

Gujarat Pollution Control Board's Report in compliance to the Hon'ble National Green Tribunal Order dated 23th Nov 2023 in the matter of Original Application No. 693 of 2023 - In re: News Item appearing in Deccan Herald dated 24.10.2023 titled "Pollution Control Boards are the weak link"

GUJARAT STATE

Gujarat is the Western most State of India. It is bounded by the Arabian Sea in the west, and it shares its borders with Madhya Pradesh in the east, Rajasthan in the north & northeast and Maharashtra in the south & south-east. Gujarat is an industrially advanced state which enables it on an remarkable position in India's growth. The population of Gujarat State is 6.04 crores as per 2011 Census. The state covers an area of 1,96,244 sq. km. Gujarat is the 7th largest state in India in terms of area. The state is in the forefront of industrialization and has taken many initiatives in setting up mega industrial establishments in manufacturing. The State is also known for better management of water resources in the country.

GUJARAT POLLUTION CONTROL BOARD

Gujarat Pollution Control Board (Now commonly known as GPCB) was constituted by Government of Gujarat on 15th October, 1974 in accordance with the provisions of the Water Act, 1974. The GPCB continues its efforts towards environment related better prevention and pollution control with improved management tools. Several critical issues in the field of environment are being tackled by the Board through its existing 27 No. of Regional Offices located at Ahmedabad city, Ahmedabad East, Ahmedabad Rural, Gandhinagar, Vadodara, Anand, Bharuch, Surat, Vapi, Sarigam, Navsari, Jetpur, Ankleshwar, Surendranagar, Himmatnagar, Palanpur, Morbi, Rajkot, Jamnagar, Godhra, Mehsana, Bhavnagar, Kutch West, Kutch East, Nadiad, Porbandar and Junagadh.

Though the basic functions of the Board has remained as regulatory, it has also been organising various awareness programmes, from time to time on local issues such as municipal solid wastes, bio-medical wastes, plastic issues besides water, air and land pollution generated from various industrial clusters. Efforts are being made for pollution control with a view to minimize and prevent pollution along with sustainable development.

The GPCB, Head Office, Gandhinagar has been registered by the BIS- Bureau of Indian Standards, Delhi under the Quality Management Systems in accordance with IS: ISO: 9001:2015 and IS: ISO: 14001:2015 for Environmental Management System. Recently Board has also been accredited with IS: 45001:2018 certificates for occupational health and safety.

The Board continued to make joint efforts with concerned Government offices, Municipal Corporations, Municipalities, hospitals, towns and municipalities, educational institutions, Industries Associations, etc. for awareness amongst the general citizens. These awareness programmes have been an effective tool in detecting and controlling the environmental pollution.

Board has also encouraged the reuse of waste in the State of Gujarat i.e. Co-processing, Waste to Energy Projects, reuse of treated sewage for conserving the natural resources.

e-GOVERNANCE PROGRAMME OF GPCB

In the field of e-Governance programme of GPCB, vizly. XGN (Extended Green Node) was launched by Shri Mangubhai Patel, Hon'ble Minister, Tribal Development, Forest & Environment on 5th June- the World Environment Day, 2008. The XGN facility has also been introduced to facilitate filing returns under the Water Cess Act, 1977, and obtaining an online assessment orders. Implementation of this XGN software has been awarded a Silver Award by the Department of Administrative Reforms and Public Grievance, Government of India on 18.2.2010. The Board has been progressing in the field of e-governance.

I. Details of technical staff, scientific staff, administrative Staff and legal staff at GPCB.

GPCB Staff Position as on 01/01/2024				
Technical Staff				
Sr No	Post	Sanctioned	Working	Vacant
1	Chief Environmental Engineer	0	0	0
2	Deputy Chief Environmental Engineer	0	0	0
3	Senior Environmental Engineer	11	5	6
4	Environmental Engineer	39	15	24
5	Deputy Environment Engineer	67	34	33
6	Assistant Environment Engineer	254	110	144
	Total	371	164	207
Scientific Staff				
Sr No	Post	Sanctioned	Working	Vacant
1	Chief Environmental Scientist	0	0	0
2	Deputy Chief Environmental Scientist	0	0	0
3	Senior Environmental Scientist	9	4	5
4	Senior Scientific Officer	25	7	18
5	Scientific Officer	84	55	29
6	Senior Scientific Assistant	165	52	113
	Total	283	118	165
Administrative/Ministerial Staff				
Sr No	Post	Sanctioned	Working	Vacant
1	Chief Administrative Staff	1	0	1
2	Administrative Officer	1	0	1
3	Account Officer	1	1	0
4	Junior Officer	17	6	11
5	Deputy Superintendent	29	12	17
6	Senior Clerk	26	5	21
7	Clerk-cum-Typist	53	1	52
	Total	128	25	103
Legal Staff				
Sr No	Post	Sanctioned	Working	Vacant
1	Senior Law Officer	1	0	1
2	Law Officer	3	0	3
3	Assistant Law Officer	15	0	15
	Total	19	0	19

II. Detailed view of Environmental Laboratory at GPCB

a) Details of Scientific staff posted in laboratory out of total scientific staff serving in GPCB

Sr No.	Name of Laboratory /Area	CES	Dy. CES	SES	SSO	SO	SSA	Total No. of Staff
1	Central Laboratory, Gandhinagar	0	0	1	1	7	7	16
2	Regional Laboratory, Vadodara	0	0	0	1	2	4	7
3	Regional Laboratory, Bharuch	0	0	0	0	3	3	6
4	Regional Laboratory, Surat	0	0	1	0	4	2	7
5	Regional Laboratory, Vapi	0	0	0	1	2	2	5
6	Regional Laboratory, Rajkot	0	0	1	0	2	4	7
7	Regional Laboratory, Bhavnagar	0	0	0	0	0	2	2
8	Regional Laboratory, Jamnagar	0	0	0	1	1	1	3
9	Regional Laboratory, Bhuj	0	0	0	0	1	1	2
	Total							55

b) Details of Analytical Infrastructure for Water, Air and Solid/ Hazardous waste Samples.

Sr No	Name of Laboratory	Water and Waste water				Air			Solid waste/ Haz waste	Accreditation/Certification				
		Physico Chemical Parameters	Trace metals	Pesticide s and other Organic Compou nds	Micro biologic al	Ambie nt	Stack gases/Sour ce emission	Noise Monitor ing		NABL (ISO:1 EC:17 025: 2017)	QMS (IS:IS O 9001 : 2015	EMS as per IS:IS O 14001 : 2015	OHS AS as per IS:IS O: 45001 : 2018	EP ACT, 1986
1	Central Laboratory Gandhinagar	√	√	√	√	√	√	√	√	Applied	√	√	√	√
Regional Laboratory														
2	Vadodara	√	√	x	√	√	√	√	√	√	√	√	√	x
3	Bharuch	√	√	x	√	√	√	√	√	x	x	x	x	x
4	Surat	√	√	x	√	√	√	√	√	x	√	√	√	x
5	Vapi	√	√	x	√	√	√	√	√	√	√	√	x	x
6	Rajkot	√	√	x	√	√	√	√	√	√	√	√	x	x
7	Bhavnagar	√	x	x	x	√	√	√	√	x	√	√	x	x
8	Jamnagar	√	√	x	√	√	√	√	√	x	Applied	√	x	x
9	Bhuj	√	√	x	√	√	√	√	√	x	√	√	x	x

c) Details of the Parameters being analyzed at **619** laboratories of the GPCB:

1) Water & Waste water

A) Physico Chemical Parameters

Sr.No.	Parameters	Sr.No.	Parameters
1	Colour	21	Chloride
2	Odour	22	Chlorine demand
3	Conductivity	23	Chlorine Residual
4	pH Value	24	Cyanide
5	Total solids	25	Dissolved Oxygen
6	Total suspended solids	26	Fluoride
7	Total dissolved solids	27	Iodine
8	Fixed and volatile solids	28	Total kjehldal nitrogen
9	Settleable solids	29	Nitrite nitrogen
10	Sludge volume index (SVI)	30	Nitrate nitrogen
11	Salinity	31	Phosphate
12	Settled sludge volume	32	Sulphate
13	Turbidity	33	Sulphide
14	Temperature	34	Total hardness
15	Velocity and discharge measurement of river, drain, industrial effluent stream etc	35	Bio-chemical Oxygen Demand (BOD)
16	Acidity	36	Chemical oxygen demand (COD)
17	Alkalinity	37	Oil & Grease
18	Ammonical Nitrogen	38	Phenolic Compound
19	Bromide	39	Surfactants
20	Carbon Dioxide		

B) Trace Metals

Sr.No.	Parameters	Sr.No.	Parameters
1	Aluminium (Al)	15	Lithium (Li)
2	Antimony (Sb)	16	Magnesium (Mg)
3	Arsenic (As)	17	Manganese (Mn)
4	Barium (Ba)	18	Mercury (Hg)
5	Beryllium (Be)	19	Nickel (Ni)
6	Boron (B)	20	Potassium (K)
7	Cadmium (Cd)	21	Selenium (Se)
8	Calcium (Ca)	22	Silver (Ag)
9	Chromium (total) (Cr ³)	23	Sodium (Na)
10	Chromium (Hexa) (Cr ⁺⁶)	24	Sodium Absorption Ratio (SAR)
11	Cobalt (Co)	25	Strontium (Sr)
12	Copper (Cu)	26	Tin (Sn)
13	Iron (Fe)	27	Vanadium (V)
14	Lead (Pb)	28	Zinc (Zn)

C) Pesticides and other organic compounds

Sr.No.	Parameters	Sr.No.	Parameters
1	Organo-chlorine	6	Polychlorinated biphenyl (PCB's)

2	Organo-phosphorous	620	Poly nuclear aromatic hydrocarbon
3	Carbamates	8	Volatile Organics
4	Herbicides	9	Trihalomethanes
5	Fungicides		

D) Microbiological Tests

Sr.No.	Parameters	Sr.No.	Parameters
1	Total Coliforms	4	Fecal Streptococci
2	Fecal Coliforms	5	Total Plate Count
3	Escherichia Coli		

2) Air Analysis

A) Ambient /Fugitive Monitoring

Sr.No.	Parameters	Sr.No.	Parameters
1	Nitrogen dioxide as NO ₂	9	Non methane hydrocarbon
2	Sulphur dioxide (SO ₂)	10	Lead
3	Total suspended particulate matter	11	Methane
4	Respirable suspended particulate matter (PM ₁₀)	12	Ozone
5	Ammonia	13	Benzene Toluene Xylene (BTX)
6	Carbon monoxide	14	Polycyclic aromatic hydrocarbon (PAH) Benzo-a-pyrine & others
7	Chlorine	15	PM _{2.5}
8	Fluoride	16	Volatile Organic Carbon

B) Stack gases/Source emission Monitoring

Sr.No.	Parameters	Sr.No.	Parameters
1	Particulate matter	10	Ammonia
2	Sulphur dioxide	11	Chlorine
3	Velocity & flow	12	Fluoride
4	Carbon dioxide	13	Hydro-chloric acid
5	Carbon monoxide	14	Total Hydro carbon
6	Temperature	15	Hydrogen Sulphide
7	Oxygen	16	Carbon disulphide
8	Oxides of nitrogen	17	Bromide
9	Acid mist		

C) Noise level Monitoring

Sr.No.	Parameters
1	Noise level measurement (20 to 140 dba)
2	Ambient Noise & Source specific noise

D) Meteorological Monitoring

Sr.No.	Parameters
1	Ambient Temperature
2	Wind direction

3	Wind speed
4	Relative Humidity
5	Solar radiation
6	Rain fall

3) Solid waste /Hazardous waste Analysis

Sr.No.	Parameters	Sr.No.	Parameters
1	Boron	16	Ammonia
2	Cation Exchange Capacity (CEC)	17	Bicarbonate
3	Electrical Conductivity (EC)	18	Calcium
4	Nitrogen available	19	Calcium carbonate
5	Organic carbon/matter (chemical method)	20	Chloride
6	pH	21	Colour
7	Phosphorous (available)	22	Exchangeable sodium percentage (ESP)
8	Phosphate (ortho)	23	Gypsum requirement
9	Phosphate (total)	24	H. Acid
10	Potassium	25	Heavy metal
11	SAR in soil extract	26	Magnesium
12	Sodium	27	Nitrate
13	Soil moisture	28	Nitrite
14	TKN	29	PAH
15	Calorific value	30	Pesticide

d) List of instrument available in laboratory of GPCB

CENTRAL LABORATORY, GPCB GANDHINAGAR.

Sr. No	Name of the Instrument /Equipments
1.	Digital Burrate-05 Nos
2.	BOD Incubator-03 Nos
3.	Digital Thermometer
4.	Muffle Furnace
5.	Heating Oven-02 Nos
6.	COD Digester-03 Nos.
7.	Bact. Incubator-02 Nos.
8.	Weighting Balance
9.	Balance
10.	Laminar Air Flow
11.	Serological Water Bath
12.	Sterilization Media Autoclave
13.	Autoclave for Discard
14.	pH meter-02 Nos
15.	Conductivity meter-02 Nos
16.	Microscope
17.	Colony Counter
18.	Bio safety cabinet
19.	Water Bath
20.	TKN Assembly
21.	Digestion Hot Plate with fuming hood
22.	Flame Photometer
23.	Heating Mental -06 Nos.
24.	AAS
25.	Spectrophotometer
26.	Turbidity meter
27.	Weight Box
28.	Pressure Gauge of Autoclave-02 Nos
29.	Wet & Dry Thermometer-02 Nos.
30.	Glass Thermometer-03 Nos
31.	Balance (6g)
32.	Ammonical Nitrogen
33.	Ion Meter
34.	HRGC-HRMS
35.	LC-MS/MS
36.	Rotary Vacuum Eva operator
37.	Solvent (Accelerated) Extraction System
38.	Total Organic Carbon Analyzer
39.	HPLC
40.	Inductively Coupled Plasma Mass Spectrometer
41.	GCMS (Volatile Organic Compound Analyser)
42.	Zero Space Extractor
43.	Water Purification System
44.	UV-Visible Spectrophotometer
45.	Microwave Digester
46.	X-ray Diffractometer (XRD)
47.	Gas Chromatograph with NPD and FPD
48.	Spectrofluorometer

49.	Gas Chromatograph with ECD,FPD,or FID
50.	Micro Digital Balance(METTLER Toledo)
51.	Atomic Absorption Spectrophotometer-(AAS)
52.	Microscope Binocular & attached display System[Stereo Zoom Microscope with Digital Camera Radial Make
53.	Micro Digital Balance (Aczet)
54.	Noise Level Meter with Data Logger
55.	Specific Ion Meter EUTECH Model -ION-277
56.	TKN Analyser KEL PLUS Nitrogen Estimation system-Block Digestion System with Distillation System-Model SUPRA-LX-VA
57.	Hot Air Oven (Medium Size)
58.	Spectralab COD Digester (2 Nos.)
59.	Muffle Furnace (HVGPS System) LED Display
60.	Mettler Toledo Model ME-204 (Weighing Balance)
61.	BOD Incubator
62.	Colorimeter
63.	Micro Digital Balance(METTLER Toledo)
64.	Atomic Absorption Spectrophotometer-(AAS)
65.	Microscope Binocular & attached display System[Stereo Zoom Microscope with Digital Camera Radial Make
66.	Micro Digital Balance (Azet)
67.	Noise Level Meter with Data Logger-Casella make
68.	Specific Ion Meter EUTECH Model -ION-277
69.	TKN Analyser KEL PLUS Nitrogen Estimation system-Block Digestion System with Distillation System-Model SUPRA-LX-VA
70.	Hot Air Oven (Medium Size)
71.	Spectralab COD Digester (2 Nos.)
72.	Muffle Furnace (HVGPS System) LED Display
73.	Mettler Toledo Model ME-204 (Weighing Balance)
74.	BOD Incubator
75.	Colorimeter

Sr.No.	Name of Instruments
1.	Handy Air Samplers Kit-Technovation
2.	Magnetic Stirrer-Remi
3.	Flame Photometer- Systronics
4.	Hot Air Oven-Sedco
5.	Bacteriological Incubator-Sedco
6.	Lab. Autoclave -Sedco
7.	Reparable Dust Sampler –APM- 460 Envirotech
8.	BOD Incubator-Lab Control
9.	Lovi Bond Color Comparator
10.	LPG Cylinder
11.	Fire Extinguisher
12.	Stack Monitoring Kit APM-620
13.	RDS-460 BL
14.	Dial Thickness Gauge
15.	COD Digestion Apparatus Model-2015-M
16.	Digital Thermo Hygrometer
17.	Bottle Top Dispenser, 2 To 10 ML
18.	Bottle Top Digital Burettec, Cap.-50 ml
19.	Bottle Top Dispenser,2-10 ml
20.	Bottle Top Dispenser.10-50 ml
21.	Stack Monitoring Kit-VES 5
22.	pH Meter,Systronics-361 Sr. No:6303
23.	Conductivity meter,Systronics-306 Sr. No:3578
24.	Turbidity meter,Systronics-135 Sr. No:322
25.	DO Meter, Systronics-314 Sr. No:309
26.	Oil free Diaphragm type Vacuum Cum Pressure Pump
27.	TKN Analyzer (Model-KES-08LE
28.	PM 2.5 Sampler (Model:-APM-559-MFC
29.	Hot Air Oven- Tex/Tex299 (Medium)
30.	Micro Digital Balance- ACZET-Model- CM6 -Sr. No. 18412943
31.	Noise Level Meter with Data Logger- Casella
32.	Vanveen Sediment Grab Sampler
33.	Niskin water sampler
34.	GPS Instrument- Midaas
35.	Real Time continuous Ambient Air Monitoring Station- Tharmofisher
36.	UV-visible spectrophotometer- Agilent
37.	Zero Head Space Extractor- Matrix
38.	Spectrofluorometer- Agilent
39.	Inductively Coupled Plasma Mass Spectrometer (ICP-MS)- Agilent
40.	Water Purification System- Tharmofisher
41.	Volatile Organic Compound Analyser Bench- Agilent
42.	Rotary Vacuum Concentrator/Evaporator with Pump- Matrix
43.	Gas Chromatograph with Nitrogen Phosphorous Detector(GC-NPD) and Flam Photometric Detector(GC-FPD)- Agilent
44.	Microwave Digester- Agilent
45.	Total Organic Carbon Analyzer- Shimadzu
46.	Gas Chromatograph with ECD,FPD, and FID- Agilent
47.	Remi Cyclo Mixer (CM-101)
48.	Ultrasonic Bath- Bioneds

Sr.No.	Name of the Instrument /Equipments
1.	Respirable Dust sampler APM 460 BL- 02 Nos
2.	Process Kit/handy Sampler-- 02 Nos
3.	Stack Monitoring Kit Model NosVSS-1
4.	Sound Level Meter
5.	PH Meter
6.	Flame photometer
7.	Nephelo Turbidity meter
8.	Conductivity meter
9.	Hot Air oven
10.	Digital Temp. Controller
11.	Air circulation Fan
12.	BOD Incubator
13.	Magnetic stirrer
14.	Heating Mental - 03 No's (250ml,500 ml, 1000 ml)
15.	Hot plate – 02 No's (Size-8" dia, 10" x 16" Rectangular)
16.	Vacuum pump
17.	COD Digestion Apparatus Model Nos215D
18.	Auto calve vertical
19.	Furnace Muffle
20.	Bacteriological Incubator
21.	Analytical Balance
22.	PM- 2.5 Sampler, Model Partisol-2000
23.	Hand Refractometer(0-100 % Salinity) ERMA
24.	Dial Thickness Gause with Wooden Box
25.	Humidity Meter Digital, 3 in 1 ,Jumbo display
26.	D.O. Meter , Model-314 , Systronic make
27.	Conductivity meter, Model-306, Systronic make
28.	Digittal pH meter pocket type 0-14 pH Hanna
29.	Visible Double Beam Spectrophotometer
30.	TKN Analyzer (Pelicon make)
31.	PM 2.5 Sampler (Ecotech make)
32.	RDS APM 460 DXNL with APM 411TE (Environtech make)
33.	Micro digital Balance (Aczet make)
34.	Noise Level Meter with data logger(CEL - 633C)

REGIONAL LABORATORY, GPCB – BHARUCH

Sr. No.	Name of the Instrument /Equipments
1.	Hot Air Oven -3 Nos.
2.	Muffle Furnace
3.	C.O.D. Assembly-02 Nos.
4.	Weighing Balance
5.	BOD Incubator-02 Nos.
6.	TKN Digestion Assembly (Temp. controller)
7.	Ammonia Distillation Assembly
8.	Deep Freeze(Digital temp. controller)
9.	Water Bath
10.	Conductivity Meter
11.	Flame Photometer-2 Nos.
12.	pH Meter-3 Nos.
13.	Digital Visible Spectrophotometer.
14.	UV-VIS Spectrophotometer-118
15.	Turbidity Meter-135(Sr.No.1252)-02 Nos
16.	Atomic Absorption Spectrophotometer-(AAS)
17.	Micro Digital Balance
18.	Meteorological Station
19.	Noise level Meter-02 Nos
20.	Flue Gas Analyzer
21.	RDS (Respirable Dust Sampler)
22.	Stack Monitoring Kit-02 Nos.
23.	Handy Air Sampler-02 Nos.
24.	Top Loading Calibrator With Stop watch (Filed Calibration Kit)
25.	Soap Film Calibrator (Soap Bubbler-500 ml)
26.	Dry Gas Meter
27.	Bacteriological Incubator-02 Nos.
28.	Autoclave-03 Nos
29.	Laminar Air Flow
30.	Analytical balances
31.	Bio-Safety Cabinet Type-II
32.	water bath- 02 Nos.
33.	Microscope
34.	Colony counter
35.	Colour Comparator

REGIONAL LABORATORY, GPCB – VAPI

Sr.No.	Name of the Instrument /Equipments
1.	Bacteriological Incubator
2.	Turbidity Meter
3.	BOD Incubator
4.	Water Bath
5.	Autoclave
6.	Metler Electronic Analytical Balance
7.	COD Digestion apparatus (assembly)
8.	Autoclave
9.	Respirable Dust Sampler-2 Nos.
10.	Colour Comparator
11.	Automatic Absorption Spectrophotometer (AAS)
12.	Conductivity Meter
13.	PH METER - New
14.	Hot Air Oven
15.	New Conductivity Meter
16.	pH Meter
17.	New Flame Photometer
18.	New Turbidity Meter
19.	Sound Level Meter (SLM-100)
20.	Laminar Air Flow
21.	VISI Scan Spectrophotometer (167)
22.	UV - Visible Spectrometer [Model 2202]
23.	Microscope
24.	Digital Temp. Incubator
25.	Handy Sampler-2 Nos.
26.	Bio Safety Cabinet
27.	Soap Bubbler Calibrator (For RDS)
28.	Bottle Top Burette
29.	Continuous Ambient Air Quality Monitoring System(CAAQMS)
30.	TKN Analyzer (ICB 17-25)
31.	Stack monitoring kit-2 Nos (VSS-1 (A)) 81-DTK-04; VSS-1 (715-DTA-2010)
32.	Noise Level Meter With Data Logger
33.	Top Loading Calibrator APM-421
34.	Hot Plate
35.	Magnetic Stirrer
36.	NOx Sampling Kit
37.	Ammonia distillation assembly
38.	Micro Digital Balance
39.	Meteorological Station
40.	Dispenser
41.	Muffle Furnace
42.	Thermo Hygrometer
43.	ION Chromatograph

REGIONAL LABORATORY, GPCB – SURAT

Sr.No.	Name of the Instrument /Equipments
1.	B.O.D. Incubator
2.	Metter Balance
3.	Weight Box
4.	UV-Visible Double beam Spectrophoto Meter
5.	Shaker
6.	Micro Digital Balance (6 Digits)
7.	pH Meter
8.	Conductivity Meter
9.	Comparator Meter
10.	Lovibond Nessleriser Comparator & Hazen Scale Discs, MK-IV
11.	Humidity meter
12.	Wet and Dry Hygrometer
13.	T.D.S. Meter “HANNA”& E.MERCK Make
14.	Flame Photometer
15.	TKN Analyzer
16.	Magnetic Stirrer with Hot Plate
17.	Stirrer Remi
18.	Water Bath
19.	Heating Mantle
20.	“SPECTRALAB” COD Digestion Apparatus, Model 2015-S
21.	Micro Meter (Gauge meter)
22.	Digital Burette
23.	Micro Pipette
24.	B.O.D.Incubator
25.	Bacteriological Incubator,
26.	Muffle Furnace
27.	Laminar Air Flow
28.	Auto Clave Vertical,” ELECTROQUIP” Make, Size : 45 x 75 cms`
29.	Soap Bubbler Meter For RDS
30.	Top Loading Calibrator for RDS
31.	Stack Sampler
32.	RDS Particle FRM 2.5
33.	Noise Level Meter
34.	DO meter
35.	Handy Air Sampling Kit
36.	Handy Air Sampler Kit APM 820
37.	Handy Gas Detector Pump
38.	RDS Particle PM 2.5
39.	Stack Sampler Kit
40.	Ion Meter, Model 940
41.	Binocular Microscope
42.	Atomic Absorption Spectrometer
43.	Gas Chromatograph, “SHIMADZU” Model GC-17 A
44.	Hot Air Oven
45.	“CHEMITTO” 2100 Spectrophotometer, Sr.No.2184/0199
46.	Mercury Analyser MA-5800 A

REGIONAL LABORATORY, GPCB – VADODARA

Sr.No.	Name of the Instrument /Equipments
1.	pH meter-3 Nos
2.	Conductivity meter
3.	Conductivity meter/Salinity Meter
4.	Turbidity Meter
5.	Analytical Balance-2 Nos
6.	Flame photometer
7.	Hot Air Oven-2 Nos
8.	COD Digestion Assembly-3 Nos.
9.	BOD Incubator-2 Nos.
10.	D.O.-Meter
11.	Water Bath
12.	Kel plus block digestion system TKN Analyzer with Ammonia Distillation Assembly
13.	Muffle Furnace
14.	Double Beam Spectrophotometer-Visible
15.	Weight Box
16.	Digital Temp. Controller (GPCB/VRD/INST/LAB-II)
17.	Specific Ion Meter
18.	Atomic Absorption Spectrophotometer
19.	Metrological station
20.	Ion chromatography
21.	Respirable Dust Sampler & Gaseous Attachments (GA)
22.	Stack Monitoring Kit-VSS1+ Stack Monitoring Kit-New
23.	Handy Air Sampler Kit (Process Kit)
24.	Soap Bubble Calibrator (With Stop Watch)
25.	Top Load Calibrator (With Stop Watch)
26.	Solund Level Meter SLM-100
27.	Bacteriological Incubator-3 Nos.
28.	Autoclave- 2 Nos.
29.	Laminar Air Flow
30.	Analytical Balance
31.	Bio-Safety Cabinet- Type-II
32.	Serological water bath
33.	Hot Air Oven -New
34.	Muffle Furnace- New
35.	TOC Analyser
36.	UV-Visible Spectrophotometer
37.	Referigerator
38.	Water Purification System
39.	Remi make Stirrer

40.	Air Conditioner
41.	PM 2.5 Sampler
42.	Gas Sampling Bomb
43.	Digital Top Buratte-50 ml
44.	Noise Level Meter
45.	Referigerator
46.	Sound Level Meter
47.	Soxhlet Mantle Type
48.	Hot Plate
49.	Heating Mental
50.	Dispenser-Total 4 Nos (30 ml-1 No , 25 ml-1 No ,10 ml-2Nos)
51.	Hazen Scale Dises-Color Comparator
52.	Vaccum Pump
53.	Micro Digital Balance-6 digit
54.	Micro Pipettes

REGIONAL LABORATORY, GPCB – KUTCH-WEST (BHUJ)

Sr.No.	Name of the Instrument /Equipments
1.	Flame Photometer
2.	Analytical Balance
3.	Hot Plate
4.	Water bath
5.	Nephlo Turbidity meter
6.	Muffle Furnace
7.	Magnetic stirrer with Hot Plate
8.	Hot Air oven (medium)
9.	Hot Air oven -1 (small)
10.	Hot Air oven – 2 (small)
11.	BOD Incubator
12.	Mechanical Rotary shaker
13.	Heating mantle (250ml)
14.	Heating mantle (500ml)
15.	Soxhlet heating mantle
16.	Ammonia / TKN Analyzer
17.	Micro digital balance
18.	Water Purification system
19.	COD Digester
20.	D.O. Meter
21.	Conductivity meter
22.	Stop watch
23.	Analytical weight box
24.	Dial Thickness

25.	Casella Noise level meter
26.	Lutron Noise level meter
27.	ICPMS
28.	UV Spectrometer
29.	Spectroflurometer
30.	TOC
31.	Process kit
32.	Stack Monitoring Kit (Vayubodhan)
33.	Stack Monitoring Kit (ECO TECH)
34.	PM2.5 sampler
35.	R.D.S.
36.	Autoclave

REGIONAL LABORATORY, GPCB – RAJKOT

Sr. no.	Name of the Instrument
1.	Turbidity Meter-Model-135
2.	Conductivity meter model-303
3.	Color Comparator
4.	Flame Photometer
5.	Microscope Binocular
6.	Multi gas Detector
7.	pH Meter Model-362
8.	Stirrer- Laboratory
9.	Stirrer-Remi- 5Nos
10.	Magnetic Storrs with Hot Plat
11.	Centrifuge- Sr no. DIC-614
12.	COD Digester
13.	RDS- APM 460 -1 Nos
14.	BOD Incubator-2 No
15.	Auto Clave Vertical
16.	Solid waste Sampler
17.	Stack monitoring kit APM 620/602
18.	Muffle Furnace
19.	Top Loading Balance
20.	Balance (Metteler) 220 gm
21.	Balance Metter Balance
22.	Balance High precision
23.	Thickener Gauge
24.	Water bath
25.	Heating Metal
26.	Spectrophotometer
27.	Spectrophoto meter-210
28.	Incubator Bacteriology-02

29.	Handy Air Sampler APM 820
30.	Laminar Flow Bench
31.	Hot Air Oven
32.	PM-2.5 sampler
33.	TKN Analyser
34.	Noise level meter
35.	NOx Assembly
36.	Colony Counter Bench

e) Requirement of Analytic instrument at Laboratories of GPCB

Sr. No.	Name of Instruments/Equipment	Vadodara	Surat	Vapi	Bharuch	Bhavnagar	Jamnagar	Rajkot	Bhuj	Cen.Lab.	Total Nos. of Instrument
1	Hot air oven	1	0	1	1	2	1	0	0	2	8
2	Muffle furnace	1	0	1	1	0	1	0	0	0	4
3	Standard weight	1	1	1	1	1	1	1	1	1	9
4	Refrigerator big size 300 liters or above	2	0	2	1	2	2	0	0	3	12
5	Deep Freezer-90 lit ,-200C	1	1	1	1	0	0	1	0	1	6
6	Cold Room-15000 lit,temp n20-80c	0	0	0	0	0	0	0	0	1	1
7	Autoclave	1	1	1	1	1	1	1	1	2	10
8	BOD Incubator	1	1	1	1	1	1	1	1	1	9
9	Centrifuge	1	1	1	1	1	1	1	1	1	9
10	COD Digester with aluminum heating blocks	1	1	1	1	1	1	1	1	1	9
11	Colony Counter	1	1	1	1	1	1	1	1	1	9
12	Flocculator (Jar testing apparatus)	1	1	1	1	1	1	1	1	1	9
13	Flow meter	1	1	1	1	1	1	1	1	1	37
14	Incubator for bacteriological test	2	2	2	2	2	2	2	2	2	18
15	Bio Safety Cabinete	1	1	1	1	1	1	1	1	1	9
16	Mechanical Shaker	1	1	1	1	1	1	1	1	1	9
17	Microwave digester	1	1	1	1	1	0	0	0	1	6
18	TKN Analyzer semi automatic with aluminum block digester	1	0	0	0	0	0	0	0	1	2

19	Ultrasonic water bath	1	1	1	1	1	1	1	1	1	9
20	Vacuum pump	2	2	2	2	2	2	2	2	2	18
21	Water purification / distillation assembly	1	1	1	1	1	0	0	0	1	6
22	Chloroscope for residual chlorine	2	2	2	2	2	2	2	2	2	18
23	Lovibond Colour Comparator	1	1	1	1	1	1	1	1	1	9
24	Refractometer(Salinity Meter),	1	1	1	1	1	1	1	1	1	9
25	Karl Fischer titrator	1	1	1	1	1	1	1	1	1	9
26	Analytical Balance + [1 mg]	1	1	1	1	1	1	1	1	1	9
27	Analytical Balance + [0.1 mg]	1	1	1	1	1	1	1	1	1	9
28	Conductivity Meter	1	1	1	1	1	1	1	1	2	10
29	Dissolved oxygen meter	1	1	1	1	1	2	1	1	2	10
30	pH Meter with combined glass electrode	1	1	1	1	1	1	1	1	2	10
31	Turbidity meter	1	1	1	1	1	1	1	1	2	10
32	Organic Halogen Analyzer (AOX/TOX)	1	0	0	1	0	0	0	0	1	3
33	Binocular Microscope	1	1	1	1	1	1	1	1	1	9
34	Flame Photometer	1	1	1	1	1	1	1	1	2	9
35	Gas Chromatograph with following detector	0	0	1	1	0	0	1	0	0	3
36	GC-MS with ancillary parts	1	1	0	0	0	0	0	0	0	2
37	Ion Chromatograph	0	0	0	0	0	0	0	0	1	1
38	Mercury Analyzer Digital	1	1	1	1	1	1	1	1	1	9

39	Rotary Evaporator	1	1	1	1	0	0	0	0	0	4
40	Spectrophotometer- Ultraviolet & visible	1	1	1	1	1	1	1	1	1	9
41	Specific Ion Meter	1	1	1	1	1	1	1	1	1	9
42	Total Organic Carbon Analyzer	1	1	1	1	1	0	0	0	1	6
43	Dispensor-1 Set	1	1	1	1	1	1	1	1	1	9
44	Digitl Burette-1 Set	1	1	1	1	1	1	1	1	1	9
45	Micro Pipette-1 Set	1	1	1	1	1	1	1	1	1	9
46	Bomb colorimeter-semi	1	1	1	1	1	1	1	1	1	9
47	Toxicity characteristic leaching procedure (TCLP) extractor	1	1	1	1	0	0	1	0	1	6

f) Requirement of instrument for Environmental monitoring purpose in Regional offices of GPCB

Sr No.	Mobile Monitoring van with CAAQMS	Portable Gas Analyser for estimation/analysis of Volatile Organic Compounds	Portable Analyser for Water Parameters like pH, TDS, Conductivity, Salinity, DO, Ammonia-NH ₃ , ION Electrodes
Vigilence Cell	-	1	2
Ahmedabad-City	-	1	2
Ahmedabad-Rural	-	1	2
Ahmedabad-East	1	1	4
Gandhinagar	-	1	2
Nadiad	-	1	2
Anand	-	1	2
Godhra	-	1	2
Vadodara	1	1	4
Bharuch	-	1	2
Ankleshwar	1	1	4
Surat	-	1	2
Navasari	-	1	2
Vapi	1	1	4
Sarigam	-	1	2
Himmatnagar	-	1	2
Palanpur	-	1	2
Mehsana	-	1	2
Surendranagar	-	1	2
Bhavnagar	-	1	2
Junagadh	-	1	2
Morbi	-	1	2
Rajkot	-	1	2
Jetpur	-	1	2
Porbandar	-	1	2
Jamnagar	-	1	2
Kutch(East)	-	1	2
Kutch(West)	-	1	2
Total	4	28	64

III. Annual Budget of GPCB

A) INCOME AND EXPENDITURE ACCOUNTS FOR THE YEAR 2020 - 21

Sr. No.	Income	Amount Rs.	Sr. No.	Expenditure	Amount Rs.
1	Grants Received from :		1	Capital Expenditure	64214618.83
	(A) State Government Plan		2	Pay and Allowance	434773828.00
	(B) State Government Non Plan		3	Contingency	82499319.99
	(C) Central Govt. towards Water Cess	5680054.00	4	M & R to expenditure of Lab.	6202780.12
	(D) Assi. For Abatement - CPCB Delhi	113284363.00	5	Maintenance & Repairs to vehicles	11882664.92
	(E) CAAQMS - CPCB DELHI		6	LOSS ON SALE OF ASSETS	10488.41
2	Fees	627490530.61	7	Maintenance & Repairs to Assets	9104104.00
3	Service rental charges	34203116.00	8	Assi. For Abatement - CPCB Delhi	112132530.00
4	Interest on Investment	481204216.00	9	Law charges	5781695.00
5	Misc. Receipts	627655945.65	10	Contribution to Gratuity Trust	4763083.00
6	Project Assistance	5487811.00	11	Miscellaneous Expenditure	40344139.00
7	PROFIT ON SALE OF ASSETS	363208.46	12	Analysis Charges paid to other	339055.00
	Total of Income	1,89,53,69,244.72		Total of Expenditure	77,20,48,306.27

B) INCOME AND EXPENDITURE ACCOUNTS FOR THE YEAR 2021 - 22

Sr. No.	Income	Amount Rs.	Sr. No.	Expenditure	Amount Rs.
1	Grants Received from :		1	Capital Expenditure	9252477.15
	(A) State Government Plan				
	(B) State Government Non Plan		2	Pay and Allowance	359796295.00
	(C) Central Govt. towards Water Cess	590290.00	3	Contingency	79043940.48
	(D) Assi. For Abatement - CPCB Delhi	204569200.00	4	M & R to expenditure of Lab.	6542264.47
	(E) CAAQMS - CPCB DELHI		5	Maintenance & Repairs to vehicles	2673385.62
2	Fees	706733564.00	6	LOSS ON SALE OF ASSETS	0.00
3	Service rental charges	45907494.00	7	Maintenance & Repairs to Assets	3567080.00
4	Interest on Investment	398916456.00	8	Assi. For Abatement - CPCB Delhi	202228176.00
5	Misc. Receipts	608708949.00	9	Law charges	9465384.00
6	Project Assistance	0.00	10	Contribution to Gratuity Trust	17244935.00
7	PROFIT ON SALE OF ASSETS	313480.15	11	Miscellaneous Expenditure	61003698.00
			12	Audit Fee	1177056.00
			13	Analysis Charges paid to other	1401720.00
	Total of Income	1,96,57,39,433.15		Total of Expenditure	75,33,96,411.72