

APSEZL/EnvCell/2023-24/050

Date: 11.09.2023

To,
Member Secretary

Gujarat Pollution Control Board
Paryavaran Bhavan,
Sector-10-A, Gandhinagar-382010

Dear Sir,

Sub: Environmental Statement for the financial year ending 31st March, 2023 for **MPSEZ Utilities Ltd.**

Ref: PCB ID: 10605, CCA Order No. AWH – 113221, issued dated 10.06.2021 Valid till 07.04.2026

With reference to the above-mentioned subject and reference, please find enclosed Environmental Statement in Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for **MPSEZ Utilities Ltd. (MUL-CETP), Plot No. / Survey No. 141 (Part), Village & Taluka: Mundra, Dist. Kutch - 370421** for the financial year ending 31st March 2023.

Thank you,

Yours faithfully,
For **M/s. MPSEZ Utilities Ltd. (MUL-CETP)**

Authorized Signatory

Encl: As above.

Copy to: The Regional Officer, Gujarat Pollution Control Board, Gandhidham

B
14.9.2023

Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

MPSEZ Utilities Ltd.
Adani House,
Nr. Mithakali Circle, Navrangpura,
Ahmedabad 380 009
Gujarat, India

Tel +91 79 2555 5801 Fax +91 79 2555 6490
info@adani.com
www.adani.com
CIN: U45209GJ2007PTC051323

Registered Office: "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad 382421, Gujarat.

FORM V
(See Rule 14)

Environmental Statement for the Financial Year ending 31st March 2023

PART – A

- (i) Name and address of the Owner/
Occupier of the Industry Operation or
Process : Mr. Sujalkumar Shah
CEO – Mundra & Tuna Port
Adani Ports and SEZ Limited
4th Floor, Adani House,
Mundra, Kutch – 370421.
Ph No. (02838) 255000
- (ii) Industry Category : Red-Large
Primary (STC Code) NA
Secondary (STC Code) NA
- (iii) Production Capacity : Common Effluent Treatment Plant: 2.5 MLD
- (iv) Year of Establishment : 2011
- (v) Date of last Environment Statement submitted : 31/08/2022

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

PART – B

Water and Raw Material Consumption

(i) Water Consumption

Water Consumption Cu. Mtr./Day	Average
Process (Chemical Dosing & CETP Operation)	3.77 m ³ /day
Cooling	Nil
Domestic	0.94 m ³ /day

Details of Water Consumption for the year 2022-23 are enclosed as **Annexure – 1**.

Name of Products	Process Water Consumption per unit of Product Output	
	During the current financial year (2021-22)	During the current financial year (2022-23)
Treated water from CETP*	2,45,805 KL	3,08,567 KL

* Unit does not go under any manufacturing process. The unit involves common effluent treatment plant (CETP) having 2.5 MLD capacities for treatment of effluent (domestic + industrial) generated from various SEZ industries, APSEZ common facilities and Mundra village. Treated water from CETP is being utilized in gardening / horticulture activity within CETP & SEZ premises.

Details of Effluent inlet and treated water outlet quantity for the year 2022-23 are enclosed as **Annexure – 1**.

(ii) Raw Material Consumption

Name of Raw Material**	Name of Products	Consumption of Raw Material per Unit of output	
		During the current financial year (2021-22)	During the current financial year (2022-23)
Alum	Effluent Treatment	2920 Kg	3286 Kg
Polyelectrolyte		164.20 Kg	365 Kg
Sodium Hypochlorite		18260 L	14600 L

** Unit does not go under any manufacturing process. Raw material consumption as dosing chemicals for neutralization and flocculation of effluent.

PART – C

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

Pollutants discharged to Environment/Unit of Output (Parameters as specified in consent issued)

Pollutants	Quantity of pollutants discharged (Mass/day)		Concentrations of pollutants in discharges (mass/volume)		Percentage of variation from prescribed standards with reasons
(a) Waste Water	Parameters	Avg. Mass Kg/Day	Parameters	Avg.	<p>There is no variation from prescribed standards in terms of quality of wastewater discharge.</p> <ol style="list-style-type: none"> 1. The CETP has treated water discharge of 308567 KL during April 2022 – March 2023. 2. Analysis reports of treated water are enclosed as Annexure – 2.
	pH	-	pH	7.56	
	Total Suspended Solids	24.20	Total Suspended Solids	28.67	
	Ammonical Nitrogen as NH3	10.59	Ammonical Nitrogen as NH3	12.54	
	BOD (3 Days @ 27 oC)	35.24	BOD (3 Days @ 27 oC)	41.75	
	COD	143.41	COD	169.89	
(b) Air (DG Stack 380 KVA)	Parameters	Avg. Mass Kg/Day	Parameters	Avg.	<p>There is no variation from prescribed standards in terms of quality of wastewater discharge.</p> <ol style="list-style-type: none"> 1. DG set having capacities 380 KVA is provided as a standby power source and used during power failure. Analysis reports of stack monitoring are enclosed as Annexure – 2. 2. The ambient air quality monitoring is being done regularly (twice a week) through NABL and MoEF&CC recognized laboratory namely M/s Unistar Environment and Research Labs Pvt. Ltd., Vapi. 3. Analysis reports of ambient air quality monitoring are enclosed as Annexure – 2
	Particulate Matter (PM)	0.0007	Particulate Matter (mg/Nm3)	19.59	
	Sulphur Dioxide (SO2)	0.0005	Sulphur Dioxide (PPM)	6.33	
	Nitrogen Oxide (NOx)	0.0016	Nitrogen Oxide (NOx) (PPM)	26.53	

- Unit does not go under any manufacturing process, as the unit involves common effluent treatment plant (CETP) having 2.5 MLD capacity for treatment of effluent generated from various SEZ industries, APSEZ common facilities and Mundra village.
- Details of Effluent inlet and treated water outlet quantity for the year 2022-23 are enclosed as **Annexure – 1**.

PART – D

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

Hazardous Wastes

(As specified under Hazardous Wastes Management and Handling Rules 2016)

Hazardous Wastes	Total Quantity (Kg)	
	During the current financial year (2021-22)	During the current financial year (2022-23)
(a) From Process	33.32 MT (CETP Sludge)	35.01 MT (CETP Sludge)
(b) From Pollution Control facilities	Details is Attached as Annexure-3	

PART – E

Solid Waste

Solid Waste	Total Quantity Generated (MT/Annum)	
	During the current financial year (2021-22)	During the current financial year (2022-23)
(a) From Process (Ash)	NIL	NIL
(b) From Pollution Control facilities		
(C-1)Quantity recycled or reutilized within the unit		Details is Attached as Annexure-3
(C-2) Sold		
(C-3) Disposed		

** Above mentioned solid waste details are of entire APSEZ area including CETP. The solid waste of CETP is also being managed in APSEZ waste management system. The solid waste (glass, paper, plastic, metal scrap and food waste) categorized in Recyclable Waste, Wet Waste and Refused Derived Fuel (RDF) and managed in common waste management facility of APSEZ.

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

PART - F

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

- The sludge generated from thickener is pumped to centrifuge for dewatering of sludge. The generated sludge is transferred to sludge drying beds. The dried sludge is being packed in HDPE bags and stored into dedicated hazardous waste storage area & disposed of through common hazardous waste facility.
- "Zero Waste" initiative - No waste is being sent to landfill or incineration facility @ Adani Ports & SEZ (also as a 100% subsidiary company of APSEZ, MUL also intended to contribute the same), all waste are being managed through 5 R principal of waste Management. APSEZ has eminent material recovery facility (MRF), having appropriate facility to proper segregate & recover the materials as per set process. Mixed Waste is being segregated via specialized mix waste segregation machine in two forms –Bio and Non bio without manual segregation, where risk to health hazards is minimized. Further waste is segregated in to 16 streams at MRF, which is sent to different end users following 5 R principal. To manage all operation of MRF, APSEZ developed local vendor though his past learnings and employed local women staff mainly to segregate waste.
- APSEZ has awarded with Zero Waste to Landfill Management System (ZWTL MS 2020) from TÜV Rheinland India Pvt. Ltd (attached as **Annexure – 4**).
- Wet Waste being managed through Organic Waste Composting Facility and Biogas generation.
- Dry waste and e-waste collection drive is being organized every month within townships to collect municipal solid waste as well as e-waste from households.
- Plastic free APSEZ Drive:
 - APSEZ pasted stickers spreading awareness among their zone as plastic are prohibited now.
 - Awareness sessions organized among department and contract workers.
 - Made shop keepers and canteen owners to stop providing plastic carry bags to carry the material.
 - Confirms to stop usage of plastic cups to serve tea and water pouches within the premises of APSEZ.
 - Regular supervision by Team Members at Port Canteens and Shops townships for verification of prohibition of plastic.
 - Defined 3 Levels to achieve plastic free APSEZ.
- Done agreement with the Ambuja Cement for the co-processing of the CETP Sludge.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- M/s. MUL is operating the CETP with primary, secondary as well as tertiary treatment facility for wastewater generated from different SEZ industries. The treated wastewater is being utilized for horticulture and gardening purpose within CETP premises as well as SEZ area to conserve the fresh water consumption.
- Regular maintenance of all equipment's of CETP is being carried out.

Measure @ APSEZ Mundra:

Energy Savings

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

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- Installed 8.8 MW roof top solar generating plant at various locations in SEZ in Mundra which is generated nearly 9.43 million units in FY 2022-23 and utilized the renewable source of energy for captive use this reduced the emission of CO₂ by nearly 7735 tCo₂e.
- APSEZ has reduced total energy consumption of 129760 KWH/ Year units which reduce the emission of CO₂ by nearly 103.93 tCo₂e by various initiatives i.e. replacement of LED lights, high energy rating of AC, installation of new solar system etc.

Water Conservation:

- There are 8740 nos of water reducer have been installed in Residence Area and various offices.
- Water less urinal have been placed in various offices.
- Modifications of flush tank have been added in water system of toilet area in Port User Buildings.
- 100% Treated Water utilization
- Following safeguard measures are taken for abatement of dust and noise emissions:
 - ✓ Regular sprinkling on road and other open area
 - ✓ Regular cleaning of roads
 - ✓ D.G. Set having acoustic enclosures
 - ✓ Adequate greenbelt and plantation area

PART – H

Additional measures /investment/ proposal for environmental protection including abatement of pollution, prevention of pollution.

- 100% utilization of treated water from CETP for gardening and horticulture activity within CETP and SEZ premises to conserve the fresh water consumption.
- APSEZ has formed dedicated Horticulture department & developing green belt within port premises.
- APSEZ has developed its own “Dept. of Horticulture” which is taking measures/ steps for terrestrial greening and developed 11.26 hectare of green belt with the density of 885 trees per hectare within CETP & WTP premises. Total 9963 trees are planted within CETP & WTP premises.
- In entire APSEZ more than 457.99 ha. area is developed as greenbelt with samplings of more than 9.06 Lacs.
- Started treating the Sewage of Mundra Village as a strong supporter and promoter of Swatchh Bharat Mission & CSR.

PART – I

Any other particulars for improving the quality of environment:

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

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- Monitoring of environmental parameters such as Air, Noise, and wastewater quality being done regular basis through MoEF&CC & NABL recognized laboratory (M/s. Unistar Environment and Research Labs Pvt. Ltd., Vapi).
- Awareness program and training on waste management, water conservation, energy conservation for employees & their families, contractors, local community is being conducted on regular basis.
- APSEZ has Environment Cell for environmental management and environmental monitoring.
- MUL-CETP has also installed Online Effluent Monitoring System as per CPCB guidelines for continuous monitoring of pH, TSS, COD, BOD, TOC & Ammonical Nitrogen parameters, which is connected with GPCB as well as CPCB server and data for the same is being transferred regularly.
- APSEZ Budget for environmental management measures (including horticulture) for the FY 2022-23 was to the tune of INR **1448.06** lakh out of which INR **1366.281** lakh was spent. Environment protection expenditure spent during the year 2022-23 is enclosed as **Annexure – 5**.
- APSEZ is driving paperless office and plastic free drive to eliminate the use of papers and plastic materials to the extent possible within ports, SEZ and residential townships.

Date: 11-09-2023

(Signature of a person carrying out an industry,
operation or process)

Designation: **Head-Environment Cell**

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

Annexure – 1

Water Consumption and Wastewater Details (April'22 to March'23)

Month	Wastewater details		Common Effluent Treatment Plant (CETP) Month wise Water consumption data in KL		
	Effluent & Sewage Water, KL	Treated Water, KL	Domestic, KL (Category-2)	Industrial, KL (Category-3)	Total, KL
Apr-22	27010	23819	101	25	126
May-22	28672	25041	170	42	212
Jun-22	27364	23598	144	36	180
Jul-22	35251	31389	150	37	187
Aug-22	37262	32489	123	31	154
Sep-22	34135	29341	122	30	152
Oct-22	33982	28849	117	29	146
Nov-22	28281	25338	82	20	102
Dec-22	29187	24664	82	20	102
Jan-23	28348	24358	82	21	103
Feb-23	22286	19102	78	20	98
Mar-23	24307	20579	126	32	158
Total	356085	308567	1376	344	1720
Per Month	29673.75	25713.92	114.67	28.67	143.33
Per Day	975.58	845.39	3.77	0.94	4.71

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

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ANNEXURE – 3
Waste Disposal Details, APSEZ, Mundra

Sr. No.	Waste Description	Disposal Method	Unit	Quantity 2021-22	Quantity 2022-23
Non-Hazardous:					
1.	Dry Waste (Recyclable waste-Metal, Wood, paper, plastic etc.)	Recycle (send to reg. recycler)/ Reuse (Used by Org.)	MT	3458.24	3779.70
2.	RDF (Non-Recyclable)	Co-processing at cement plant	MT	376.01	544.17
3.	Organic Waste (included food waste)	Reprocess & Recovery Manure/biogas	MT	851.51	897.82
4.	E-Waste	Recycle (send to reg. recycler)	MT	50	89.86
Hazardous:					
1.	CETP-sludge	Landfilling	MT	33.32	35.010

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

ANNEXURE-4



Certificate

Standard: Zero Waste to Landfill Management System
(ZWTL MS 2020)

Certificate Holder: Adani Ports and Special Economic Zone Limited
Mundra Port, Kutch - 370421,
Gujarat, India

Scope: Providing Port Facilities for Import and Export of
Bulk, Break Bulk, Liquid and Containerized Cargo,
its Storage and RORO Operation for Export of
Vehicles

Validity: This certificate is valid from 01-06-2021 until 31-05-2024
Subject to satisfactory annual surveillance audits.

Certificate No. TUV/ZWLMS/2021/Adani Ports/0501

New Delhi, 01-06-2021

TÜV Rheinland India Pvt. Ltd.
Office 610, 6th Floor, iThum
Tower, A-40, Sector-62,
Noida- 201301, India

A handwritten signature in black ink.

Environment Statement for 2022-23 for M/s MPSEZ Utilities Ltd.

(PCB ID: 10605)

ANNEXURE – 5
Cost of Environmental Protection Measures of APSEZ, Mundra
F.Y. 2022-23

Sr. No.	Activity	Cost incurred (INR in Lacs)		Budgeted Cost (INR in Lacs)
		2022 – 23	2022 – 23	
1.	Environmental Study / Audit and Consultancy	7.32		11.05
2.	Legal & Statutory Expenses	12.32		12
3.	Environmental Monitoring Services	15.32		33
4.	Hazardous / Non-Hazardous Waste Management & Disposal	104.035		127.72
5.	Environment Days Celebration and Advertisement / Business development	2.53		8.00
6.	Treatment and Disposal of Bio-Medical Waste	2.29		2.04
7.	Mangrove Plantation, Monitoring & Conservation	35.0		35.0
8.	Other Horticulture Expenses	956		979
9.	O&M of Sewage Treatment Plant and Effluent Treatment Plant (including STP, ETP of Port & SEZ & Common Effluent Treatment Plant)	141.33		164.46
10.	Expenditure of Environment Dept. (Apart from above head)	90.136		75.79
Total		1366.281		1448.06



"Half Yearly Environmental Monitoring Reports "

For,
adani
Ports and
Logistics

ANNEXURE - 2

M/S. MPSEZ Utilities Ltd. (MUL)

Survey No. 141, Village - Mundra, APSEZ, Tal: Mundra, Dist.: Kutch - 370 421

Monitoring Period: April - 2022 to September - 2022

Submitted By



UniStar Environment & Research Labs Pvt. Ltd.

White House, Near GIDC Office, Char Rasta, Vapi, Gujarat, India - 396195



RESULTS OF CETP INLET WATER

SR.NO.	TEST PARAMETERS	UNIT	CETP INLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22		
			04-04-2022	10-05-2022	01-06-2022	02-07-2022	04-08-2022	28-09-2022		
1.	pH @ 27 ° C	--	7.68	7.84	7.46	7.29	7.56	7.76	6.5 to 8.5	APHA 23 rd Ed.,2017,4500-H ⁺ B
2.	Temperature	°C	30.2	30.5	31	30	30	30.5	--	IS 3025(Part 9)1984
3.	Colour	Pt. Co. Scale	55	60	50	60	80	70	100	IS 3025(Part 4)
4.	Total Suspended Solids	mg/L	86	102	114	108	104	84	800	APHA 23 rd Ed.,2017,2540-D
5.	Oil & Grease	mg/L	8	9	12	11	10	10	20	IS 3025(Part39)1991, Amd. 2
6.	Phenolic Compound	mg/L	0.54	0.85	1.03	1.12	0.95	0.86	2	IS 3025(Part 43)1992, Amd.2
7.	Fluoride	mg/L	1	0.94	1.14	0.86	1.12	1.05	2	APHA 23 rd Ed.,2017,4500 F, D
8.	Iron as Fe	mg/L	0.86	1.06	1.11	1.24	1.32	1.62	3	IS 3025(Part 53)2003,
9.	Zinc as Zn	mg/L	1.12	1.26	1.21	1.19	1.05	1.28	15	IS 3025(Part 49)1994
10.	Trivalent Chromium	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	By Calculation
11.	Sulphide	mg/L	0.86	1.05	0.89	1.24	1.36	1.11	2	APHA 23 rd Ed.,2017,4500-H ⁺ B

Continue...

SR.NO.	TEST PARAMETERS	UNIT	CETP INLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22		
			04-04-2022	10-05-2022	01-06-2022	02-07-2022	04-08-2022	28-09-2022		
12.	Ammonical Nitrogen	mg/L	25.2	28.8	22.4	25.8	26.5	28.5	50	IS 3025(Part 9)1984
13.	BOD (3 days at 27 °C)	mg/L	150	178	160	171	202	196	1000	IS 3025(Part 4)
14.	COD	mg/L	624.5	744.2	668.4	708.9	722.4	810.4	2000	APHA 23 rd Ed.,2017,2540-D
15.	Chloride (as Cl) -	mg/L	846.2	821.2	861.4	844.6	842.2	846.2	1000	IS 3025(Part39)1991, Amd. 2
16.	Sulphate (as SO ₄)	mg/L	286.8	290.4	210.8	188	204	180	1000	IS 3025(Part 43)1992, Amd.2
17.	Total Dissolved Solids	mg/L	1682	1704	1710	1756	1734	1810	2100	APHA 23 rd Ed.,2017,4500 F, D
18.	Total Residual Chlorine	mg/L	0.6	0.77	0.87	0.68	0.72	0.68	2	IS 3025(Part 53)2003,
19.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 49)1994



Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

RESULTS OF CETP OUTLET WATER

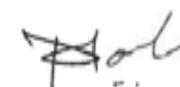
SR.NO.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP Outlet	TEST METHOD
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22		
			04-04-2022	10-05-2022	01-06-2022	02-07-2022	04-08-2022	28-09-2022		
1.	pH @ 27 ° C	--	7.51	7.46	7.52	7.84	7.83	7.62	6.0 – 9.0	APHA 23 rd Ed.,2017,4500-H ⁺ B
2.	Temperature	°C	30.1	30.4	30.5	30	30	30.5	Shall not exceed more than 5 °C above received water temperature	IS 3025(Part 9)1984
3.	Colour	Pt. Co. Scale	30	40	30	25	30	50	100	IS 3025(Part 4)
4.	Total Suspended Solids	mg/L	14	28	22	26	24	44	100	APHA 23 rd Ed.,2017,2540-D
5.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	2	10	IS 3025 (Part39)1991, Amd. 2
6.	Phenolic Compound	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	1	IS 3025(Part 43)1992, Amd.2
7.	Fluoride	mg/L	0.58	0.49	0.84	1.12	1.1	0.88	2	APHA 23 rd Ed.,2017,4500F, D
8.	Iron as Fe	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	3	IS 3025(Part 53)2003,
9.	Zinc as Zn	mg/L	0.88	0.94	1.12	1.32	1.09	1.05	15	IS 3025(Part 49)1994
10.	Trivalent Chromium	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	2	By Calculation

Continue...

SR.NO.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP Inlet	TEST METHOD	
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22			
			04-04-2022	10-05-2022	01-06-2022	02-07-2022	04-08-2022	28-09-2022			
11.	Sulphide	mg/L	1.14	0.58	0.64	0.84	1.12	1.24	2	APHA 23 rd Ed.,2017,4500-H+B	
12.	Ammonical Nitrogen	mg/L	6.2	10.2	14.5	18.6	22.5	30.2	50	IS 3025(Part 9)1984	
13.	BOD (3 days at 27 °C)	mg/L	39	45	46	48	52	47	100	IS 3025(Part 4)	
14.	COD	mg/L	164.5	188.4	194.2	204	218.5	196	250	APHA 23 rd Ed.,2017,2540-D	
15.	Chloride (as Cl) -	mg/L	812.2	818.2	823.1	844.4	785.7	854	1000	IS 3025(Part 39)1991, Amd. 2	
16.	Sulphate (as SO ₄)	mg/L	204.4	210	180.6	184	196	210	1000	IS 3025(Part 43)1992, Amd.2	
17.	Total Dissolved Solids	mg/L	1844	1876	1888	1874	1856	1852	2100	APHA 23 rd Ed.,2017,4500F, D	
18.	Total Residual Chlorine	mg/L	0.8	0.96	0.87	0.96	0.68	0.84	1	IS 3025(Part 53)2003,	
19.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 49)1994	
20.	Bio Assay test (%)	%	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	IS:6582-1971



Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

Results of Ambient Air Quality Monitoring

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
1.	08-04-2022	84.56	33.56	22.34	29.65	--
2.	11-04-2022	80.21	27.85	26.18	32.48	--
3.	12-04-2022	78.45	39.34	20.15	27.85	--
4.	18-04-2022	85.65	44.23	23.45	29.21	--
5.	21-04-2022	75.89	37.85	27.15	33.52	--
6.	25-04-2022	84.56	31.28	25.12	34.5	--
7.	28-04-2022	89.76	38.56	23.67	28.45	--
8.	02-05-2022	86.43	36.78	21.45	27.85	--
9.	05-05-2022	80.45	31.25	25.23	31.33	--
10.	09-05-2022	87.32	40.54	20.25	25.67	--
11.	12-05-2022	89.25	33.78	17.83	23.45	--
12.	16-05-2022	78.74	26.25	21.56	28.92	--
13.	18-05-2022	81.45	39.25	25.23	27.85	--
14.	23-05-2022	84.21	35.68	27.17	31.54	--
15.	26-05-2022	77.34	39.25	22.68	26.79	--
16.	30-05-2022	88.24	42.35	24.85	30.15	--
17.	02-06-2022	83.45	35.23	19.32	25.67	--
18.	06-06-2022	78.98	27.68	22.37	29.21	--
19.	09-06-2022	84.56	31.25	18.24	25.68	--

Continue...

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
20.	13-06-2022	75.69	26.12	25.34	30.21	--
21.	15-06-2022	88.93	29.45	28.21	33.25	--
22.	20-06-2022	73.45	22.85	26.45	30.17	--
23.	23-06-2022	85.68	34.56	23.11	29.15	--
24.	27-06-2022	81.33	29.92	25.75	31.22	--
25.	29-06-2022	78.95	26.34	22.27	28.45	--
26.	07-07-2022	35.67	12.34	9.23	13.23	--
27.	11-07-2022	41.23	14.56	8.44	11.21	--
28.	14-07-2022	38.45	13.42	11.23	13.45	--
29.	18-07-2022	42.45	14.21	9.15	12.28	--
30.	21-07-2022	40.23	15.1	10.17	12.45	--
31.	25-07-2022	55.34	15.6	9.23	11.23	--
32.	28-07-2022	40.23	12.34	8.35	11.67	--
33.	01-08-2022	89.23	39.35	24.68	29.38	--
34.	04-08-2022	87.6	29.39	26.45	32.61	--
35.	08-08-2022	83.91	43.8	18.27	21.76	--
36.	11-08-2022	86.6	34.26	21.4	28.83	--
37.	15-08-2022	88.85	28.71	24.86	32.07	--
38.	18-08-2022	83.14	41.14	27.96	31.48	--
39.	22-08-2022	85.1	38.63	26.32	29.14	--

Continue...

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
40.	25-08-2022	73.64	37.82	21.89	28.39	--
41.	29-08-2022	86.54	40.24	28.69	33.65	--
42.	01-09-2022	81.8	32.15	18.32	23.62	--
43.	05-09-2022	87.38	24.86	21.08	27.43	--
44.	08-09-2022	76.52	34.47	14.53	18.67	--
45.	12-09-2022	84.86	38.71	20.65	31.28	--
46.	15-09-2022	79.38	21.34	29.31	36.74	--
47.	19-09-2022	88.62	38.26	17.28	25.9	--
48.	22-09-2022	86.71	42.18	23.12	32.34	--
49.	26-09-2022	84.1	34.93	27.48	34.28	--
50.	29-09-2022	78.36	46.64	26.81	30.42	--
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	08-04-2022	85.23	30.56	13.45	23.45	0.05	NOT DETECTED	NOT DETECTED
2.	11-04-2022	78.25	24.54	15.2	19.26	NOT DETECTED	NOT DETECTED	NOT DETECTED
3.	12-04-2022	86.23	35.67	17.23	24.21	0.07	NOT DETECTED	NOT DETECTED
4.	18-04-2022	78.21	23.45	11.24	18.98	0.1	NOT DETECTED	NOT DETECTED
5.	21-04-2022	84.56	29.44	14.23	22.56	0.05	NOT DETECTED	NOT DETECTED
6.	25-04-2022	89.15	30.21	18.18	26.78	NOT DETECTED	NOT DETECTED	NOT DETECTED
7.	28-04-2022	83.25	27.56	15.45	21.35	0.04	NOT DETECTED	NOT DETECTED
8.	02-05-2022	70.23	24.21	15.67	22.78	0.05	NOT DETECTED	NOT DETECTED
9.	05-05-2022	86.78	35.23	18.21	24.51	0.02	NOT DETECTED	NOT DETECTED
10.	09-05-2022	72.34	26.78	16.78	21.37	0.1	NOT DETECTED	NOT DETECTED
11.	12-05-2022	79.21	24.12	18.44	25.46	0.04	NOT DETECTED	NOT DETECTED
12.	16-05-2022	67.34	28.15	15.43	20.19	0.05	NOT DETECTED	NOT DETECTED
13.	18-05-2022	78.95	31.69	17.21	23.56	0.04	NOT DETECTED	NOT DETECTED
14.	23-05-2022	84.56	37.25	12.34	21.45	0.08	NOT DETECTED	NOT DETECTED
15.	26-05-2022	89.24	32.56	16.79	23.45	0.05	NOT DETECTED	NOT DETECTED
16.	30-05-2022	78.45	29.15	15.24	22.34	0.05	NOT DETECTED	NOT DETECTED
17.	02-06-2022	65.46	23.58	11.78	17.89	0.02	NOT DETECTED	NOT DETECTED
18.	06-06-2022	72.35	27.21	14.53	22.46	0.04	NOT DETECTED	NOT DETECTED
19.	09-06-2022	64.56	22.45	15.17	23.18	0.08	NOT DETECTED	NOT DETECTED

Continue...

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
20.	13-06-2022	57.43	20.18	12.94	19.84	0.05	NOT DETECTED	NOT DETECTED
21.	15-06-2022	69.22	25.21	15.43	23.45	0.07	NOT DETECTED	NOT DETECTED
22.	20-06-2022	73.25	28.43	18.32	24.19	0.06	NOT DETECTED	NOT DETECTED
23.	23-06-2022	62.34	25.17	13.19	19.18	0.04	NOT DETECTED	NOT DETECTED
24.	27-06-2022	75.44	28.16	17.36	24.55	0.03	NOT DETECTED	NOT DETECTED
25.	29-06-2022	60.23	21.49	15.33	21.39	0.02	NOT DETECTED	NOT DETECTED
26.	07-07-2022	29.44	10.15	8.34	10.21	NOT DETECTED	NOT DETECTED	NOT DETECTED
27.	11-07-2022	32.35	9.25	7.23	9.25	NOT DETECTED	NOT DETECTED	NOT DETECTED
28.	14-07-2022	27.89	8.45	9.2	11.26	NOT DETECTED	NOT DETECTED	NOT DETECTED
29.	18-07-2022	35.68	11.44	7.23	10.45	NOT DETECTED	NOT DETECTED	NOT DETECTED
30.	21-07-2022	39.23	13.28	6.35	9.45	NOT DETECTED	NOT DETECTED	NOT DETECTED
31.	25-07-2022	41.23	13.87	7.21	9.15	NOT DETECTED	NOT DETECTED	NOT DETECTED
32.	28-07-2022	33.23	10.35	5.12	8.45	NOT DETECTED	NOT DETECTED	NOT DETECTED
33.	01-08-2022	79.16	27.11	13.87	24.32	0.03	NOT DETECTED	NOT DETECTED
34.	04-08-2022	86.38	32.76	19.76	27.47	0.05	NOT DETECTED	NOT DETECTED
35.	08-08-2022	68.74	29.54	14.48	23.85	0.09	NOT DETECTED	NOT DETECTED
36.	11-08-2022	85.38	27.35	21.36	28.49	0.02	NOT DETECTED	NOT DETECTED
37.	15-08-2022	63.84	32.43	13.25	19.18	0.03	NOT DETECTED	NOT DETECTED
38.	18-08-2022	73.18	34.92	16.38	26.22	0.06	NOT DETECTED	NOT DETECTED
39.	22-08-2022	88.52	36.64	17.27	23.63	0.05	NOT DETECTED	NOT DETECTED

Continue...

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
40.	25-08-2022	75.49	31.28	13.26	26.61	0.08	NOT DETECTED	NOT DETECTED
41.	29-08-2022	82.55	28.63	14.37	28.24	0.03	NOT DETECTED	NOT DETECTED
42.	01-09-2022	71.62	31.51	17.26	28.49	0.07	NOT DETECTED	NOT DETECTED
43.	05-09-2022	68.42	28.62	16.76	22.38	0.04	NOT DETECTED	NOT DETECTED
44.	08-09-2022	78.42	36.89	18.51	21.02	0.03	NOT DETECTED	NOT DETECTED
45.	12-09-2022	81.27	32.34	16.83	23.95	0.06	NOT DETECTED	NOT DETECTED
46.	15-09-2022	66.14	26.23	9.76	13.28	0.04	NOT DETECTED	NOT DETECTED
47.	19-09-2022	79.52	30.86	21.42	31.68	0.09	NOT DETECTED	NOT DETECTED
48.	22-09-2022	83.21	32.56	23.06	29.53	0.04	NOT DETECTED	NOT DETECTED
49.	26-09-2022	86.73	37.42	15.17	23.24	0.08	NOT DETECTED	NOT DETECTED
50.	29-09-2022	74.62	34.22	19.36	32.24	0.02	NOT DETECTED	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	--	5.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS - 5182, Part – 11



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		WTP- Nr. CETP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		02-04-2022	17-05-2022	29-06-2022	22-07-2022	04-08-2022	03-09-2022
1	06:00 to 07:00	60.4	61.8	63.9	62.6	64.4	62.8
2	07:00 to 08:00	63.5	63.8	66.3	68.3	63.8	66.3
3	08:00 to 09:00	58.9	66.7	66.8	64.2	66.7	65.5
4	09:00 to 10:00	63.5	65.3	68.5	69.8	65.3	67.8
5	10:00 to 11:00	67.8	66.7	66.2	62.2	66.7	66.2
6	11:00 to 12:00	69.5	62.9	65.2	68.8	62.9	65.2
7	12:00 to 13:00	64.5	64.2	66.5	67.2	64.2	66.5
8	13:00 to 14:00	66.2	62.5	66.1	62.5	62.5	66.1
9	14:00 to 15:00	60.2	63.6	67.3	67.1	63.6	67.3
10	15:00 to 16:00	65.5	60.6	63.4	61.5	60.6	64.2
11	16:00 to 17:00	68.9	63.5	65.5	66.8	63.5	65.5
12	17:00 to 18:00	60.5	60.5	62.8	67.5	60.5	62.8
13	18:00 to 19:00	64.5	58.5	60.5	68.1	58.5	60.5
14	19:00 to 20:00	60.2	58.3	61.3	65.2	58.3	62.1
15	20:00 to 21:00	58.7	59.5	60.2	64.1	59.5	60.2
16	21:00 to 22:00	56.5	58.5	59.6	61.2	60.8	60.1
Day Time		<75 dB (A)					

Continue...

Location Name		WTP- Nr. CETP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		02-04-2022	17-05-2022	29-06-2022	22-07-2022	04-08-2022	03-09-2022
1	22:00 to 23:00	57.2	56.4	59.5	63.2	60.2	58.4
2	23:00 to 24:00	60.2	58.2	58.5	60.5	57.5	56.8
3	24:00 to 01:00	57.6	57.5	58.3	60.4	58.3	59.4
4	01:00 to 02:00	55.3	57.5	57.5	62.1	56.8	58.1
5	02:00 to 03:00	55.5	56.8	57.8	57.8	56.9	56.9
6	03:00 to 04:00	57.8	56.9	55.9	59.4	57.7	58.5
7	04:00 to 05:00	56.2	55.4	55.5	60.2	57.8	59.4
8	05:00 to 06:00	58.9	57.8	58.2	64.2	61.9	62.6
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		AIR STRIP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		11-04-2022	24-05-2022	11-06-2022	19-07-2022	23-08-2022	20-09-2022
1	06:00 to 07:00	62.5	63.7	62.5	62.6	60.9	62.5
2	07:00 to 08:00	68.5	65.2	61.5	68.3	66.3	61.5
3	08:00 to 09:00	65.5	62.9	60.5	64.2	62.7	60.5
4	09:00 to 10:00	64.2	65.8	62.3	69.8	66.7	62.3
5	10:00 to 11:00	66.8	63.2	60.5	62.2	64.8	61.1
6	11:00 to 12:00	62.8	62	63.4	68.8	63.8	64.8
7	12:00 to 13:00	66.9	63.2	64.2	67.2	62.9	64.2
8	13:00 to 14:00	65.6	62.9	65.5	62.5	63.7	65.5
9	14:00 to 15:00	65.2	63.2	64.9	67.1	61.4	63.8
10	15:00 to 16:00	68.2	62	63.6	61.5	65.4	63.6
11	16:00 to 17:00	64.2	62.3	65.3	66.8	63.8	64.9
12	17:00 to 18:00	67.2	65.1	62.8	65.7	66.1	62.8
13	18:00 to 19:00	66.5	60	60.4	68.1	60.3	61.2
14	19:00 to 20:00	68.5	62.3	59.4	65.2	64.6	59.4
15	20:00 to 21:00	63.2	57	58.5	64.1	59.7	58.5
16	21:00 to 22:00	59.7	59.2	59.3	61.2	62.1	59.9
Day Time		<75 dB (A)					

Continue...

Location Name		AIR STRIP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		11-04-2022	24-05-2022	11-06-2022	19-07-2022	23-08-2022	20-09-2022
1	22:00 to 23:00	59.6	57.2	57.5	63.2	58.9	59.4
2	23:00 to 24:00	58.76	58.2	55.6	57.8	60.8	61.8
3	24:00 to 01:00	63.5	58.4	57.2	58.9	56.7	57.7
4	01:00 to 02:00	60.21	56.5	55.8	62.1	53.9	54.9
5	02:00 to 03:00	60.2	52.3	54.2	55.4	54.2	53.2
6	03:00 to 04:00	64.2	55.7	54.9	59.4	53.1	54.5
7	04:00 to 05:00	58.2	56.9	55.3	60.2	55.5	56.8
8	05:00 to 06:00	62.1	58.2	56.5	64.2	58.8	59.1
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Stack Monitoring

Sr. No.	Parameter	Unit	April-2022	GPCB LIMIT	Method of Test
			D.G.Set No. S-1 (380 KVA)		
			23-04-2022		
1	Particulate Matter	mg/Nm ³	20.18	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	6.1	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	27.45	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	3.8	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	--	UERL/AIR/SOP/27



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Minimum Detection Limit

Ambient Air Quality Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Particulate Matter (PM10)	µg/m3	5 µg/m3
2	Particulate Matter (PM10)	µg/m3	5 µg/m3
3	Sulphur Dioxide (SO2)	µg/m3	4 µg/m3
4	Nitrogen Dioxide (NO2)	µg/m3	5 µg/m3
5	Carbon Monoxide (CO)	mg/m3	0.01 mg/m3
6	Ammonia (NH3)	µg/m3	5 µg/m3
7	Ozone (O3)	µg/m3	5 µg/m3
8	Lead (Pb)	µg/m3	0.5 µg/m3
9	Nickle (Ni)	ng/m3	1 ng/m3
10	Arsenic (As)	ng/m3	1 ng/m3
11	Benzene	µg/m3	1 µg/m3
12	Benzo(o)Pyrene	ng/m3	0.1 ng/m3
14	Hydro Carbon	µg/m3	1 µg/m3

Stack Emission Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Suspended particulate matter	mg/Nm3	2 mg/Nm3
2	Sulphur Dioxide SOX	mg/Nm3	4 mg/Nm3
3	Oxides of Nitrogen NOX	mg/Nm3	5 mg/Nm3

CETP water

Sr. No.	Test Parameter	Unit	MDL
1	pH @ 27 ° C	--	2
2	Temperature	0C	5
3	Colour	Pt. Co. Scale	5
4	Total Suspended Solids	mg/L	4
5	Oil & Grease	mg/L	2
6	Phenolic Compound	mg/L	0.1
7	Fluoride	mg/L	0.2
8	Iron as Fe	mg/L	0.1
9	Zinc as Zn	mg/L	0.05
10	Trivalent Chromium	mg/L	0.05
11	Sulphide	mg/L	0.05
12	Ammonical Nitrogen	mg/L	2
13	BOD (3 days at 27 0C)	mg/L	1
14	COD	mg/L	2
15	Chloride (as Cl) -	mg/L	1
16	Sulphate (as SO ₄)	mg/L	1
17	Total Dissolved Solids	mg/L	4
18	Total Residual Chlorine	mg/L	0.1
19	Copper as Cu	mg/L	0.05
20	Bio Assay test (%)	%	--



"Half Yearly Environmental Monitoring Reports "

For,
adani
Ports and
Logistics

M/S. MPSEZ Utilities Ltd. (MUL)

Survey No. 141, Village - Mundra, APSEZ, Tal: Mundra, Dist.: Kutch – 370 421

Monitoring Period: October - 2022 to March - 2023

Submitted By



UniStar Environment & Research Labs Pvt. Ltd.

White House, Near GIDC Office, Char Rasta, Vapi, Gujarat, India – 396195



RESULTS OF CETP INLET WATER

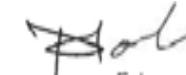
SR.NO.	TEST PARAMETERS	UNIT	CETP INLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23		
			10-10-2022	28-11-2022	16-12-2022	03-01-2023	02-02-2023	02-03-2023		
1.	pH @ 27 ° C	--	7.21	7.38	7.75	7.46	7.69	7.84	6.5 to 8.5	APHA 23 rd Ed.,2017,4500-H+B
2.	Temperature	°C	30.5	30	29	28.5	29	29	--	IS 3025(Part 9)1984
3.	Colour	Pt. Co. Scale	60	80	60	60	80	80	100	IS 3025(Part 4)
4.	Total Suspended Solids	mg/L	88	78	72	82	208	158	800	APHA 23 rd Ed.,2017,2540-D
5.	Oil & Grease	mg/L	9	10	2	6	8	10	20	IS 3025(Part 39)1991, Amd. 2
6.	Phenolic Compounds	mg/L	0.82	1.12	0.24	0.86	BDL(MDL:0.1)	0.58	2	IS 3025(Part 43)1992, Amd.2
7.	Fluoride	mg/L	1.14	1.11	1.8	1.24	1.3	1.04	2	APHA 23 rd Ed.,2017,4500 F, D
8.	Iron as Fe	mg/L	1.24	1.32	0.109	1.168	0.133	0.624	3	IS 3025(Part 53)2003,
9.	Zinc as Zn	mg/L	0.94	1.14	0.56	0.82	BDL(MDL:0.05)	0.128	15	IS 3025(Part 49)1994
10.	Trivalent Chromium	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	By Calculation
11.	Sulphide	mg/L	1.24	1.34	0.85	1.06	1.5	1.64	2	APHA 23 rd Ed.,2017,4500-H+B

Continue...

SR.NO.	TEST PARAMETERS	UNIT	CETP INLET						GPCB Permissible Limit CETP Inlet	TEST METHOD
			Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23		
			10-10-2022	28-11-2022	16-12-2022	03-01-2023	02-02-2023	02-03-2023		
12.	Ammonical Nitrogen	mg/L	11.9	18.4	25.3	22.5	31.3	13.1	50	IS 3025(Part 9)1984
13.	BOD (3 days at 27 °C)	mg/L	180	140	77	64	70	180	1000	IS 3025(Part 4)
14.	COD	mg/L	750.4	586.4	320.5	268.4	245.7	644.5	2000	APHA 23 rd Ed.,2017,2540 –D
15.	Chloride (as Cl) -	mg/L	767.4	714.6	820.2	880	899.7	886.4	1000	IS 3025(Part39)1991, Amd. 2
16.	Sulphate (as SO ₄)	mg/L	172	164	125.3	116	142	168	1000	IS 3025(Part 43)1992, Amd.2
17.	Total Dissolved Solids	mg/L	1780	1746	1780	1860	1880	1888	2100	APHA 23 rd Ed.,2017,4500 F, D
18.	Total Residual Chlorine	mg/L	0.82	0.88	0.91	0.64	0.94	0.84	2	IS 3025(Part 53)2003,
19.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 49)1994



Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

RESULTS OF CETP OUTLET WATER

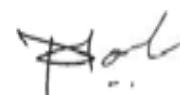
SR.NO.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP Outlet	TEST METHOD
			Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23		
			10-10-2022	28-11-2022	16-12-2022	03-01-2023	02-02-2023	02-03-2023		
1.	pH @ 27 ° C	--	7.2	7.32	7.73	7.45	7.58	7.64	6.0 – 9.0	APHA 23 rd Ed.,2017,4500-H ⁺ B
2.	Temperature	°C	30.5	30	29	28.5	29	29	Shall not exceed more than 5 °C above received water temperature	IS 3025(Part 9)1984
3.	Colour	Pt. Co. Scale	50	40	50	50	40	50	100	IS 3025(Part 4)
4.	Total Suspended Solids	mg/L	26	32	34	42	10	42	100	APHA 23 rd Ed.,2017,2540 –D
5.	Oil & Grease	mg/L	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	10	IS 3025 (Part 39)1991, Amd. 2
6.	Phenolic Compounds	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	1	IS 3025(Part 43)1992, Amd.2
7.	Fluoride	mg/L	1.1	0.82	1.3	1.22	1.3	1.02	2	APHA 23 rd Ed.,2017,4500F, D
8.	Iron as Fe	mg/L	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	3	IS 3025(Part 53)2003,
9.	Zinc as Zn	mg/L	0.59	0.64	0.52	0.67	BDL(MDL:0.05)	BDL(MDL:0.05)	15	IS 3025(Part 49)1994
10.	Trivalent Chromium	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	2	By Calculation

Continue...

SR.NO.	TEST PARAMETERS	UNIT	CETP OUTLET						GPCB Permissible Limit CETP Inlet	TEST METHOD	
			Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23			
			10-10-2022	28-11-2022	16-12-2022	03-01-2023	02-02-2023	02-03-2023			
11.	Sulphide	mg/L	0.98	0.42	0.64	0.98	BDL(MDL:0.05)	1.62	2	APHA 23 rd Ed.,2017,4500-H+B	
12.	Ammonical Nitrogen	mg/L	11.5	16.4	3.4	6.7	2.3	8	50	IS 3025(Part 9)1984	
13.	BOD (3 days at 27 °C)	mg/L	45	35	37	25	31	51	100	IS 3025(Part 4)	
14.	COD	mg/L	186.6	146.5	156.1	90.4	112.2	181.3	250	APHA 23 rd Ed.,2017,2540-D	
15.	Chloride (as Cl) -	mg/L	740.5	712.2	793	744	751.4	867.5	1000	IS 3025(Part 39)1991, Amd. 2	
16.	Sulphate (as SO ₄)	mg/L	166	160	116.4	114	110	156	1000	IS 3025(Part 43)1992, Amd.2	
17.	Total Dissolved Solids	mg/L	1750	1740	1776	1844	1868	1854	2100	APHA 23 rd Ed.,2017,4500F, D	
18.	Total Residual Chlorine	mg/L	0.75	0.82	0.86	0.64	0.94	0.82	1	IS 3025(Part 53)2003,	
19.	Copper as Cu	mg/L	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	3	IS 3025(Part 49)1994	
20.	Bio Assay test (%)	%	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	90 % survival of fish after 96 hrs. in 100% effluent	IS:6582-1971



Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

Results of Ambient Air Quality Monitoring

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
1.	03-10-2023	86.52	34.56	15.67	21.44	1.00
2.	06-10-2022	82.35	27.86	13.45	18.78	--
3.	10-10-2022	89.34	30.23	18.78	24.56	--
4.	13-10-2022	78.44	24.21	21.34	27.67	--
5.	17-10-2022	85.67	26.57	20.45	24.56	--
6.	20-10-2022	81.07	37.68	22.45	28.79	--
7.	27-10-2022	87.42	26.75	22.46	27.65	--
8.	28-10-2022	74.56	23.28	19.89	25.61	--
9.	31-10-2022	81.52	27.9	23.48	29.35	--
10.	03-11-2022	72.34	26.12	15.21	21.45	--
11.	07-11-2022	82.34	29.34	15.67	22.34	--
12.	10-11-2022	89.15	37.12	14.23	19.38	--
13.	14-11-2022	88.12	32.69	17.23	24.56	--
14.	17-11-2022	73.45	28.72	22.34	29.35	--
15.	21-11-2022	81.23	36.29	20.15	27.68	--

Continue...

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
16.	24-11-2022	65.78	23.42	23.18	28.55	--
17.	28-11-2022	77.23	29.56	24.17	31.25	--
18.	01-12-2022	62.58	34.26	20.38	26.23	--
19.	05-12-2022	67.36	36.49	18.74	24.18	--
20.	08-12-2022	74.24	26.75	17.27	23.68	--
21.	12-12-2022	69.26	39.17	23.59	29.52	--
22.	15-12-2022	87.57	34.98	16.63	21.39	--
23.	19-12-2022	72.5	29.47	13.93	18.48	--
24.	22-12-2022	84.27	31.41	16.38	25.67	--
25.	26-12-2022	81.38	37.19	21.64	28.41	--
26.	29-12-2022	76.62	24.82	18.39	27.46	--
27.	02-01-2023	67.18	39.72	24.47	31.92	0.07
28.	05-01-2023	83.72	43.47	26.25	32.53	--
29.	09-01-2023	88.62	34.79	21.38	27.44	--
30.	12-01-2023	76.24	28.61	20.88	25.73	--
31.	16-01-2023	68.62	27.36	19.73	28.48	--

Continue...

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
32.	19-01-2023	88.23	38.57	24.42	33.62	--
33.	23-01-2023	68.24	37.18	22.87	27.16	--
34.	26-01-2023	62.4	45.66	27.34	34.63	--
35.	30-01-2023	82.27	34.32	24.28	31.27	--
36.	02-02-2023	89.17	43.76	30.69	37.28	--
37.	06-02-2023	83.68	32.48	21.35	28.93	--
38.	09-02-2023	76.06	37.53	18.16	26.55	--
39.	13-02-2023	87.29	35.42	27.53	36.19	--
40.	16-02-2023	71.53	33.73	29.93	38.61	--
41.	20-02-2023	85.16	31.96	32.39	39.46	--
42.	23-02-2023	87.52	42.09	28.31	34.83	--
43.	27-02-2023	79.26	32.58	22.79	31.18	--
44.	02-03-2023	86.38	35.82	24.18	31.64	--
45.	06-03-2023	83.54	27.19	27.63	36.81	--
46.	09-03-2023	71.49	31.47	23.38	29.42	--
47.	13-03-2023	86.51	42.87	31.48	39.53	--

Continue...

Name of Location		WTP- Nr. CETP				
Sr. No.	Date of Monitoring	Parameter with Results				
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³
48.	16-03-2023	81.28	40.16	25.96	32.47	--
49.	20-03-2023	78.51	37.55	28.17	34.28	--
50.	23-03-2023	86.42	33.75	23.18	27.06	--
51.	27-03-2023	71.32	38.19	29.73	35.62	--
52.	30-03-2023	82.74	41.78	32.57	41.48	--
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0
Test Method		IS - 5182, Part- 23	UERL/AIR/ SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Ambient Air Quality Monitoring

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
1.	03-10-2023	86.28	29.74	18.93	31.41	0.06	NOT DETECTED	NOT DETECTED
2.	06-10-2022	83.84	32.28	21.74	26.73	0.04	NOT DETECTED	NOT DETECTED
3.	10-10-2022	79.52	27.59	19.14	18.37	0.03	NOT DETECTED	NOT DETECTED
4.	13-10-2022	73.92	24.26	14.61	23.53	0.05	NOT DETECTED	NOT DETECTED
5.	17-10-2022	78.72	26.85	14.38	20.78	0.03	NOT DETECTED	NOT DETECTED
6.	20-10-2022	69.61	30.83	19.22	25.24	0.08	NOT DETECTED	NOT DETECTED
7.	27-10-2022	88.24	32.88	20.16	32.23	0.04	NOT DETECTED	NOT DETECTED
8.	28-10-2022	82.96	27.19	13.72	22.73	0.06	NOT DETECTED	NOT DETECTED
9.	31-10-2022	78.48	30.39	17.53	27.74	0.06	NOT DETECTED	NOT DETECTED
10.	03-11-2022	72.34	27.69	12.35	18.95	0.06	NOT DETECTED	NOT DETECTED
11.	07-11-2022	68.15	25.68	17.36	26.13	0.02	NOT DETECTED	NOT DETECTED
12.	10-11-2022	80.14	31.24	14.55	22.34	0.06	NOT DETECTED	NOT DETECTED
13.	14-11-2022	62.34	35.23	17.23	21.59	0.05	NOT DETECTED	NOT DETECTED
14.	17-11-2022	68.59	27.49	15.12	23.63	0.03	NOT DETECTED	NOT DETECTED
15.	21-11-2022	79.23	28.15	21.34	30.25	0.04	NOT DETECTED	NOT DETECTED

Continue...

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
16.	24-11-2022	82.34	32.51	19.26	24.55	0.02	NOT DETECTED	NOT DETECTED
17.	28-11-2022	71.27	34.74	22.15	28.12	0.05	NOT DETECTED	NOT DETECTED
18.	01-12-2022	87.26	36.31	19.22	27.73	0.04	NOT DETECTED	NOT DETECTED
19.	05-12-2022	76.4	32.69	24.64	34.58	0.05	NOT DETECTED	NOT DETECTED
20.	08-12-2022	63.53	27.84	21.46	29.71	0.06	NOT DETECTED	NOT DETECTED
21.	12-12-2022	69.17	28.49	23.58	32.93	0.04	NOT DETECTED	NOT DETECTED
22.	15-12-2022	84.38	35.96	17.61	27.31	0.06	NOT DETECTED	NOT DETECTED
23.	19-12-2022	88.53	33.84	27.02	36.86	0.06	NOT DETECTED	NOT DETECTED
24.	22-12-2022	71.64	39.57	26.62	31.79	0.03	NOT DETECTED	NOT DETECTED
25.	26-12-2022	86.19	29.12	27.58	32.16	0.05	NOT DETECTED	NOT DETECTED
26.	29-12-2022	75.38	32.79	22.73	28.14	0.05	NOT DETECTED	NOT DETECTED
27.	02-01-2023	69.38	39.26	14.39	26.84	0.08	NOT DETECTED	NOT DETECTED
28.	05-01-2023	85.42	37.48	29.74	38.46	0.06	NOT DETECTED	NOT DETECTED
29.	09-01-2023	79.5	36.21	27.39	36.82	0.04	NOT DETECTED	NOT DETECTED
30.	12-01-2023	72.37	33.64	26.29	28.48	0.13	NOT DETECTED	NOT DETECTED
31.	16-01-2023	67.52	39.72	24.53	36.64	0.06	NOT DETECTED	NOT DETECTED

Continue...

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
32.	19-01-2023	73.49	43.18	21.39	32.96	0.09	NOT DETECTED	NOT DETECTED
33.	23-01-2023	81.96	29.46	28.73	34.27	0.05	NOT DETECTED	NOT DETECTED
34.	26-01-2023	78.36	27.93	23.72	31.28	0.07	NOT DETECTED	NOT DETECTED
35.	30-01-2023	84.27	38.43	28.27	36.38	0.05	NOT DETECTED	NOT DETECTED
36.	02-02-2023	83.48	32.67	18.37	29.71	0.09	NOT DETECTED	NOT DETECTED
37.	06-02-2023	87.24	43.5	21.37	34.88	0.13	NOT DETECTED	NOT DETECTED
38.	09-02-2023	76.59	39.13	16.84	27.93	0.10	NOT DETECTED	NOT DETECTED
39.	13-02-2023	89.61	37.82	19.37	31.84	0.05	NOT DETECTED	NOT DETECTED
40.	16-02-2023	75.05	31.49	21.93	32.27	0.08	NOT DETECTED	NOT DETECTED
41.	20-02-2023	85.74	36.57	27.28	38.46	0.16	NOT DETECTED	NOT DETECTED
42.	23-02-2023	72.18	41.28	31.47	39.82	0.07	NOT DETECTED	NOT DETECTED
43.	27-02-2023	86.39	38.31	29.64	37.16	0.08	NOT DETECTED	NOT DETECTED
44.	02-03-2023	89.36	41.38	23.19	31.58	0.11	NOT DETECTED	NOT DETECTED
45.	06-03-2023	83.65	37.18	26.63	29.84	0.16	NOT DETECTED	NOT DETECTED
46.	09-03-2023	84.68	34.79	21.1	28.62	0.13	NOT DETECTED	NOT DETECTED
47.	13-03-2023	76.25	39.76	26.49	34.36	0.08	NOT DETECTED	NOT DETECTED

Continue...

Name of Location		AIR STRIP						
Sr. No.	Date of Monitoring	Parameter with Results						
		PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO mg/m ³	HC µg/m ³	Benzene µg/m ³
48.	16-03-2023	82.16	35.53	17.47	26.85	0.11	NOT DETECTED	NOT DETECTED
49.	20-03-2023	86.19	31.28	21.55	29.26	0.14	NOT DETECTED	NOT DETECTED
50.	23-03-2023	73.96	38.36	27.94	34.81	0.10	NOT DETECTED	NOT DETECTED
51.	27-03-2023	81.39	34.91	24.73	28.46	0.13	NOT DETECTED	NOT DETECTED
52.	30-03-2023	88.37	32.48	28.13	36.81	0.09	NOT DETECTED	NOT DETECTED
Permissible Value as per NAAQMS		100.0	60.0	80.0	80.0	2.0	---	5.0
Test Method		IS - 5182, Part-23	UERL/AIR/SOP/11	IS - 5182, Part - 2	IS - 5182, Part - 6	IS - 5182, Part - 10	Gas analyzer	IS - 5182, Part - 11



Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		WTP- Nr. CETP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		04-10-2022	09-11-2022	03-12-2022	04-01-2023	08-02-2023	04-03-2023
1	06:00 to 07:00	63.6	58.3	62.4	62.1	59.4	59.4
2	07:00 to 08:00	63.5	63.2	65.4	64.8	62.7	61.7
3	08:00 to 09:00	58.9	66.8	65.1	64.3	65.4	63.8
4	09:00 to 10:00	62.4	64.5	65.9	66.9	63.9	67.4
5	10:00 to 11:00	67.8	68.6	68.4	67.5	67.0	64.3
6	11:00 to 12:00	69.5	65.2	67.3	67.3	67.8	65.8
7	12:00 to 13:00	68.1	67.1	63.9	63.9	63.8	65.2
8	13:00 to 14:00	66.2	66.1	66.1	67.4	63.2	69.4
9	14:00 to 15:00	62.3	69.0	61.8	61.8	62.4	63.2
10	15:00 to 16:00	65.5	68.2	63.4	64.2	62.5	63.1
11	16:00 to 17:00	67.4	66.9	64.6	67.5	67.1	68.4
12	17:00 to 18:00	60.5	62.8	62.8	69.0	63.9	65.0
13	18:00 to 19:00	61.8	65.8	62.5	64.8	67.4	68.4
14	19:00 to 20:00	60.2	61.3	61.3	62.8	63.2	61.2
15	20:00 to 21:00	59.3	68.9	63.5	63.5	67.6	64.9
16	21:00 to 22:00	58.8	65.7	62.7	63.7	68.7	63.6
Day Time		<75 dB (A)					

Continue...

Location Name		WTP- Nr. CETP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) – Night Time					
		04-10-2022	09-11-2022	03-12-2022	04-01-2023	08-02-2023	04-03-2023
1	22:00 to 23:00	57.2	59.5	61.2	58.6	56.4	55.7
2	23:00 to 24:00	60.2	56.8	60.5	61.3	57.3	57.3
3	24:00 to 01:00	57.6	56.2	61.3	61.4	57.8	57.8
4	01:00 to 02:00	55.3	60.7	63.9	63.9	59.2	59.1
5	02:00 to 03:00	55.5	56.2	58.5	59.7	57.6	56.8
6	03:00 to 04:00	57.8	59.3	59.4	60.2	59.3	57.3
7	04:00 to 05:00	56.2	55.7	60.2	63.5	56.8	58.2
8	05:00 to 06:00	58.9	57.1	63.6	62.7	58.3	59.3
Night Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Noise Level Monitoring

Location Name		AIR STRIP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Day Time					
		21-10-2022	26-11-2022	24-12-2022	24-01-2023	25-02-2023	25-03-2023
1	06:00 to 07:00	61.1	62.9	61.1	60.5	59.8	63.7
2	07:00 to 08:00	68.5	61.5	63.5	62.7	62.7	64.2
3	08:00 to 09:00	65.5	63.3	64.3	63.9	67.8	63.8
4	09:00 to 10:00	63.3	62.3	64.8	65.1	64.5	65.8
5	10:00 to 11:00	65.7	61.2	62.4	67.3	61.2	64.9
6	11:00 to 12:00	62.8	63.4	63.4	66.9	68.4	67.0
7	12:00 to 13:00	68.2	67.4	65.8	63.2	64.2	63.8
8	13:00 to 14:00	65.6	68.0	62.9	62.9	69.1	67.5
9	14:00 to 15:00	64.2	63.7	64.9	64.9	65.8	66.3
10	15:00 to 16:00	68.2	63.6	64.7	63.3	64.3	62.5
11	16:00 to 17:00	63.6	65.1	65.3	67.5	67.2	68.4
12	17:00 to 18:00	67.2	63.2	63.2	64.7	63.2	65.4
13	18:00 to 19:00	68.7	60.4	60.4	62.4	60.4	64.1
14	19:00 to 20:00	68.5	60.6	60.1	62.5	60.9	63
15	20:00 to 21:00	61.1	59.6	58.5	58.5	62.6	62.7
16	21:00 to 22:00	60.9	61.8	63.6	62.8	63.6	62.4
Day Time		<75 dB (A)					

Continue...

Location Name		AIR STRIP					
Sr. No.	Sampling Date and Time	Noise Level Leq. dB(A) - Night Time					
		21-10-2022	26-11-2022	24-12-2022	24-01-2023	25-02-2023	25-03-2023
1	22:00 to 23:00	59.6	55.8	60.7	58.4	57.3	58.5
2	23:00 to 24:00	57.4	56.8	57.8	57.8	58.1	57.4
3	24:00 to 01:00	63.5	59.3	59.1	58.3	60.4	57.9
4	01:00 to 02:00	60.7	56.2	62.1	61.2	57.8	59.3
5	02:00 to 03:00	60.2	56.4	58.4	59.0	57.6	57.2
6	03:00 to 04:00	63.8	61.3	58.7	58.7	60.3	61.7
7	04:00 to 05:00	58.2	57.3	60.8	61.1	57.8	56.4
8	05:00 to 06:00	62.1	58.7	62.2	62.1	58.7	58.1
Day Time		<70 dB (A)					

Test Method	IS: 9989 : 1981
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Nikunj D. Patel
(Chemist)




Jaivik S. Tandel
(Manager - Operations)

Results of Stack Monitoring

Sr. No.	Parameter	Unit	Dec-2022	GPCB LIMIT	Method of Test
			D.G.Set No. S-1 (380 KVA)		
			15-12-2022		
1	Particulate Matter	mg/Nm ³	18.4	150	IS 11255 (Part - 1)
2	Sulphur Dioxide as SO ₂	ppm	6.8	100	IS 11255 (Part - 2)
3	Oxides of Nitrogen as NO _x	ppm	24.7	50	IS 11255 (Part - 7)
4	Carbon Monoxide	mg/Nm3	2.6	--	UERL/AIR/SOP/18
5	Non Methyl Hydro Carbon	ppm	Not Detected	--	UERL/AIR/SOP/27



Nikunj D. Patel
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Jaivik S. Tandel
(Manager - Operations)

RESULTS OF BOREHOLE WATER SAMPLE

Sr. No	Parameters	Method	Unit	05-07-2022
				Nr. CETP
1	pH @ 25 ° C	IS 3025(Part 11)1983	--	7.42
2	Salinity	APHA 23rd Ed.,2017,2520 B	ppt	1.89
3	Oil & Grease	IS 3025(Part39)1991, Amd. 2	mg/L	BDL(MDL:2.0)
4	Hydrocarbon	GC/GCMS	mg/L	Not Detected
5	Lead as Pb	IS 3025 (PART 47) 1994	mg/L	0.08
6	Arsenic as As	APHA 23rd Ed.,2017,3114-C	mg/L	BDL(MDL:0.01)
7	Nickel as Ni	IS 3025 (PART 54) 2003	mg/L	0.068
8	Total Chromium as Cr	IS 3025 (PART 52) 2003	mg/L	BDL(MDL:0.05)
9	Cadmium as Cd	IS 3025(PART 41) 1992	mg/L	BDL(MDL:0.003)
10	Mercury as Hg	APHA 23rd Ed.,2017, 3112-B	mg/L	BDL(MDL:0.001)
11	Zinc as Zn	IS 3025(PART 49) 1994	mg/L	0.286
12	Copper as Cu	IS 3025 (PART 42) 1992	mg/L	BDL(MDL:0.05)
13	Iron as Fe	IS 3025(PART 53) 2003	mg/L	BDL(MDL:0.1)
14	Insecticides/Pesticides	USEPA 8081 B	µg/L	Absent
15	Depth of Water Level from Ground Level	--	meter	2.3



Patel
Mr. Nilesh Patel
Sr. Chemist

Tandel
Mr. Nitin Tandel
Technical Manager

RESULTS OF SOIL SAMPLE

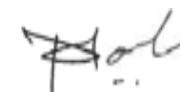
SR. NO.	TEST PARAMETERS	UNIT	05-07-2022
			Near CETP
1	pH	--	8.75
2	Nitrogen as N	%	0.34
3	Phosphorus as P	mg/kg	362
4	Potassium as K	mg/kg	124
5	Boron as B	mg/kg	3.36
6	Calcium as Ca	mg/kg	452
7	Magnesium as Mg	mg/kg	598
8	Iron as Fe	%	0.45
9	Moisture	%	8.18
10	Organic Matter	%	0.21
11	Cation exchange capacity (CEC)	meq/100gm	9.52
12	TVC	CFU/gm	1.8 x 106
13	Cadmium as Cd	mg/kg	BDL(MDL:1.0)
14	Thorium as Th	mg/kg	BDL(MDL:1.0)
15	Antimony as Sb	mg/kg	BDL(MDL:1.0)
16	Arsenic as As	mg/kg	BDL(MDL:1.0)

Continue...

17	Lead as Pb	mg/kg	BDL(MDL:1.0)
18	Chromium as Cr	mg/kg	BDL(MDL:1.0)
19	Cobalt as Co	mg/kg	23.5
20	Copper as Cu	mg/kg	40.2
21	Nickel as Ni	mg/kg	12.9
22	Manganese and Mn	mg/kg	325
23	Vanadium as V	mg/kg	8.15



Mr. Nilesh Patel
Sr. Chemist

Mr. Nitin Tandel
Technical Manager

Minimum Detection Limit

Ambient Air Quality Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	Particulate Matter (PM10)	µg/m3	5 µg/m3
2	Particulate Matter (PM10)	µg/m3	5 µg/m3
3	Sulphur Dioxide (SO2)	µg/m3	4 µg/m3
4	Nitrogen Dioxide (NO2)	µg/m3	5 µg/m3
5	Carbon Monoxide (CO)	mg/m3	0.01 mg/m3
6	Ammonia (NH3)	µg/m3	5 µg/m3
7	Ozone (O3)	µg/m3	5 µg/m3
8	Lead (Pb)	µg/m3	0.5 µg/m3
9	Nickle (Ni)	ng/m3	1 ng/m3
10	Arsenic (As)	ng/m3	1 ng/m3
11	Benzene	µg/m3	1 µg/m3
12	Benzo(o)Pyrene	ng/m3	0.1 ng/m3
14	Hydro Carbon	µg/m3	1 µg/m3

Stack Emission Monitoring

Sr. No.	Test Parameter	Unit	MDL
1	SuspeNOT DETECTED particulate matter	mg/Nm3	2 mg/Nm3
2	Sulphur Dioxide SOX	mg/Nm3	4 mg/Nm3
3	Oxides of Nitrogen NOX	mg/Nm3	5 mg/Nm3

CETP water

Sr. No.	Test Parameter	Unit	MDL
1	pH @ 27 ° C	--	2
2	Temperature	0C	5
3	Colour	Pt. Co. Scale	5
4	Total Suspended Solids	mg/L	4
5	Oil & Grease	mg/L	2
6	Phenolic Compounds	NOT DETECTED	0.1
7	Fluoride	mg/L	0.2
8	Iron as Fe	mg/L	0.1
9	Zinc as Zn	mg/L	0.05
10	Trivalent Chromium	mg/L	0.05
11	Sulphide	mg/L	0.05
12	Ammonical Nitrogen	mg/L	2
13	BOD (3 days at 27 0C)	mg/L	1
14	COD	mg/L	2
15	Chloride (as Cl) -	mg/L	1
16	Sulphate (as SO ₄)	mg/L	1
17	Total Dissolved Solids	mg/L	4
18	Total Residual Chlorine	mg/L	0.1
19	Copper as Cu	mg/L	0.05
20	Bio Assay test (%)	%	--