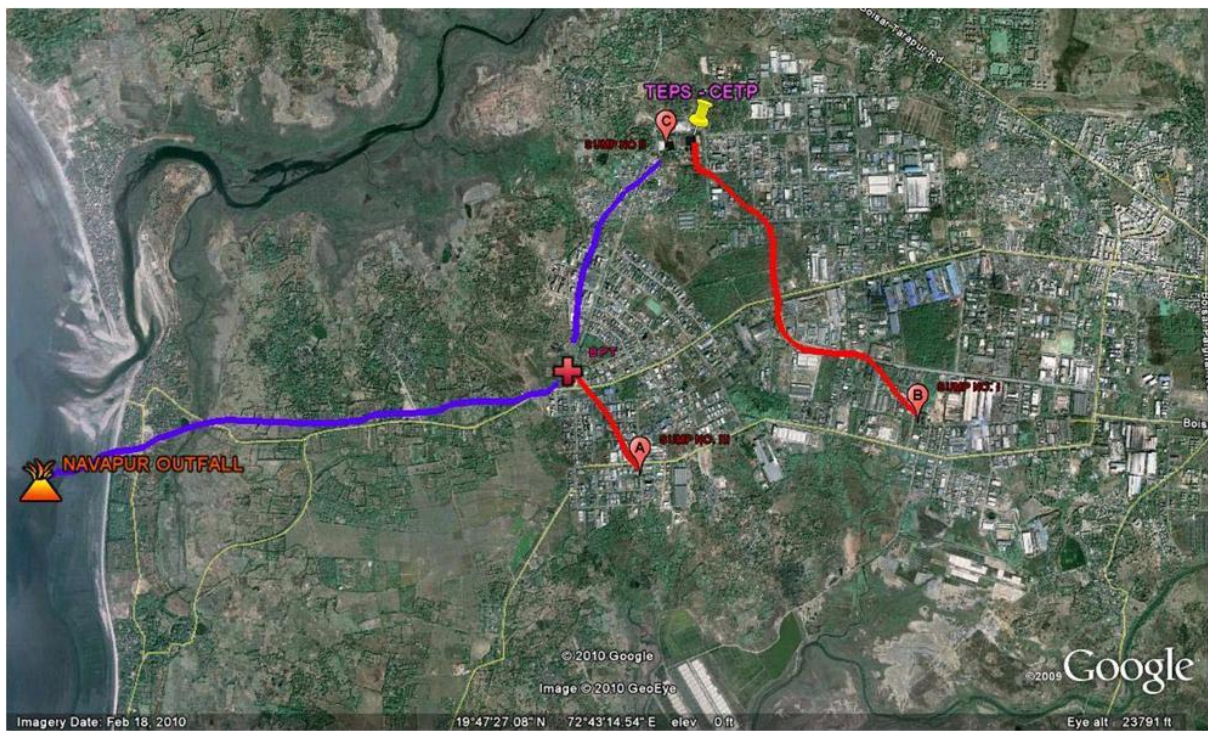
Sump wise map



4. CLUSTER DEMARCATIION:



Digital map of MIDC Tarapur



CETP Discharge Point

The initial boundary coordinates of the cluster boundary are as follows:

Table 1

Direction	Latitude	Longitude
East	19 ⁰ 47'19.65" N	72 ⁰ 42'54.45" E
West	19 ⁰ 45'05.24" N	72 ⁰ 45'05.24" E
North	19 ⁰ 48'37.64" N	72 ⁰ 43'51.91" E
South	19 ⁰ 45'19.65" N	72 ⁰ 42'54.45" E

Also, a 5 km buffer zone has been demarcated from the edge of the cluster as shown in the maps below:



Tarapur Industrial Cluster demarcation with 5 km Impact zone

5. Total Population and sensitive receptors (hospitals, educational institutions, Courts etc) Residing in the area comprising of geographical area of the cluster and its impact Zone (minimum 5 km):

As of 2001 India census, Tarapur had a population of 7012. Males constitute 50% of the population and females 50%. Tarapur has an literacy rate of 91% for both males and females, much higher than the national average of 60%. In Tarapur, 11% of the population is under 6 years of age. Total villages around Tarapur Industrial area namely Boisar, Salwad, Kumbhavali, Pasthal, Pam and Sarawali. Boisar is main residential area located within in 2.0 km radius from MIDC Tarapur. There are 16 villages in and around Tarapur Industrial area come under radius of 5.0 km compromising total population 88399 as per year 2001 census. Details of population is given table

Table 2

Population in surrounding at MIDC, Tarapur area (Year 2001)

Sr. No	Village	Distance from MIDC	Population		
			female	Male	Total
1	BOISAR	@ 500 meters	6356	8329	14685
2	SALWAD		3058	4829	7887
3	KUMBHAVALI		851	1232	5086
4	PASTHAL	@ 1 km	7551	8634	16185
5	PAM	@ 1.5 km	816	1093	1909
6	SARAWALI	@ 1 km	2483	3020	5503

6. Eco-geological features Impact Zones (the area comprising of geographical area of the cluster and its impact zone (minimum 5 km):

a) Major Water Bodies (Rivers, Lakes, Ponds etc)

There are no Rivers, lakes, ponds within the radius of 5.0 km. However, River surya is flowing within the 12 Km from industrial area which is main water source for operations of industrial activities.

b) Ecological Parks, sanctuaries, flora and fauna or any eco sensitive zones.

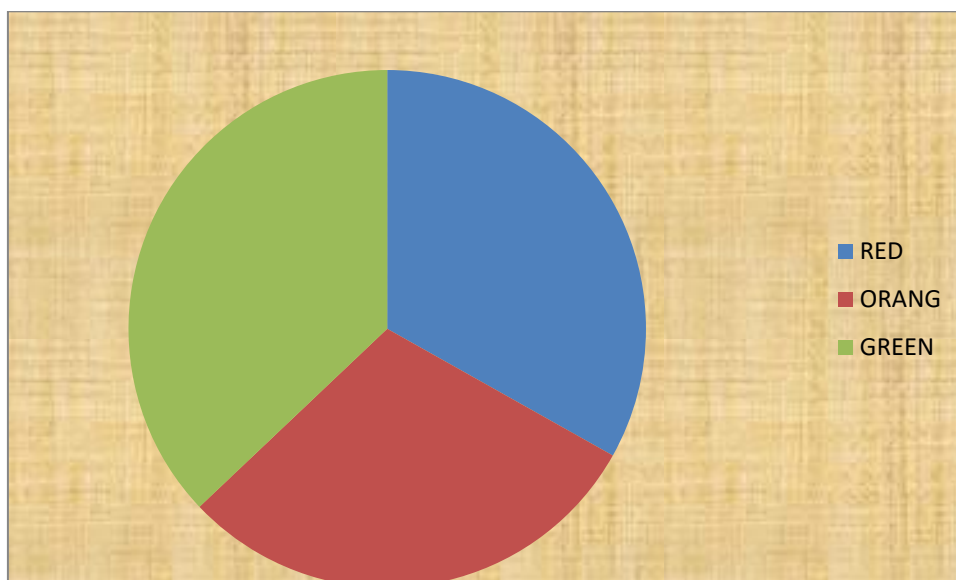
There are no Ecological Parks, sanctuaries, flora and fauna or any eco sensitive zones from boundary of MIDC.

7. INDUSTRIES IN THE CLUSTER: RED CATEGORY & 17 – CATEGORY:

The total number of industries operating in the Tarapur Industrial cluster is as listed below:

Table 3

Sale/ Category	RED	ORANG	GREEN	Total
Large	18	Nil	Nil	18
Medium	1	Nil	Nil	01
Small	40	53	66	159
Total	59	53	66	178



Industrial Statistics

Table 4

17 category Industries

		In operation (Unit)	Closed (Unit)
Pharmaceutical (Bulk Drugs)	20	18	2
Dye & Dye	1	1	0
Pesticide	2	2	0
Total	23	21	0

Table-5

Sr NO	Industries Name	Industry Type
1	M/s Bajaj Healthcare Pvt. Ltd., N-216/217, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
2	M/s Calyx Chemicals, N-102, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
3	M/s Jivraj chemicals (M/s Calyx chemicals and Pharmaceuticals Ltd) Unit - II Plot No.: N-90, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
4	M/s.Aarti Drugs Ltd, N-198, MIDC Tarapur, Dist-Palghar	Basic Drugs & Pharma Mfg.
5	M/s Aarti Drugs Ltd.Plot No.: E-9/3 MIDC, Tarapur	Basic Drugs & Pharma Mfg.
6	M/s Aarti Drugs, E-21/22, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
7	M/s Lupin Ltd., T-142, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
8	M/s Aarti Industries, E-50, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
9	M/s The Pharmaceutical Products of India, N-24/25, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
10	M/s Auro Laboratories, K-56, MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
11	M/s Aarti Industries Ltd, K-17/18/19 , MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
12	M/s Sequent Scientific Ltd, W-150, , MIDC Tarapur, Dist.-Thane.	Basic Drugs & Pharma Mfg.
13	M/s. Melody Healthcare pvt. Ltd. J-73, MIDC Tarapur, Dist Thane	Basic Drugs & Pharma Mfg.
14	M/s Nipur Ltd., D-17, 20, MIDC Tarapur, Dist.-Thane.	Dyes and Dye-intermediates
15	M/s UPL (formerly M/s Punjab Chemicals & Crop Protection Ltd.), E-51/1 &2/52, MIDC, Tarapur, Dist-Thane	Pesticide
16	Sumitomo Chemicals India P. Ltd.,T-137/138/113/251 MIDC, Tarapur, Dist-Thane	Pesticide
17	M/s. Arch Pharma , E-80, MIDC Tarapur.	Basic Drugs & Pharma Mfg.
18	M/s.Shrinivas Chemicals Industries Pvt. Ltd E-5, MIDC Tarapur, Dist-Palghar	Basic Drugs & Pharma Mfg.
19	M/s. Mac Chem Products Ltd, N-211/2/10, MIDC Tarapur, Palghar	Basic Drugs & Pharma Mfg.
20	M/s. Bharat Chemicals, L-30,29,13,28, MIDC Tarapur, Palghar	Basic Drugs & Pharma Mfg.
21	Nutra Plus Ltd, N-92, MIDC Tarapur, Palghar	Basic Drugs & Pharma Mfg.
22	NGL Fine chem Ltd., F-11, MIDC Tarapur, Palghar	Basic Drugs & Pharma Mfg.
23	Medley Pharmaceuticals Ltd., Plot No. F-13, MIDC Tarapur	Basic Drugs & Pharma Mfg.

8. Grossly Polluting industries

There is no grossly polluting industry in MIDC Tarapur which is discharging treated/untreated effluent directly to River /creek. Industries located in MIDC Tarapur have their own effluent treatment facilities. Most of industries located in Tarapur industrial area have become members of TEPS CETP. Individual industries are treating effluent in their in house Effluent Treatment Plants. Treated effluent collected from individual industries will be further treated by TEPS CETP and finally discharged to MIDC sumps from where MIDC is pumping treated effluent/partially treated effluent to Navapur Creek. Some quantity of treated effluent is discharged to MIDC sump from where it will be destined to navapur creek.

9. INFORMATION ABOUT CETP:

- **Existing CETP Capacity** :- 25 MLD
- **Proposed CETP** :- 50 MLD
- **Compliance of Existing CETP :-** Presently not meeting the consented Standards & in accordance no up-gradation.
- **Status of proposed CETP :-** Environment Department have accorded Environmental clearance. Out of 50 MLD 25 MLD CETP work completed in January-2020 and is in operation. Remaining 25 MLD CETP work in progress.

MIDC SUMP DETAIL AND CETP RESULTS (existing 25 MLD)

Sr. no	Parameter	Zone A,B,C, D, F,H (Gravity line) Textile	SUMP-1. (Zone-G,J,S,W. Pumping/gravity)	E-Zone. (Gravity)	Sump 3 (Zone-L,M,N)	Sump-4 (Zone-K,T)
1	Collection sump Capacity in m ³	6000	...	1000	500
2	Flow (MLD)	10	9.5	0.5	2.5	2.5
3	COD (mg/l)	1650	2600	14500	9000	7500
4	TDS (mg/l)	4500	6000	15500	16500	12000

CETP INLET RESULTS (existing 25 MLD)

Sr. No.	Parameters	Inlet standards	Actual annual average of inlet			
			2016-17	2017-18	2018-19	2019 to Till date
1	pH	5.5-9.0	6.1	6.9	6.7	6.8
2	BOD	1500 mg/lit	1103.4	1039	1250.03	833.57
3	COD	3500 mg/lit	3551.48	3171.53	4332.72	2873.22
4	SS	1000 mg/lit	488.3	244.3	381.8	271.6
5	O & G	50 mg/lit	6.5	4.7	3.6	3.6
6	TDS	-	9550.25	8755.79	10976	9190.68

CETP OUTLET RESULTS (existing 25 MLD)

Sr. No.	Parameters	Outlet standards	Actual annual average of Outlet			
			2016-17	2017-18	2018-19	2019
1	pH	6.0-9.0	7.06	7.23	6.92	6.89
2	BOD	30 mg/lit	304.56	270	336.28	221.09
3	COD	250 mg/lit	917.65	810.07	1090.1	683.83
4	SS	100 mg/lit	203.5	154.7	190.1	106.2
5	O & G	10 mg/lit	2.8	2.2	2.1	1.5
6	TDS	2100 mg/lit	4091.52	3908.19	3774.38	2517

50 MLD CETP

- Environment Department have accorded Environmental clearance. Out of 50 MLD 25 MLD CETP work completed in January-2020 and is in operation. Remaining 25 MLD CETP work in progress.

Subsidy:

Cost as per revised DPR: ₹ 119.83 Cr.

MIDC share @ 20 % : ₹ 23.96 Cr.

Subsidy Released : ₹ 16.53 Cr.

Additional New 25 MLD CETP Inlet & Outlet Standards:

Sr. No.	Parameters	Inlet standards	Outlet Standards
1	pH	5.5-9.0	6.0-9.0
2	BOD	1500 mg/lit	30 mg/lit
3	COD	3500 mg/lit	250 mg/lit
4	SS	1000 mg/lit	100 mg/lit
5	O & G	50 mg/lit	10 mg/lit
6	TDS	--	2100 mg/lit

1) Construction of 4000 m³ Capacity Sump with Pump house & connecting inlet / disposal lines

4000 Cum Sump + Pump House	Sump Walls are completed. Pump house floor slab is completed	Dump is completed. Pump house is completed. Erection of Electric Panels is in progress.	Completed
500 mm dia Gravity	From Plot J-11 to 50 MLD (Connecting to inlet of CETP)	334.85 mtr.	Pipeline laid End connections balance
630 mm dia Pumping	From Sump No.1 to 50 MLD (Connecting to inlet of CETP)	384.03 mtr.	Pipes Laid laid, end Connections balance
800 dia Pumping	From 50 MLD CETP to BPT No. 2 (For Disposal)	3080.00 mtr	15 meters line balance to be laid

Sump dia. – 25.20 m & Depth – 8 m deep

Estimated cost – Rs 26, 97, 07,161/-

Accepted cost – Rs. 25, 49, 00,232/-

Stipulated Time limit – 05/01/2017 to 04/01/2018

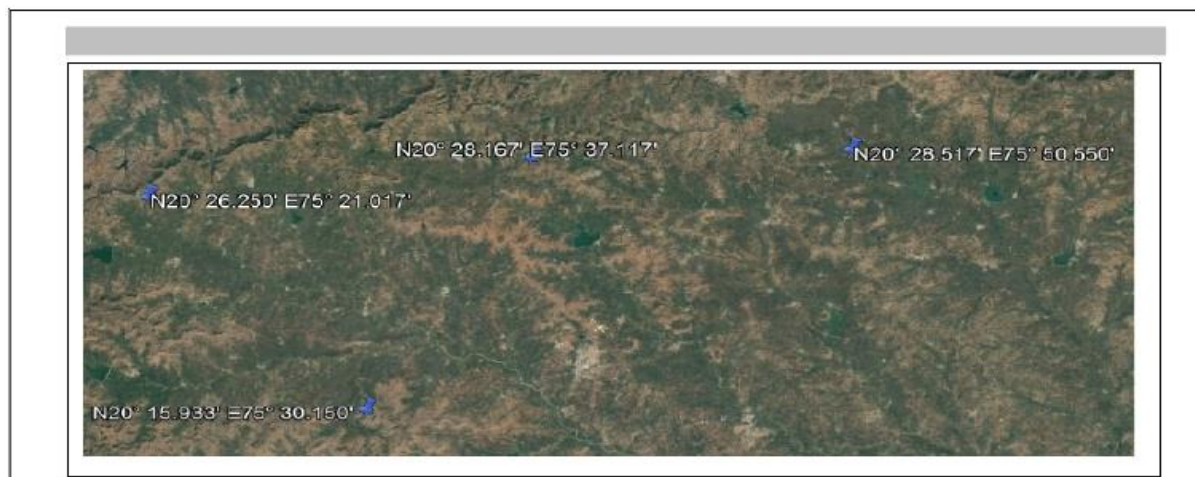
Up to date Expenditure – (95.10 %) Rs. 24, 24, 10,120/-

2) Internal Drainage Collection Lines

Out of 19,500 meters lines of various diameters, **11,500 meters** lines are laid.

10. MONITORING STATIONS SELECTED BY CPCB: SURFACE WATER, GROUND WATER & AIR QUALITY:

i. Air Quality Monitoring Station:

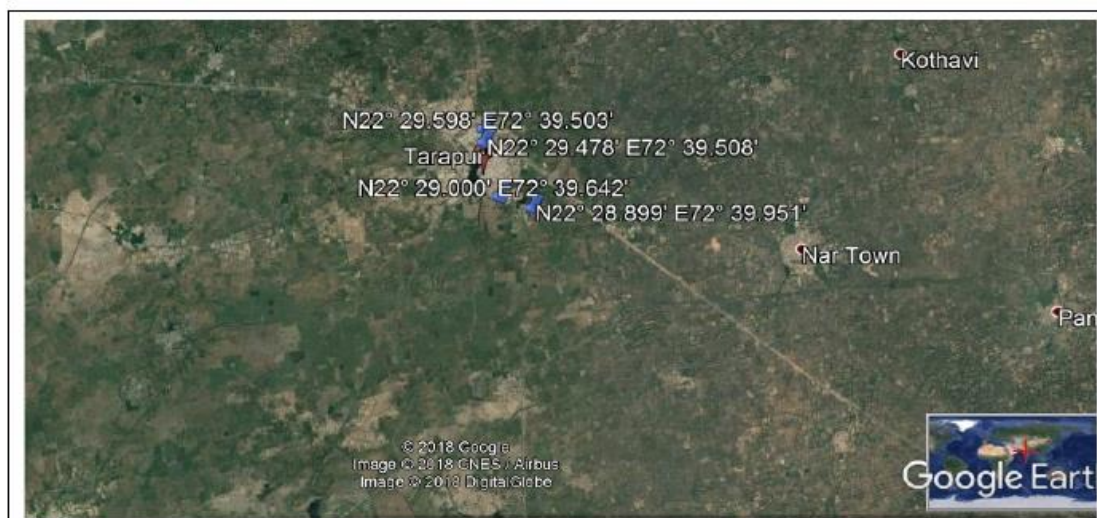


AAQ sampling location on google

Ambient Air Quality Monitoring Location:

<u>Sr. No.</u>	<u>Location Name</u>	<u>Latitude</u>	<u>Longitude</u>
A-1	Kokuyo Camlin Ltd	19 ⁰ 47'49.83" N	72 ⁰ 44'12.76 E
A-2	Docor Export Pvt. Ltd, MIDC	19 ⁰ 47'28.34" N	72 ⁰ 44'02.93" E
A-3	Sumitomo Chemical India Pvt. Ltd N22	19 ⁰ 47'24.50" N	72 ⁰ 43'09.54" E
A-4	MPCB SRO Office, near Vijay Nagar	19 ⁰ 48'33.79" N	72 ⁰ 44'37.69"

ii. **Surface Water Monitoring Station:**

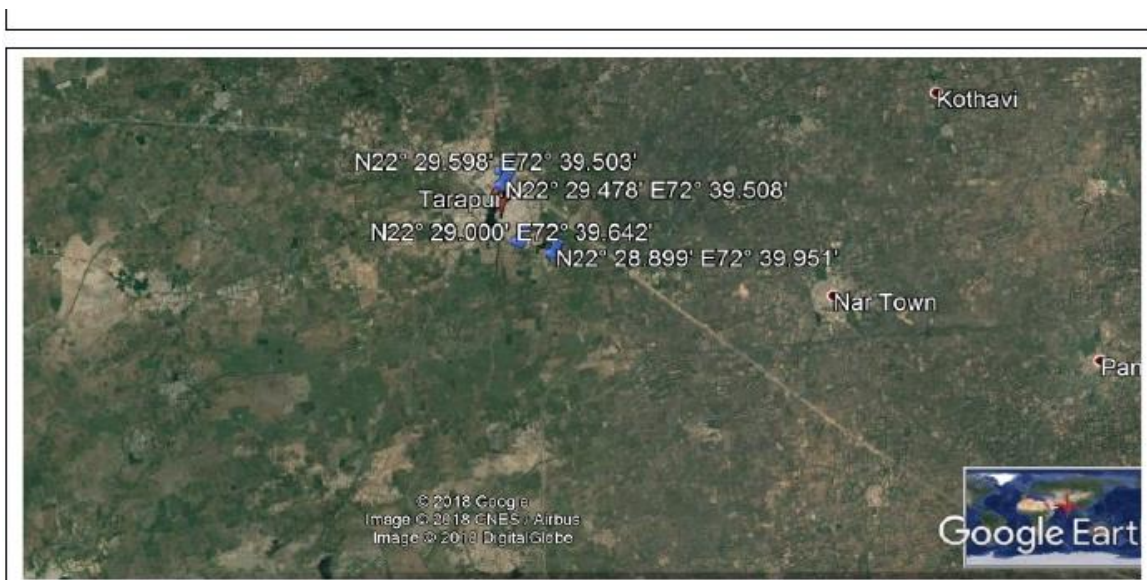


SW sampling location on google

Surface Water Quality Monitoring Location

<u>Sr. No.</u>	<u>Location Name</u>	<u>Latitude</u>	<u>Longitude</u>
SW-1	BPT Navapur Out Fall	19° 47.215'	19° 47.215'
SW-2	Over Flow of Sump No-1	19° 47.138'	19° 47.138'
SW-3	Nala near Sump 2, Tarapur CETP	19° 48.336'	19° 48.336'
SW-4	Open drain near Sump 3, node MIDC Tarapur	19° 46.933'	19° 46.933'
SW-5	Nalla to Dandi	N22°29'33.05"	E72°39'43.89"
SW-6	Nalla Carrying Domestic Sewage at saravalli	N22°29'40.5"	E72°39'18.62"

iii. **Ground Water Monitoring Station:**



GW sampling location on google

Ground Water Quality Monitoring Location

<u>Sr. No.</u>	<u>Location Name</u>	<u>Latitude</u>	<u>Longitude</u>
GW-1	Hand pump water, Besides Sai Complex	N22°29'0.01''	E72°39'38.52''
GW-2	Well water, Chikkuwadi in PIO (Police Station)	N22°29'28.66''	E72°39'30.50''
GW-3	Open well, near Nalla Sump 1	N22°29'35.87''	E72°39'30.15
GW-4	Bore well at Shivajinagar Boisar	N22°28'53.94''	E72°39'57.03''

**11. Comprehensive Environmental Pollution Index As per
CPCB Monitoring 2017-2018:**

Sr. No	Industrial Area	Air	Water	Land	CEPI Score	Rank
1	Tarapur	72.0	89.0	59.25	93.69	1

Revised CEPI is comprised of the following components:

Component A	Scale of industrial activity	20 Marks
Component B	Status of Ambient ENV. Quality (Air/SW/GW)	50 Marks
Component C	Health related Statistics	10 Marks
Component D	Compliance of	20 Marks

a) Air Score:

- Ambient Air Quality Parameter considered for CEPI calculation:
PM₁₀, PM_{2.5} & CO.
- Sub Score (A+B+C+D)= (12+40+5+15)=72.0

b) Water Score (Surface Water):

- Surface Water Parameter considered for CEPI calculation : TN,
T. Hardness & Hg
- Sub Score (A+B+C+D)= (14+50+10+15)=89

c) Land Score (Ground Water):

- Ground Water Parameter considered for CEPI calculation : Total
Hardness, Hg, Iron
- Sub Score (A+B+C+D)= (14+20.25+10+15)=59.25

12.Implementation Status of Short term & long term Action Plan:

Sr. No.	Action point	Compliance
1.	Expansion of TEPS-CETP from existing 25 MLD to Proposed 50 MLD=75 MLD (Expansion -50MLD)	Proposed 50 MLD CETP to which Environment Department have accorded Environmental clearance. Out of 50 MLD 25 MLD CETP work completed in January-2020 and is in operation. Remaining 25 MLD CETP work expected to complete within one year.
2	Upgradation of existing 25 MLD CETP.	<ul style="list-style-type: none"> Up-gradation / modernization plan & also study report of the reason why the parameters are not meeting the standards is not submitted. Adoption of automation/ semi automation for unit process shall be introduce wherever necessary. CETP has upgraded aeration system with aspirator technology. Revamping of machineries is done.
3.	Arresting leakage of drainage pipe line	<ul style="list-style-type: none"> AMC is granted by MIDC to attend the leakages when & where happen. The issues of leakages of drainage pipeline & overflow and choke up of drainage chambers still continues. Board has instructed to MIDC to remove sludge from sump-1,3, 4 & final discharge point sump no.2 & the removed sludge shall be disposed to CHWTSDF, Taloja. Also connect industry discharge line to new pipe line, old pipeline shall be removed. MIDC to

		<p>remove sludge from sump no.2 & 4.</p> <ul style="list-style-type: none"> Leakages behind Sarex Overseas Plot No. N-Zone, Back side of M/s. Sunil Great HYK N Zone , behind M/s. Mandhana Dyeing E-Zone, Opp. M/s. Galaxy Surfactants, M-3, behind Abhilasha Tex Chem, Plot No. M-7 , Opp. M/s. Resonanace Specialties, near by natural nala of Cosmic Chemical, K-Zone. The leakages in pipe line are arrested. Any incidental choke up in collection systems are removed from time to time. Manholes and chambers are attended though AMC.
4	Connection Sump III to CETP	<ul style="list-style-type: none"> Work is completed
5	Identification of Solvent Use & solvent recovery plant to Improve the efficiency of solvent recovery by solvent using industries	<ul style="list-style-type: none"> Due to various measures taken by the industries solvent recovery improved. And following industries has taken masseurs: 1. M/s. Arti Drugs Ltd, Plot No. N-198, MIDC,Tarapur, Tal.Palghar. This industry has developed new technology for the recovery of ammonium sulphate 2000 MT / month by unit operation like evaporation, crystallization. Earlier the same was treated in their ETP. 2. M/s Camlin Fine Chemicals. Ltd., Plot No. D2/3,MIDC

		<p>Tarapur has segregated and treatment of high COD stream separately done.</p> <p>3. M/s. Arti Industries Ltd., , Plot No E-50, has installed zero discharge plant such as MEE for high COD.</p> <p>4. M/s Lupin Limited Plt No. T-142 MIDC, Tarapur has provided Anaerobic Digester for segregated effluents. And now achieved ZLD.</p>
6.	Illegal dumping of hazardous waste	<ul style="list-style-type: none"> • Presently there is no illegal HW dumping • Board has informed CHWTSDF to increase the frequency of collecting of HW and its transportation.
7.	Massive Tree Plantation	<ul style="list-style-type: none"> • MIDC is carrying out massive tree plantation program on empty/ reserved plots, and on boundary of MIDC. Sufficient tree plantation is already done in MIDC Tarapur area. • During monsoon of 2019, tree plantation activity is being done by CETP, TIMA & individual industries in MIDC Tarapur.
8.	Expansion of TEPS CETP from existing 25 MLD to 50 MLD	<ul style="list-style-type: none"> • MIDC has allotted plot admeasuring 85000 M². • Environment Department have accorded Environmental clearance. Out of 50 MLD 25 MLD CETP work completed in January-2020 and is in operation. Remaining 25 MLD CETP work expected to complete within one year.

9	If outlet treated quality is not achieved, advanced technologies such as MBR/RO are to be enforced	After installation of additional CETP, If outlet parameters are not achieved, then,, advanced technology such as MBR/RO will be insisted. TEPS has not yet submitted proposal of segregation & treatment of high COD stream. AS per TEPS high COD stream will be treated separately and this stream will be connected at inlet of CETP.
10	Replacement of RCC drainage by HDPE within MIDC area.	Total drainage pipeline length is 59 Km. MIDC has Replaced old RCC pipeline of 51.00 km by HDPE. Remaining 8.0 km pipeline replacement work under progress.
11	Augmentation of sump no. 1 holding capacity and Augmentation of pumping machinery at sump 1 & 2	Augmentation of sump No.1 is completed by constructing additional sump. Also augmentation of pumping at Sump No.1 and 2 is completed.
12	Extension of pipeline inside Navapur sea	The length of existing disposal pipeline is only up to 0.5 Km from HTL. Proposal for extension of this disposal pipeline is not clear. For new 50 MLD CETP the MIDC is suppose to provide disposal pipeline as per the recommendation of NIO, disposal point should be at 7.1 Km from HTL. Of the 7.1 km pipeline the MIDC has laid down pipeline of about 4.61 Km deep into Navapur sea from HTL remaining work of 2.49 km is progress.
13	Reuse and recycle of treated water by the textile industries	<ul style="list-style-type: none"> 7 nos. Textile unit are 100% Zero Liquid Discharge unit & 19 nos. Textile unit are 50% recycling unit.
14	Pursuing matter with Mahanagar Gas limited/ GAIL to make available CNG	<ul style="list-style-type: none"> Laying of pipeline from Vikramgad to MIDC is completed and connections are given & supply started to 5 major industries

	to MIDC Tarapur. (Issue with GAIL & Gujrat Gas)	<ul style="list-style-type: none"> • M/s. JSW steel ltd.B-6 • M/s. Tata steel Ltd. A-6 • M/s. Tata steel Ltd. S-76 • M/s Viraj Profiles Ltd. G-1/2,1/3,2 • M/s Viraj Profiles Ltd. G-22,23,33,34,35 • Gujrat Gas has started CNG/PNG gas pipeline work for MIDC & surrounding Grampanchayat areas. Of this work of laying of 20 Km gas pipeline work is completed.
15	Installation of continuous Ambient Air Quality monitoring under CPCB scheme	M/s JSW Steel Ltd has installed of CAAQMS monitoring stations. One CAAQMS station is in operation.

EFFORTS TAKEN FOR Implementation of Action Plan:

1. Water Environment

There are very limited proven no low cost advanced cleaner technology to treat complex effluents generated from various types of industries. However, several industry have taken in plant majors including clean technologies intervention and reduction the effluent quantity and strength. Some of the examples are

RO Plant: - The following plants have provided advanced treatment technology such RO for reuse of waste water.

- M/s JSW Steel Ltd.,Plot No. B-6, MIDC, Tarapur, Boisar, Tal : Palghar, Dist : Thane - 401506, have provided RO of capacity 300 CMD.
- M/s. Sunway Textile Ltd, Plot No.G-21,have provided RO of capacity 3 KL /Day

Caustic Recovery Plant :- the following plants have provided the caustic recovery plant

- M/s.Mudra lifestyle limited, Plot No. D-1, MIDC,Tarapur, Boisar, Tal.Palghar, Dist :- Thane- 401506, have provided caustic recovery plant of capacity 10 Kl/hr.
- M/s.Bombay Rayon Fashion Ltd. Plot No C-6 & C-7 MIDC, Tarapur, Taluka- Palghar, Dist- Thane., have provided caustic recovery plant of capacity 24 Kl/hr..

Multi Effective Operator

- M/s. Nipur Chemicals, Plot No. D-17, MIDC,Tarapur, Boisar, Tal.Palghar, Dist :-Thane- 401506, have provided multi effective operator for the concentration of rich stream generated from H-Acid manufacturing plant.

Waste Pickle Recovery

- M/s. Indorx Global Pvt Ltd, Plot No. B-11, MIDC,Tarapur, Boisar, Tal.Palghar, Dist :- Thane- 401506, have provided acid recovery plant of capacity 4.5Kl/Hr. The waste pickle from M/s.TATA Steel Ltd and M/s.JSW Ltd is treated at this plant.

Recovery of Ammonium Sulphate

- M/s. Arti Drugs Ltd, Plot No. N-198, MIDC,Tarapur, Boisar, Tal.Palghar, Dist :-Thane- 401506. This industry has developed new technology for the recovery of ammonium sulphate 2000 Mt / month by unit operation like evaporation, crystallization. Earlier the same was treated in their ETP.
- Camlin Fine Chemicals. Ltd., Plot No. D, MIDC Tarapur has proposed segregation of high COD.
- M/s. Arti Industries Ltd., E-50, has installed zero discharge plant such as incineration high COD.

2. Air Environment:

MPCB has identified 3 Ambient air Quality monitoring stations in MIDC taking critical industrial cluster into consideration. These are N-zone, T zone and K zone where chemical industries are existed. However, Ambient Air Quality Monitoring is being conducted at MPCB office.

There are 32 nos of industries are using coal as a fuel. These industries have provided with air pollution control devices.

Board has proposed continuous Ambient Air Quality monitoring with meteorological data in Tarapur industrial area. Proposal has already been submitted. The tentatively Budget requirement for this proposal is apporx. 5.0 cr.

3. Land Environment

The hazardous waste was dumped by the factories located in MIDC Tarapur Industrial Area at various locations such as K-Zone, 70 Bunglow area and many other places prior to 2005 has been collected and stored in secured engineering land fill site at K-Zone in 2006.

Board had initiated to for encapsulation of secured land fill .The total quantum of waste kept at this secured land fill is 1,50,000 MT. costing 5.0 cr. This may be one of the predominant sources of land and ground water pollution in the industrial area.

Board is monitoring illegal hazardous waste dumps. Some of the industries have been fined for illegal dump and proper action taken by sending illegal hazardous waste to CHWTSDF.

4. Green Belt

Tarapur Industrial area is developed in 1100 hectares of land out of which 10% land is reserved for open area and being planned for Green belt development

5. Specific schemes

- MWML is facility Taloja has developed GPS monitoring model for tracking of transportation of hazardous wastes
- 20.0 MLD of sewage is generated from 6 villages in and around of MIDC. To set up a Sewage treatment plant, Approx. Rs. 10-12 cr investment is required to set up STP and Rs. 15.0 cr is required for operating STP per annum

6. Public Awareness & Training Programs

Board is actively participating in various public awareness programs during Festivals such as Ganesh Chaturdi, Holi, dassara and World Environment Day through poster campaign, Media publicity etc. Workshop with stakeholders for conversion of coal to CNG/PNG conducted.

Carrying out CEPI Monitoring as per CPCB direction dtd.26/04/2016:

- As per CPCB direction dtd.26/04/2016 Board has selected third party agency (laboratory) recognized under Environmental (Protection) Act, 1986 and accredited under NABL through E-tendering for 3-year Post-monsoon season & Pre-monsoon Season monitoring. The monitoring data with CEPI score were communicated to CPCB and uploaded on public domain. The monitoring score are as below,
- Below are the CEPI score from 2017 to Feb 2019 Carried by Board through third party as per CPCB direction:

	Air Index	Water Index	Land Index	CEPI
CEPI score Feb 2019	34.75	45	45	53.60
CEPI score June 2018	26	39.25	45	50.61
CEPI score February 2018	32.5	38.5	45	51.88
CEPI score June 2017	20	49	46.25	52.72
CEPI score February 2017	46	59	46	67.67
CEPI Score 2016	56	46	47	65.51

PROPOSED ACTION PLANS FOR 2019 – 2020:

1. CEPI area for Tarapur including Tarapur Industrial area.
2. In the Application No. 1038/2018, directions are given by Hon'ble NGT regarding CEPI score for Aurangabad is 93.69 as its rank is 1 as Critically Polluted Industrial Area (SPAs).
3. MPCB with all stakeholders prepared time bound action plan to improve CEPI score as an below,

No	Particulars	Responsible Stakeholders	Time frame
1	To complete the remaining work laying of treated effluent discharge pipe line from high tide line to location recommended by NIO (7.1 km).	MIDC	6 Month
3	Provide separate treatment for high COD stream. Submit time bound pert chart.	TEPS-CETP	6 Month
4	Removal of sludge accumulated in MIDC sump No.	TEPS-CETP	3 Month
5	Agreement by industries with Gail for gas connection.	GAIL & Industries	3 Month

6	Enhancement in green belt from 33% to 40%.	Industry/ MIDC	Coming monsoon
7	Repair & maintenance of approach & internal roads of industrial area. to avoid resuspension dust	MIDC	3 Month
8	Action against polluting industries & imposing environmental compensation.	MPCB	3 month
9	Inspection & monitoring of air polluting as well as water polluting industries to assess the compliance status for adequacy of Air & Water pollution control system.	MPCB/MIDC	3 Month
10	To complete work of laying of storm water drain in MIDC Tarapur	MIDC	6 month
11	To Complete the work of laying 1200 mm dia 1100 meters pipe line of discharge pipe line in navapur village	MIDC	6 month
12	To remove accumulated sludge from equalization tanks	CETP	immediately

	of CETP		
13	To stop overflows of untreated/partially treated effluent form MIDC sump No.2 & 3	MIDC	Immediately
14	Installation of continuous Ambient Air Quality monitoring under CPCB scheme	MPCB Board has proposed to install CAAQMS	6 month
15	3 nos. of Ambient Air quality monitoring stations under NAMP	MPCB	6 Month
16	Studying Carrying capacity of Tarapur MIDC area	MPCB/NEERI	18 month
17	Replacement of RCC drainage by HDPE within MIDC area. Total drainage pipeline length is 59 Km. MIDC has Replaced old RCC pipeline of 51.00 km by HDPE. Remaining 8.0 km pipeline is yet to be replaced. MIDC to expedite the work.	MIDC	6 Month

18	Evaluation of Air Quality scenario for industrial point source emission in Tarapur MIDC Area	MPCB	6 Month
19	Identification of Solvent Use & solvent recovery plant to Improve the efficiency of solvent recovery by solvent using industries	Industry	6 Month
20	Assessment of probable contaminated site at MIDC Tarapur	MPCB/NEERI	1 year

Conclusion:

State Level Monitoring Committee, under Chairmanship of Principal Secretary, Environment Department constituted vide GR dtd. 31/12/1018.

Till date M.P.C.Board under Chairmanship of Member Secretary conducted various reviews meeting with all stakeholders for effective implementation of action plan and constituted monitoring team at respective Regional Officer for visit.

Also Hon'ble Principle Secretary, Environment Department , GoM and Hon'ble Chief Secretary, GoM has conducted time to time meeting to review progress.

The proposed action plan is comprehensive and each activity under Air, Water and land considered for achieving environmental standards and will help to reduce Air CEPI score below 60. The all stakeholders like MIDC authority, Industrial associations, District administrator, Local body contribution for implementation of action plan will help to achieve reduction of CEPI score.