

BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH

NEW DELHI

Original Application No. 693/2023

IN THE MATTER OF:

News Item titled "Pollution Control Boards are the weak link" appearing in Deccan Herald dated 24.10.2023

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1.	Additional Affidavit Filed on Behalf of the Pollution Control Board, Assam in compliance of the Order dated 14.10.2025 of this Hon'ble Tribunal.	1-
2.	Copy of Status of Filling of vacant post in Pollution Control Board, Assam as on 30.11.2025 annexed as Annexure A	
3.	Details of its Laboratories Analytical Facilities are annexed as Annexure B	

FILED BY:



Avijit Roy
Advocate

For the THE POLLUTION CONTROL
BOARD, ASSAM/Respondent

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Filed On : ___/12/ 2025

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
NEW DELHI

Original Application No. 693/2023

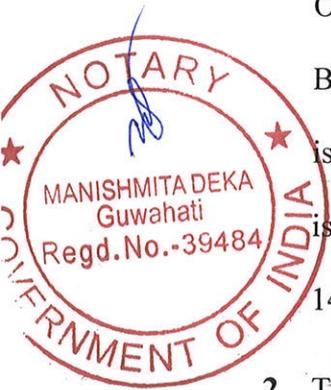
IN THE MATTER OF:

News Item titled "Pollution Control Boards are the weak link" appearing in Deccan Herald dated 24.10.2023

**ADDITIONAL AFFIDAVIT FILED ON BEHALF OF POLLUTION
CONTROL BOARD, ASSAM IN COMPLIANCE OF THE ORDER
DATED 14.10.2025 OF THIS HON'BLE TRIBUNAL.**

I, Smti. Mousumi Bardalai, aged about 55 years, works working as Addl. Chief Environmental Engineer and Nodal Officer (Legal), having its office at Bamunimaidam, Guwahati-781021, Assam do hereby as deponent solemnly affirm and state as under:

1. That, this deponent is the Addl. Chief Environmental Engineer and Nodal Officer (Legal) of Pollution Control Board, Assam (hereinafter referred to as the Board), and conversant with the facts and circumstances of the present case and is duly authorized to swear and affirm this instant affidavit. This instant affidavit is filed for limited purpose as directed by this Hon'ble Tribunal by its order dated 14.10.2025.
2. That in compliance of the aforesaid order dated 14.10.2025, the answering respondent Board begs to submit report as per the format provided by the CPCB vide its letter no. PCP/NGT/693 of 2023/2023-24 dated October 28, 2025.
3. That as per the format provided by the CPCB vide its letter no. PCP/NGT/693 of 2023/2023-24 dated October 28, 2025, the answering respondent Board prepared as detailed list and same is furnished herein in addition of submission



4728

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of same to the CPCB. Copies of Status of Filling of vacant post in Pollution Control Board, Assam and Details of its Laboratories Analytical Facilities are annexed as **Annexure A & B.**

4. That in addition to the aforesaid submissions, it is therefore submitted that this answering Respondent shall abide by any/all orders or directions passed by this Hon'ble Tribunal and craves the leave of this Hon'ble Tribunal to file additional affidavit, if so required.



Manusmita Sarda
DEPONENT

VERIFICATION:

I, the deponent herein above, do hereby verify that the contents of the above affidavit are true and correct to the best of my knowledge and belief, that no part of it is false and nothing material has been concealed therefrom.

Verified at Guwahati on this 22nd day of December, 2025.

Manusmita Sarda
DEPONENT

Identified by:-

[Signature]
Advocate.

NOTARY
MANISHMITA DEKA
Govt. of India
Guwahati, Regd. No.-39484

Solemnly affirmed before me this day, I certify that I read over and explained the contents to the declarant and that the declarant seemed perfectly to understand them.

PART A: STATUS OF FILLING OF VACANT POSTS

Name of the Board: Pollution Control Board, Assam

Category of post	Status of Sanctioned posts in Number			Details of current vacancies in number		Action Taken (Approval of the Govt. , Engagement agency, Advertisement, Exam date etc.)	The time line by which the vacancy will be filled (in months)
	Sanctioned	Filled posts as on 30.11.2025	Current Vacancy as on 30.11.2025				
a) Scientific	47	33	14	a) Direct	1	Vacancies under promotion which are either backlog or incumbent not eligible for promotion. Letter are sent to the Government to de-reserve the reserved post to clear the backlog.	Within 6 (Six) months.
				b) Promotion	13		
				c) Deputation	nil		
b) Engineering	64	56	8	a) Direct	7		
				b) Promotion	1		
				c) Deputation	nil		
c) Administration	153	133	20	a) Direct	17		
				b) Promotion	3		
				c) Deputation	nil		
Total	264	221	43				

Remarks:- The Pollution Control Board, Assam vide its 107th Board Meeting has approved the Draft amendment of the "Pollution Control Board, Assam (Employee' Service) Regulation - 2012" to meet the current requirements and future prospective. Hence, thereafter the draft proposal was placed before the State Government for approval vide this office letter dated 31/07/2024. Present Status : Draft amendmnet of the said Regulation under process with the State Government for approval.

a) Current vacancy in this section has increased from 13 to 14 due to superannuation of one employee

b) Current vacancy in this section has increased from 6 to 9 due to superannuation/resignation of employees

c) Current vacancy increase in this section due to superannuation/resignation/demise of employees

For the resultant vaccancies the posts as such shall be advertised for direct recruitment in the FY 2026-27

Note: It is requested to please ensure that each sheet is created separately for each laboratory and rename the sheet accordingly . For e.g. Central Laboratory, Regional Laboratory etc				
LABORATORY ANALYTICAL FACILITIES				
Name of the Board: Assam Pollution Control Board				
PART I: Facility available for monitoring of environmental parameters:				
S. No.	Parameters	Facilities Available (Yes / No)	If facility is not available, Specify Timeline for addition of this parameter. (in months)	Action Taken for addition of this parameter (Specification finalized / procurement initiated / work awarded / outsourced)
A. Sample Matrix / Group of Water and Wastewater				
(a) Physical Tests				
1	Temperature	Yes		
2	Colour	Yes		
3	pH	Yes		
4	Turbidity	Yes		
5	Conductivity	Yes		
6	Total Solids	Yes		
7	Total Dissolved Solids (TDS)	Yes		
8	Total Suspended Solids (TSS)	Yes		
(b) Inorganic Tests				
(i) General & Non-metallic				
1	Alkalinity	Yes		
2	Chloride	Yes		
3	Cyanide	No		
4	Dissolved oxygen	Yes		
5	Nitrite nitrogen	Yes		
6	Nitrate nitrogen	Yes		
7	Ammonical nitrogen	Yes		
8	Fluoride	Yes		
9	Hardness (Total)	Yes		
10	Calcium	Yes		
11	Magnesium	Yes		
12	Phosphate	Yes		
13	Sulphate	Yes		
14	Sulphide	Yes		
15	Total Residual chlorine (TRC)	Yes		
(ii) Trace Metals Tests				
1	Aluminium (Al)	Yes		
2	Arsenic (As) Total	Yes		
3	Barium	Yes		
4	Boron	Yes		
5	Chromium (Cr) Hexavalent	Yes		
6	Chromium (Cr) Total	Yes		
7	Cadmium (Cd)	Yes		
8	Cobalt (Co)	Yes		

9	Copper (Cu)	Yes		
10	Iron (Fe)	Yes		
11	Lead (Pb)	Yes		
12	Manganese (Mn)	Yes		
13	Mercury (Hg)	Yes		
14	Nickel (Ni)	Yes		
15	Potassium (K)	Yes		
16	Sodium (Na)	Yes		
17	Vanadium (V)	Yes		
18	Zinc (Zn)	Yes		
19	Selenium (Se)	Yes		
(c) Organics (General) and Trace Organics Tests				
1	Biological Oxygen Demand (BOD)	Yes		
2	Chemical oxygen demand (COD)	Yes		
3	Oil & Grease	Yes		
4	Phenolic Compounds as C ₆ H ₅ OH	Yes		
5	Benzopyrene	Yes		
6	Pesticides			
6.a	Organochlorine Pesticides (OCPs) Tests			
i	Aldrin	Yes		
ii	Alpha Endosulphan	Yes		
iii	p,p'-DDT	Yes		
iv	Alpha-HCH	Yes		
v	Beta HCH	Yes		
vi	Beta Endosulphan	Yes		
vii	Gama-HCH	Yes		
viii	o,p'-DDT	Yes		
ix	p,p'-DDE	Yes		
6.b	Organophosphorus Pesticides (OPP) Tests			
i	Malathion	Yes		
ii	Methyl parathion	Yes		
iii	Chlorpyrifos	Yes		
iv	Dimethoate	Yes		
v	Dieldrin	Yes		
vi	Ethion	Yes		
(d) Microbiological Tests				
1	Total Coliform	Yes		
2	Faecal Coliform	Yes		
3	E. Coli	Yes		
4	Faecal Streptococci	Yes		
(e) Toxicological Tests				
1	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	Yes		
B. Sample Matrix / Group of Solid / Solid Waste				

(a) Soil / Sediment / Compost Tests				
1	Cation Exchange Capacity (CEC)	Yes		
2	Electrical Conductivity (EC)	Yes		
3	Organic carbon (Chemical Method)	Yes		
4	pH	Yes		
5	Soil moisture	Yes		
6	Total nitrogen	Yes		
7	Metals by digestion (As, Cd, Cr, Pb, Ni etc.)	Yes		
(b) Hazardous Waste (Liquid / Slurry / Sludge / Solid / Semi-Solid) Tests				
1	Corrosivity	No		
2	Ignitability (Flash Point)	No		
3	Loss on Drying at 1050C (% Moisture Content)	No		
4	Loss on Drying at 5500C (% Organic Content)	No		
5	pH	No		
6	Organic carbon/matter (Chemical Method)	No		
7	Calorific Value	No		
8	Toxicity Characteristics leaching procedure (TCLP) Leachate and Metals in Leachate (As,Cd,Cr, Pb, Ni)	No		
C. Sample Matrix / Group of Analytes: Air				
(a) Ambient Air				
1	Nitrogen dioxide as NO2	Yes		
2	Sulphur dioxide (SO2)	Yes		
3	Particulate matter (PM10)	Yes		
4	Particulate matter (PM2.5)	Yes		
5	Carbon Monoxide	Yes		
6	Ozone	Yes		
7	Benzene	Yes		
8	Ammonia	Yes		
9	Metals in Particulate Matter, Pb	Yes		
10	Metals in Particulate Matter, As	Yes		
11	Metals in Particulate Matter, Ni	Yes		
12	Particulate Benzo-a-Pyrene (BaP)	Yes		
(b) Stack Gas / Stationary Source Emission				
1	Particulate Matter	Yes		
2	Sulphur Dioxide	Yes		
3	Carbon Dioxide	Yes		

4	Carbon Monoxide (NDIR based Method)	Yes		
5	Temperature	Yes		
6	Moisture	No		
7	Oxygen	Yes		
8	Oxides of Nitrogen	Yes		
9	Halides (HCL/HF)	No		
(c) Noise Level				
1	Ambient Noise level measurement (20 to 140 dB)	Yes		
2	Source Noise Level Measurement (Industrial process, DG set- 20 to 140dB)	Yes		
(d) Meteorological Monitoring				
1	Ambient Temperature	Yes		
2	Wind direction	Yes		
3	Wind speed	Yes		
4	Relative Humidity	Yes		
5	Mixing Height	Yes		
Specific remarks, if any:				
Infrastructure (Instruments and Equipment)				
S. No.	Name of Instrument / Equipments	Facilities Available (Yes / No)	If the Instrument / Equipment is not available, Specify Timeline for procurement of this instrument (in months)	Action Taken for procurement of this Instrument / Equipment (Specification finalized / procurement initiated / work awarded / outsourced)
A. List of Instruments / Equipment for Sampling of Water, Wastewater and Soil / Hazardous Wastes				
a) Mandatory Requirements				
1	Portable / Pen type pH meter / pH strip	Yes		
2	Portable Dissolved Oxygen Meter / Field Fixing using chemicals	Yes		
3	Electrical Conductivity meter pen type	Yes		
4	Flow meter / Physical flow measuring	Yes		
5	GPS / Mobile with GPS app	Yes		
6	Ice Box (2 nos.) (150 litre & 100 litre capacities)	No		
7	Thermometer	Yes		
8	Stainless steel bucket with nylon rope and mug	Yes		
9	Ground water level measuring device	No		
10	Scoop / shovel	Yes		
11	Auger / core sampler	Yes		
b) Optional Requirements				
1	Bottom Sampler / Depth sampler	Yes		
2	Chloroscope for residual chlorine	Yes		

3	Vandorn or equivalent water sampler (Automatic sampler when composite sampling to be done)	No		
4	Ekman Dredge	Yes		
B. List of Instruments / Equipment for Sampling of Ambient Air and Source Emission monitoring				
a) Mandatory Requirements				
1	Fine dust samplers PM2.5 (*4 Nos)	Yes		
2	Respirable Dust Sampler PM 10 (* 4 Nos)	Yes		
3	High Volume Sampler (SPM) (4 Nos)	No		
4	Handy Sampler with set of glass impingers (*2 Nos)	Yes		
5	Low Volume Sampler (LVS)	Yes		
6	Tedler bags different sizes	No	6 months	
7	Meteorological tower (All in one telescopic Mast) with sensors comprising wind speed, wind direction, ambient temp., Relative humidity, Solar radiation, rainfall etc.	Yes		
8	Nitrogen Cylinder portable	Yes		
9	Activated Charcoal tubes/ Tenex	Yes		
10	Barometer (Digital)	Yes		
11	Isokinetic Stack Monitoring Kit complete with Stack monitoring instrument panel with inclined cum vertical manometer, Cold Box, Vacuum pump, Glass assembly impingers	Yes		
12	Modified S type Stainless steel Pitot tube (Standard length) with Assembly	Yes		
13	Monoblock type, rotary design vacuum pump	Yes		
14	Orsat Apparatus	Yes		
15	Source emission monitoring Impingers train set with spare impingers 100 ml & 225 ml capacity	Yes		
16	Stainless steel heated Sampling Probes with thimble holders short and long	Yes		
17	Flue Gas analyzer	Yes		
18	Thermometer/ Thermocouple	Yes		
19	Calibrator for Noise Meters	Yes		
20	Digital Sound level (Noise) Metres	Yes		
21	Portable TOC Analyzer for emission monitoring.	No		

22	Polyurethane Foam PUF Sampler	No		
b) Optional Requirements				
1	Anemometer	Yes		
2	Weather Monitoring system	Yes		
3	Wind speed/wind direction monitor	Yes		
4	Continuous Ambient Air Monitoring System, Fixed	Yes		
5	Continuous PM10 Analyzer	Yes		
6	Continuous Ambient Air Monitoring System, Mobile	No		
7	Continuous PM2.5 analyzer	Yes		
8	Ambient Nitrogen Oxides (NO-NO2-NOx Analyzer	Yes		
9	Ambient Ozone Analyzer	Yes		
10	Ambient BTEX Analyzer	Yes		
11	Multipoint Gas Calibration system	Yes		
12	Ambient Sulphur Dioxide analyzer	Yes		
13	Ambient Carbon Monoxide & Carbon dioxide analyzer	Yes		
14	Total Hydrocarbon analyzer	Yes		
15	Ambient Ammonia analyzer	Yes		
16	Zero Gas Generator	No		
17	Synthetic Air Cylinder	No		
18	Calibration Gas Cylinders, SO2, NO, CO, NH3, Benzene and Toluene One each with stainless steel Regulators	Yes		
19	Continuous emission monitoring equipment	No		Not required for Board but Red category industries are submitting the real-time data/report to the CPCB server as well as PCBA RTDAS server
20	19 inch Rack mounting system for air analyzers	Yes		
21	Dry Gas Meter	Yes		
22	Diesel Exhaust analyzer	Yes		
23	Exhaust CO/HC analyzer with Sampling Probe	Yes		
24	Automated Noise Monitoring System	No		Already proposed for installation of real time noise monitoring station under State Action Plan on Noise Pollution; but delayed due to insufficient fund. Proposed 4 nos. for Guwahati city and one each for district headquarter (Total: 35 nos)
25	Integrating Sound level meter	Yes		
26	Continuous PM10& PM2.5 Monitoring Analyzer TEOM system	Yes		
27	Top loading orifice kit for calibration of HVS	Yes		Already installed at the Central Laboratory
28	Permeation tubes (SO2, NO-NO2-NOx, NH3, BTX)	Yes		
C. List of Equipment required for processing of Environmental Samples:				

a) Mandatory Requirements				
1	Accelerated Solvent Extraction (ASE) System	No		
2	Ammonia distillation assembly/TKN Analyzer	Yes		
3	Analytical Balance 4/5 digit & 6 digit (Digital)	Yes		
4	Aquarium for Toxicity bioassay test with complete accessories (*4 Nos)	Yes		
5	Autoclave (*2 Nos)	Yes		
6	Bacteriological Incubators Stainless steel (*2 Nos)	Yes		
7	Bio safety cabinets	Yes		
8	BOD Incubators (2 nos.)	Yes		
9	Centrifuge	Yes		
10	COD Digestion heated Blocks (2) with capacity 16 nos. or more	Yes		
11	Cyanide Distillation Assembly (3)	Yes		
12	Deep Freezer- Capacity 500 litre	Yes		
13	Laboratory Ball Mill Grinder	No		Shall be procured once funds are available
14	Laboratory Grinder	Yes		
15	Laminar Flow bench for Microbiological analysis	Yes		
16	Magnetic Stirrer with heating system (*2 Nos)	Yes		
17	Mechanical Shaker	Yes		
18	Membrane Filtration assembly with vacuum pump (2 nos.)	Yes		
19	Microbial culture refrigerator	No		
20	Microwave Digester with 16 vessels/ Hot Plate	Yes		
21	Muffle Furnace (*1 Nos), Range 1200 C	Yes		
22	Phenol distillation assembly (3)	Yes		
23	Plate counter, Manual/Automatic	Yes		
24	Digestion Chambers/ Fume hood	Yes		
25	Digital Thermometer & Humidity meter- All lab area	Yes		
26	Dispensers (Various capacities) up to 5, 10, 25 & 50 ml	Yes		
27	Filtration Assembly with vacuum pump	Yes		
28	Fluoride Distillation Assembly (3)	Yes		
29	Arsenic / Fluoride Glass Distillation assemblies	Yes		
30	Glass Double Distillation Assembly /Water Purification System	Yes		
31	Heating mantles (2 nos.)	Yes		
32	Hot plates (small, Medium and Large) (*2 nos.)	Yes		
33	Thermo Hygrometer	No		
34	Imhoff Cone	No		
35	Top loading Precision Digital Balance (minimum detection 0.001mg/0.01 mg) with anti-vibration facility- 3 nos. i.e 4/5 Digit (2 nos), - 6 Digit (1 no)	Yes		

36	Refrigerators Big Size 300 litres or more, double door- 2 nos.	Yes		
37	Rotary Evaporator (Buchi type) with water recirculating chiller	Yes		
38	Separating funnel shaker	Yes		
39	Soxhlet Apparatus	Yes		
40	Solid Phase Extraction (SPE) /SPME Extraction system	No		
41	Thermometer (Alcohol)	Yes		
42	Dry & wet bulb Thermometer	Yes		
43	Toxicity characteristic leaching procedure (TCLP) Extractors (Zero head and Bottle)	Yes		
44	Ultra sonic water bath- Capacity 3 litre	Yes		
45	Water Bath with temperature control (*2 Nos)	Yes		
46	Water Bath with temp. for mercury sample digestion- 20 BOD Bottles	No		
D. Analytical Instruments at Environmental Laboratories				
a) Mandatory Requirements				
1	Atomic Absorption spectrometer (AAS)- Flame, Hydride & Graphite Tube Atomizer (GTA)	Yes		
2	Binocular Stereo Zoom Microscope	Yes		
3	Bomb Calorimeter	Yes		
4	BTX Analyzer with BTX calibrator	Yes		
5	Colony counter	No		Shall be procured when required.
6	Conductivity meter- 2 nos.	Yes		
7	Environment conditioning chamber	Yes		
8	Digital Burettes- 50 ml*2, 100 ml*2	No		
9	Dissolved Oxygen Meter (Bench model)	Yes		
10	Flame Photometer	Yes		
11	Flash Point Apparatus	Yes		
12	Gas Chromatograph Mass Spectrometer	Yes		
13	High Performance Liquid Chromatograph (HPLC)	No		
14	Inductively Coupled Plasma (ICP) Spectrometer-OES	Yes		
15	Ion Chromatograph Anion & Cations	Yes		
16	Methane and Non Methane (NMHC) Analyzer	No		
17	Microscope – 100x	Yes		
18	Microscope Binocular Research	Yes		
19	CO (NDIR based) Analyzer	Yes		

20	Nephelometer (Turbidity Meter)	Yes		
21	pH-Meter with combined electrode (3 point)- 2 nos.	Yes		
22	Specific ion Analyzer with ion selective electrodes	Yes		
23	Spectrophotometer Visible (Portable)	Yes		
24	TKN Analyzer semi-automatic with aluminum block digester	Yes		
25	UV-Vis Spectrophotometer	Yes		
26	Moisture Content Analyzer	No		
b) Optional Requirements				
1	Automatic Titration Assembly	No		
2	Carbon, Hydrogen, Nitrogen and Sulphur (CHNS) Elemental Analyzer	No		
3	EDXRF Analyzer/WDXRF Analyzer	No		
4	Fourier-transform infrared Spectrometer (FTIR)	No		
5	Flocculator (Jar testing apparatus)	No		
6	Toxic Gas Analyzer	No		
7	Organic Halogen (AOX/TOX) Analyzer	No		Delayed due to lack of fund
8	TOC Analyzer	No		Procurement initiated but delayed due to l
9	High Resolution Mass Spectrometer (HRGC-HRMS)	No		
10	Inductively Coupled Plasma Mass (ICP-MS) Spectrometer	No		
11	X Ray Fluorescence (XRF) Spectrometer (Portable)	No		
Specific remarks, if any:				

Note: It is requested to please ensure that each sheet is created separately for each laboratory and rename the sheet accordingly . For e.g. Central Laboratory, Regional Laboratory etc				
LABORATORY ANALYTICAL FACILITIES				
Name of the Board: Assam Pollution Control Board				
PART I: Facility available for monitoring of environmental parameters:				
S. No.	Parameters	Facilities Available (Yes / No)	If facility is not available, Specify Timeline for addition of this parameter. (in months)	Action Taken for addition of this parameter (Specification finalized / procurement initiated / work awarded / outsourced)
A. Sample Matrix / Group of Water and Wastewater				
(a) Physical Tests				
1	Temperature	Yes		
2	Colour	Yes		
3	pH	Yes		
4	Turbidity	Yes		
5	Conductivity	Yes		
6	Total Solids	Yes		
7	Total Dissolved Solids (TDS)	Yes		
8	Total Suspended Solids (TSS)	Yes		
(b) Inorganic Tests				
(i) General & Non-metallic				
1	Alkalinity	Yes		
2	Chloride	Yes		
3	Cyanide	No		
4	Dissolved oxygen	Yes		
5	Nitrite nitrogen	Yes		
6	Nitrate nitrogen	Yes		
7	Ammonical nitrogen	Yes		
8	Fluoride	Yes		
9	Hardness (Total)	Yes		
10	Calcium	Yes		
11	Magnesium	Yes		
12	Phosphate	Yes		
13	Sulphate	Yes		
14	Sulphide	Yes		
15	Total Residual chlorine (TRC)	Yes		
(ii) Trace Metals Tests				
1	Aluminium (Al)	Yes		
2	Arsenic (As) Total	Yes		
3	Barium	Yes		
4	Boron	Yes		
5	Chromium (Cr) Hexavalent	Yes		
6	Chromium (Cr) Total	Yes		
7	Cadmium (Cd)	Yes		
8	Cobalt (Co)	Yes		
9	Copper (Cu)	Yes		
10	Iron (Fe)	Yes		
11	Lead (Pb)	Yes		
12	Manganese (Mn)	Yes		
13	Mercury (Hg)	Yes		
14	Nickel (Ni)	Yes		
15	Potassium (K)	Yes		
16	Sodium (Na)	Yes		
17	Vanadium (V)	Yes		
18	Zinc (Zn)	Yes		

19	Selenium (Se)	Yes		
(c) Organics (General) and Trace Organics Tests				
1	Biological Oxygen Demand (BOD)	Yes		
2	Chemical oxygen demand (COD)	Yes		
3	Oil & Grease	Yes		
4	Phenolic Compounds as C ₆ H ₅ OH	Yes		
5	Benzopyrene	Yes		
6	Pesticides			
6.a	Organochlorine Pesticides (OCPs) Tests			
i	Aldrin	Yes		
ii	Alpha Endosulphan	Yes		
iii	p,p'-DDT	Yes		
iv	Alpha-HCH	Yes		
v	Beta HCH	Yes		
vi	Beta Endosulphan	Yes		
vii	Gama-HCH	Yes		
viii	o,p'-DDT	Yes		
ix	p,p'-DDE	Yes		
6.b	Organophosphorus Pesticides (OPPs) Tests			
i	Malathion	Yes		
ii	Methyl parathion	Yes		
iii	Chlorpyrifos	Yes		
iv	Dimethoate	Yes		
v	Dieldrin	Yes		
vi	Ethion	Yes		
(d) Microbiological Tests				
1	Total Coliform	Yes		
2	Faecal Coliform	Yes		
3	E. Coli	Yes		
4	Faecal Streptococci	Yes		
(e) Toxicological Tests				
1	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	Yes		
B. Sample Matrix / Group of Solid / Solid Waste				
(a) Soil / Sediment / Compost Tests				
1	Cation Exchange Capacity (CEC)	Yes		
2	Electrical Conductivity (EC)	Yes		
3	Organic carbon (Chemical Method)	Yes		
4	pH	Yes		
5	Soil moisture	No		
6	Total nitrogen	Yes		
7	Metals by digestion (As, Cd, Cr, Pb, Ni etc.)	Yes		
(b) Hazardous Waste (Liquid / Slurry / Sludge / Solid / Semi-Solid) Tests				
1	Corrosivity	No		
2	Ignitability (Flash Point)	No		
3	Loss on Drying at 1050C (% Moisture Content)	No		
4	Loss on Drying at 5500C (% Organic Content)	No		
5	pH	No		
6	Organic carbon/matter (Chemical Method)	No		
7	Calorific Value	No		
8	Toxicity Characteristics leaching procedure (TCLP) Leachate and Metals in Leachate (As,Cd,Cr, Pb, Ni)	No		
C. Sample Matrix / Group of Analytes: Air				
(a) Ambient Air				
1	Nitrogen dioxide as NO ₂	Yes		
2	Sulphur dioxide (SO ₂)	Yes		
3	Particulate matter (PM ₁₀)	Yes		

4	Particulate matter (PM2.5)	Yes		
5	Carbon Monoxide	Yes		
6	Ozone	Yes		
7	Benzene	Yes		
8	Ammonia	Yes		
9	Metals in Particulate Matter, Pb	Yes		
10	Metals in Particulate Matter, As	Yes		
11	Metals in Particulate Matter, Ni	Yes		
12	Particulate Benzo-a-Pyrene (BaP)	Yes		
(b) Stack Gas / Stationary Source Emission				
1	Particulate Matter	Yes		
2	Sulphur Dioxide	Yes		
3	Carbon Dioxide	Yes		
4	Carbon Monoxide (NDIR based Method)	Yes		
5	Temperature	Yes		
6	Moisture	No		
7	Oxygen	Yes		
8	Oxides of Nitrogen	Yes		
9	Halides (HCL/HF)	No		
(c) Noise Level				
1	Ambient Noise level measurement (20 to 140 dB)	Yes		
2	Source Noise Level Measurement (Industrial process, DG set- 20 to 140dB)	Yes		
(d) Meteorological Monitoring				
1	Ambient Temperature	Yes		
2	Wind direction	Yes		
3	Wind speed	Yes		
4	Relative Humidity	Yes		
5	Mixing Height	Yes		
Specific remarks, if any:				
PART II: Details of Laboratory Infrastructure (Instruments and Equipment)				
S. No.	Name of Instrument / Equipments	Available Yes / No	If the Instrument / Equipment is not available, Specify Timeline for procurement of this instrument (in months)	Action Taken for procurement of this Instrument / Equipment (Specification finalized / procurement initiated / work awarded / outsourced)
A. List of Instruments / Equipment for Sampling of Water, Wastewater and Soil / Hazardous Wastes				
a) Mandatory Requirements				
1	Portable / Pen type pH meter / pH strip	Yes		
2	Portable Dissolved Oxygen Meter / Field Fixing using chemicals	Yes		
3	Electrical Conductivity meter pen type	Yes		
4	Flow meter / Physical flow measuring	Yes		
5	GPS / Mobile with GPS app	Yes		
6	Ice Box (2 nos.) (150 litre & 100 litre capacities)	No		
7	Thermometer	Yes		
8	Stainless steel bucket with nylon rope and mug	Yes		
9	Ground water level measuring device	Yes		
10	Scoop / shovel	Yes		

11	Auger / core sampler	No		
b) Optional Requirements				
1	Bottom Sampler / Depth sampler	Yes		
2	Chloroscope for residual chlorine	Yes		
3	Vandorn or equivalent water sampler (Automatic sampler when composite sampling to be done)	No		
4	Ekman Dredge	No		
B. List of Instruments / Equipment for Sampling of Ambient Air and Source Emission monitoring				
a) Mandatory Requirements				
1	Fine dust samplers PM2.5 (*4 Nos)	Yes		
2	Respirable Dust Sampler PM 10 (* 4 Nos)	Yes		
3	High Volume Sampler (SPM) (4 Nos)	No		
4	Handy Sampler with set of glass impingers (*2 Nos)	Yes		
5	Low Volume Sampler (LVS)	Yes		
6	Tedler bags different sizes	No		
7	Meteorological tower (All in one telescopic Mast) with sensors comprising wind speed, wind direction, ambient temp., Relative humidity, Solar radiation, rainfall etc.	Yes		
8	Nitrogen Cylinder portable	Yes		
9	Activated Charcoal tubes/ Tenex	Yes		
10	Barometer (Digital)	Yes		
11	Isokinetic Stack Monitoring Kit complete with Stack monitoring instrument panel with inclined cum vertical manometer, Cold Box, Vacuum pump, Glass assembly impingers	Yes		
12	Modified S type Stainless steel Pitot tube (Standard length) with Assembly	Yes		
13	Monoblock type, rotary design vacuum pump	Yes		
14	Orsat Apparatus	Yes		
15	Source emission monitoring Impingers train set with spare impingers 100 ml & 225 ml capacity	Yes		
16	Stainless steel heated Sampling Probes with thimble holders short and long	Yes		
17	Flue Gas analyzer	Yes		
18	Thermometer/ Thermocouple	Yes		
19	Calibrator for Noise Meters	Yes		
20	Digital Sound level (Noise) Metres	Yes		
21	Portable TOC Analyzer for emission monitoring.	No		
22	Polyurethane Foam PUF Sampler	No		
b) Optional Requirements				
1	Anemometer	Yes		
2	Weather Monitoring system	Yes		
3	Wind speed/wind direction monitor	Yes		
4	Continuous Ambient Air Monitoring System, Fixed	Yes		
5	Continuous PM10 Analyzer	Yes		

6	Continuous Ambient Air Monitoring System, Mobile	No		
7	Continuous PM2.5 analyzer	Yes		
8	Ambient Nitrogen Oxides (NO-NO2-NOx Analyzer	Yes		
9	Ambient Ozone Analyzer	Yes		
10	Ambient BTEX Analyzer	Yes		
11	Multipoint Gas Calibration system	Yes		
12	Ambient Sulphur Dioxide analyzer	Yes		
13	Ambient Carbon Monoxide & Carbon dioxide analyzer	Yes		
14	Total Hydrocarbon analyzer	Yes		
15	Ambient Ammonia analyzer	Yes		
16	Zero Gas Generator	No		
17	Synthetic Air Cylinder	No		
18	Calibration Gas Cylinders, SO2, NO, CO, NH3, Benzene and Toluene One each with stainless steel Regulators	Yes		
19	Continuous emission monitoring equipment	Yes		
20	19 inch Rack mounting system for air analyzers	Yes		
21	Dry Gas Meter	Yes		
22	Diesel Exhaust analyzer	Yes		
23	Exhaust CO/HC analyzer with Sampling Probe	Yes		
24	Automated Noise Monitoring System	Yes		
25	Integrating Sound level meter	Yes		
26	Continuous PM10& PM2.5 Monitoring Analyzer TEOM system	Yes		
27	Top loading orifice kit for calibration of HVS	Yes		Installed at Central laboratory, PCBA
28	Permeation tubes (SO2, NO-NO2-NOx, NH3, BTX)	Yes		

C. List of Equipment required for processing of Environmental Samples:

a) Mandatory Requirements

1	Accelerated Solvent Extraction (ASE) System	No		
2	Ammonia distillation assembly/TKN Analyzer	Yes		
3	Analytical Balance 4/5 digit & 6 digit (Digital)	Yes		
4	Aquarium for Toxicity bioassay test with complete accessories (*4 Nos)	Yes		
5	Autoclave (*2 Nos)	Yes		
6	Bacteriological Incubators Stainless steel (*2 Nos)	Yes		
7	Bio safety cabinets	Yes		
8	BOD Incubators (2 nos.)	Yes		
9	Centrifuge	Yes		
10	COD Digestion heated Blocks (2) with capacity 16 nos. or more	Yes		
11	Cyanide Distillation Assembly (3)	Yes		
12	Deep Freezer- Capacity 500 litre	Yes		
13	Laboratory Ball Mill Grinder	No		Shall be procured once funds are available
14	Laboratory Grinder	Yes		
15	Laminar Flow bench for Microbiological analysis	Yes		
16	Magnetic Stirrer with heating system (*2 Nos)	Yes		
17	Mechanical Shaker	Yes		

18	Membrane Filtration assembly with vacuum pump (2 nos.)	Yes		
19	Microbial culture refrigerator	No		
20	Microwave Digester with 16 vessels/ Hot Plate	Yes		
21	Muffle Furnace (*1 Nos), Range 1200 C	Yes		
22	Phenol distillation assembly (3)	Yes		
23	Plate counter, Manual/Automatic	Yes		
24	Digestion Chambers/ Fume hood	Yes		
25	Digital Thermometer & Humidity meter- All lab area	Yes		
26	Dispensers (Various capacities) up to 5, 10, 25 & 50 ml	Yes		
27	Filtration Assembly with vacuum pump	Yes		
28	Fluoride Distillation Assembly (3)	Yes		
29	Arsenic / Fluoride Glass Distillation assemblies	Yes		
30	Glass Double Distillation Assembly /Water Purification System	Yes		
31	Heating mantles (2 nos.)	Yes		
32	Hot plates (small, Medium and Large) (*2 nos.)	Yes		
33	Thermo Hygrometer	No		
34	Imhoff Cone	No		
35	Top loading Precision Digital Balance (minimum detection 0.001mg/0.01 mg) with anti-vibration facility- 3 nos. i.e 4/5 Digit (2 nos), - 6 Digit (1 no)	Yes		
36	Refrigerators Big Size 300 litres or more, double door- 2 nos.	Yes		
37	Rotary Evaporator (Buchi type) with water recirculating chiller	Yes		
38	Separating funnel shaker	Yes		
39	Soxhlet Apparatus	Yes		
40	Solid Phase Extraction (SPE) /SPME Extraction system	No		
41	Thermometer (Alcohol)	Yes		
42	Dry & wet bulb Thermometer	Yes		
43	Toxicity characteristic leaching procedure (TCLP) Extractors (Zero head and Bottle)	Yes		
44	Ultra sonic water bath- Capacity 3 litre	Yes		
45	Water Bath with temperature control (*2 Nos)	Yes		
46	Water Bath with temp. for mercury sample digestion- 20 BOD Bottles	No		

D. Analytical Instruments at Environmental Laboratories
a) Mandatory Requirements

1	Atomic Absorption spectrometer (AAS)- Flame, Hydride & Graphite Tube Atomizer (GTA)	Yes		
2	Binocular Stereo Zoom Microscope	Yes		
3	Bomb Calorimeter	Yes		
4	BTX Analyzer with BTX calibrator	Yes		
5	Colony counter	Yes		
6	Conductivity meter- 2 nos.	Yes		
7	Environment conditioning chamber	Yes		

8	Digital Burettes- 50 ml*2, 100 ml*2	No		
9	Dissolved Oxygen Meter (Bench model)	Yes		
10	Flame Photometer	Yes		
11	Flash Point Apparatus	Yes		
12	Gas Chromatograph Mass Spectrometer	Yes		
13	High Performance Liquid Chromatograph (HPLC)	Yes		
14	Inductively Coupled Plasma (ICP) Spectrometer-OES	Yes		
15	Ion Chromatograph Anion & Cations	Yes		
16	Methane and Non Methane (NMHC) Analyzer	No		
17	Microscope – 100x	Yes		
18	Microscope Binocular Research	Yes		
19	CO (NDIR based) Analyzer	Yes		
20	Nephelometer (Turbidity Meter)	Yes		
21	pH-Meter with combined electrode (3 point)- 2 nos.	Yes		
22	Specific ion Analyzer with ion selective electrodes	Yes		
23	Spectrophotometer Visible (Portable)	Yes		
24	TKN Analyzer semi-automatic with aluminum block digester	Yes		
25	UV-Vis Spectrophotometer	Yes		
26	Moisture Content Analyzer	No		
b) Optional Requirements				
1	Automatic Titration Assembly	No		
2	Carbon, Hydrogen, Nitrogen and Sulphur (CHNS) Elemental Analyzer	No		
3	EDXRF Analyzer/WDXRF Analyzer	No		
4	Fourier-transform infrared Spectrometer (FTIR)	No		
5	Flocculator (Jar testing apparatus)	No		
6	Toxic Gas Analyzer	No		
7	Organic Halogen (AOX/TOX) Analyzer	No		
8	TOC Analyzer	No		Procurement initiated but delayed due to lack of fund
9	High Resolution Mass Spectrometer (HRGC-HRMS)	No		
10	Inductively Coupled Plasma Mass (ICP-MS) Spectrometer	No		
11	X Ray Fluorescence (XRF) Spectrometer (Portable)	No		
Specific remarks, if any:				

Note: It is requested to please ensure that each sheet is created separately for each laboratory and rename the sheet accordingly . For e.g. Central Laboratory, Regional Laboratory etc				
LABORATORY ANALYTICAL FACILITIES				
Name of the Board: Regional Office cum Laboratory, Bongaigaon				
PART I: Facility available for monitoring of environmental parameters:				
S. No.	Parameters	Facilities Available (Yes / No)	If facility is not available, Specify Timeline for addition of this parameter. (in months)	Action Taken for addition of this parameter (Specification finalized / procurement initiated / work awarded / outsourced)
A. Sample Matrix / Group of Water and Wastewater				
(a) Physical Tests				
1	Temperature	Yes		
2	Colour	No		
3	pH	Yes		
4	Turbidity	Yes		
5	Conductivity	Yes		
6	Total Solids	No		
7	Total Dissolved Solids (TDS)	Yes		
8	Total Suspended Solids (TSS)	Yes		
(b) Inorganic Tests				
(i) General & Non-metallic				
1	Alkalinity	Yes		
2	Chloride	Yes		
3	Cyanide	No		
4	Dissolved oxygen	Yes		
5	Nitrite nitrogen	Yes		
6	Nitrate nitrogen	Yes		
7	Ammonical nitrogen	No		
8	Fluoride	No		
9	Hardness (Total)	Yes		
10	Calcium	Yes		
11	Magnesium	Yes		
12	Phosphate	Yes		
13	Sulphate	Yes		
14	Sulphide	No		
15	Total Residual chlorine (TRC)	No		
(ii) Trace Metals Tests				
1	Aluminium (Al)	No		
2	Arsenic (As) Total	No		
3	Barium	No		
4	Boron	No		
5	Chromium (Cr) Hexavalent	No		
6	Chromium (Cr) Total	No		
7	Cadmium (Cd)	No		
8	Cobalt (Co)	No		
9	Copper (Cu)	No		
10	Iron (Fe)	No		
11	Lead (Pb)	No		
12	Manganese (Mn)	No		
13	Mercury (Hg)	No		

14	Nickel (Ni)	No		
15	Potassium (K)	No		
16	Sodium (Na)	No		
17	Vanadium (V)	No		
18	Zinc (Zn)	No		
19	Selenium (Se)	No		
(c) Organics (General) and Trace Organics Tests				
1	Biological Oxygen Demand (BOD)	Yes		
2	Chemical oxygen demand (COD)	Yes		
3	Oil & Grease	No		
4	Phenolic Compounds as C ₆ H ₅ OH	No		
5	Benzopyrene	No		
6	Pesticides			
6.a	Organochlorine Pesticides (OCPs) Tests			
i	Aldrin	No		
ii	Alpha Endosulphan	No		
iii	p,p'-DDT	No		
iv	Alpha-HCH	No		
v	Beta HCH	No		
vi	Beta Endosulphan	No		
vii	Gama-HCH	No		
viii	o,p'-DDT	No		
ix	p,p'-DDE	No		
6.b	Organophosphorus Pesticides (OPPs) Tests			
i	Malathion	No		
ii	Methyl parathion	No		
iii	Chlorpyrifos	No		
iv	Dimethoate	No		
v	Dieldrin	No		
vi	Ethion	No		
(d) Microbiological Tests				
1	Total Coliform	No		
2	Faecal Coliform	No		
3	E. Coli	No		
4	Faecal Streptococci	No		
(e) Toxicological Tests				
1	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	No		
B. Sample Matrix / Group of Solid / Solid Waste				
(a) Soil / Sediment / Compost Tests				
1	Cation Exchange Capacity (CEC)	No		
2	Electrical Conductivity (EC)	No		
3	Organic carbon (Chemical Method)	No		
4	pH	No		
5	Soil moisture	No		
6	Total nitrogen	No		
7	Metals by digestion (As, Cd, Cr, Pb, Ni etc.)	No		
(b) Hazardous Waste (Liquid / Slurry / Sludge / Solid / Semi-Solid) Tests				
1	Corrosivity	No		
2	Ignitability (Flash Point)	No		
3	Loss on Drying at 1050C (% Moisture Content)	No		
4	Loss on Drying at 5500C (% Organic Content)	No		
5	pH	No		
6	Organic carbon/matter (Chemical Method)	No		
7	Calorific Value	No		

8	Toxicity Characteristics leaching procedure (TCLP) Leachate and Metals in Leachate (As,Cd,Cr, Pb, Ni)	No		
C. Sample Matrix / Group of Analytes: Air				
(a) Ambient Air				
1	Nitrogen dioxide as NO2	Yes		
2	Sulphur dioxide (SO2)	Yes		
3	Particulate matter (PM10)	Yes		
4	Particulate matter (PM2.5)	Yes		
5	Carbon Monoxide	No		
6	Ozone	No		
7	Benzene	No		
8	Ammonia	No		
9	Metals in Particulate Matter, Pb	No		
10	Metals in Particulate Matter, As	No		
11	Metals in Particulate Matter, Ni	No		
12	Particulate Benzo-a-Pyrene (BaP)	No		
(b) Stack Gas / Stationary Source Emission				
1	Particulate Matter	No		
2	Sulphur Dioxide	No		
3	Carbon Dioxide	No		
4	Carbon Monoxide (NDIR based Method)	No		
5	Temperature	No		
6	Moisture	No		
7	Oxygen	No		
8	Oxides of Nitrogen	No		
9	Halides (HCL/HF)	No		
(c) Noise Level				
1	Ambient Noise level measurement (20 to 140 dB)	Yes		
2	Source Noise Level Measurement (Industrial process, DG set- 20 to 140dB)	Yes		
(d) Meteorological Monitoring				
1	Ambient Temperature	Yes		
2	Wind direction	Yes		
3	Wind speed	Yes		
4	Relative Humidity	Yes		
5	Mixing Height	Yes		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				
PART II: Details of Laboratory Infrastructure (Instruments and Equipment)				
S. No.	Name of Instrument / Equipments	Available Yes / No	If the Instrument / Equipment is not available, Specify Timeline for procurement of this instrument (in months)	Action Taken for procurement of this Instrument / Equipment (Specification finalized / procurement initiated / work awarded / outsourced)
A. List of Instruments / Equipment for Sampling of Water, Wastewater and Soil / Hazardous Wastes				
a) Mandatory Requirements				
1	Portable / Pen type pH meter / pH strip	Yes		
2	Portable Dissolved Oxygen Meter / Field Fixing using chemicals	Yes		

3	Electrical Conductivity meter pen type	Yes		
4	Flow meter / Physical flow measuring	Yes		
5	GPS / Mobile with GPS app	Yes		
6	Ice Box (2 nos.) (150 litre & 100 litre capacities)	Yes		
7	Thermometer	Yes		
8	Stainless steel bucket with nylon rope and mug	Yes		
9	Ground water level measuring device	No		
10	Scoop / shovel	Yes		
11	Auger / core sampler	No		
b) Optional Requirements				
1	Bottom Sampler / Depth sampler	Yes		
2	Chloroscope for residual chlorine	Yes		
3	Vandorn or equivalent water sampler (Automatic sampler when composite sampling to be done)	Yes		
4	Ekman Dredge	Yes		
B. List of Instruments / Equipment for Sampling of Ambient Air and Source Emission monitoring				
a) Mandatory Requirements				
1	Fine dust samplers PM2.5 (*4 Nos)	Yes		
2	Respirable Dust Sampler PM 10 (* 4 Nos)	Yes		
3	High Volume Sampler (SPM) (4 Nos)	No		
4	Handy Sampler with set of glass impingers (*2 Nos)	Yes		
5	Low Volume Sampler (LVS)	No		
6	Tedler bags different sizes	No		
7	Meteorological tower (All in one telescopic Mast) with sensors comprising wind speed, wind direction, ambient temp., Relative humidity, Solar radiation, rainfall etc.	No		
8	Nitrogen Cylinder portable	No		
9	Activated Charcoal tubes/ Tenex	No		
10	Barometer (Digital)	No		
11	Isokinetic Stack Monitoring Kit complete with Stack monitoring instrument panel with inclined cum vertical manometer, Cold Box, Vacuum pump, Glass assembly impingers	No		
12	Modified S type Stainless steel Pitot tube (Standard length) with Assembly	No		
13	Monoblock type, rotary design vacuum pump	No		
14	Orsat Apparatus	No		
15	Source emission monitoring Impingers train set with spare impingers 100 ml & 225 ml capacity	No		
16	Stainless steel heated Sampling Probes with thimble holders short and long	No		
17	Flue Gas analyzer	No		

18	Thermometer/ Thermocouple	No		
19	Calibrator for Noise Meters	No		
20	Digital Sound level (Noise) Metres	No		
21	Portable TOC Analyzer for emission monitoring.	No		
22	Polyurethane Foam PUF Sampler	No		
b) Optional Requirements				
1	Anemometer	No		
2	Weather Monitoring system	No		
3	Wind speed/wind direction monitor	No		
4	Continuous Ambient Air Monitoring System, Fixed	No		
5	Continuous PM10 Analyzer	No		
6	Continuous Ambient Air Monitoring System, Mobile	No		
7	Continuous PM2.5 analyzer	No		
8	Ambient Nitrogen Oxides (NO-NO2-NOx Analyzer	No		
9	Ambient Ozone Analyzer	No		
10	Ambient BTEX Analyzer	No		
11	Multipoint Gas Calibration system	No		
12	Ambient Sulphur Dioxide analyzer	No		
13	Ambient Carbon Monoxide & Carbon dioxide analyzer	No		
14	Total Hydrocarbon analyzer	No		
15	Ambient Ammonia analyzer	No		
16	Zero Gas Generator	No		
17	Synthetic Air Cylinder	No		
18	Calibration Gas Cylinders, SO2, NO, CO, NH3, Benzene and Toluene One each with stainless steel Regulators	No		
19	Continuous emission monitoring equipment	No		
20	19 inch Rack mounting system for air analyzers	No		
21	Dry Gas Meter	No		
22	Diesel Exhaust analyzer	No		
23	Exhaust CO/HC analyzer with Sampling Probe	No		
24	Automated Noise Monitoring System	No		
25	Integrating Sound level meter	No		
26	Continuous PM10& PM2.5 Monitoring Analyzer TEOM system	No		
27	Top loading orifice kit for calibration of HVS	No		
28	Permeation tubes (SO2, NO-NO2-NOx, NH3, BTX)	No		
C. List of Equipment required for processing of Environmental Samples:				
a) Mandatory Requirements				
1	Accelerated Solvent Extraction (ASE) System	No		
2	Ammonia distillation assembly/TKN Analyzer	No		
3	Analytical Balance 4/5 digit & 6 digit (Digital)	No		

4	Aquarium for Toxicity bioassay test with complete accessories (*4 Nos)	No		
5	Autoclave (*2 Nos)	No		
6	Bacteriological Incubators Stainless steel (*2 Nos)	No		
7	Bio safety cabinets	No		
8	BOD Incubators (2 nos.)	No		
9	Centrifuge	No		
10	COD Digestion heated Blocks (2) with capacity 16 nos. or more	No		
11	Cyanide Distillation Assembly (3)	No		
12	Deep Freezer- Capacity 500 litre	No		
13	Laboratory Ball Mill Grinder	No		
14	Laboratory Grinder	No		
15	Laminar Flow bench for Microbiological analysis	No		
16	Magnetic Stirrer with heating system (*2 Nos)	No		
17	Mechanical Shaker	No		
18	Membrane Filtration assembly with vacuum pump (2 nos.)	No		
19	Microbial culture refrigerator	No		
20	Microwave Digester with 16 vessels/ Hot Plate	No		
21	Muffle Furnace (*1 Nos), Range 1200 C	No		
22	Phenol distillation assembly (3)	No		
23	Plate counter, Manual/Automatic	No		
24	Digestion Chambers/ Fume hood	No		
25	Digital Thermometer & Humidity meter- All lab area	No		
26	Dispensers (Various capacities) up to 5, 10, 25 & 50 ml	No		
27	Filtration Assembly with vacuum pump	No		
28	Fluoride Distillation Assembly (3)	No		
29	Arsenic / Fluoride Glass Distillation assemblies	No		
30	Glass Double Distillation Assembly /Water Purification System	No		
31	Heating mantles (2 nos.)	No		
32	Hot plates (small, Medium and Large) (*2 nos.)	No		
33	Thermo Hygrometer	No		
34	Imhoff Cone	No		
35	Top loading Precision Digital Balance (minimum detection 0.001mg/0.01 mg) with anti-vibration facility- 3 nos. i.e 4/5 Digit (2 nos), - 6 Digit (1 no)	No		
36	Refrigerators Big Size 300 litres or more, double door- 2 nos.	No		
37	Rotary Evaporator (Buchi type) with water recirculating chiller	No		
38	Separating funnel shaker	No		
39	Soxhlet Apparatus	No		
40	Solid Phase Extraction (SPE) /SPME Extraction system	No		
41	Thermometer (Alcohol)	No		

42	Dry & wet bulb Thermometer	No		
43	Toxicity characteristic leaching procedure (TCLP) Extractors (Zero head and Bottle)	No		
44	Ultra sonic water bath- Capacity 3 litre	No		
45	Water Bath with temperature control (*2 Nos)	No		
46	Water Bath with temp. for mercury sample digestion- 20 BOD Bottles	No		
D. Analytical Instruments at Environmental Laboratories				
a) Mandatory Requirements				
1	Atomic Absorption spectrometer (AAS)- Flame, Hydride & Graphite Tube Atomizer (GTA)	No		
2	Binocular Stereo Zoom Microscope	No		
3	Bomb Calorimeter	No		
4	BTX Analyzer with BTX calibrator	No		
5	Colony counter	No		
6	Conductivity meter- 2 nos.	No		
7	Environment conditioning chamber	No		
8	Digital Burettes- 50 ml*2, 100 ml*2	No		
9	Dissolved Oxygen Meter (Bench model)	No		
10	Flame Photometer	No		
11	Flash Point Apparatus	No		
12	Gas Chromatograph Mass Spectrometer	No		
13	High Performance Liquid Chromatograph (HPLC)	No		
14	Inductively Coupled Plasma (ICP) Spectrometer-OES	No		
15	Ion Chromatograph Anion & Cations	No		
16	Methane and Non Methane (NMHC) Analyzer	No		
17	Microscope – 100x	No		
18	Microscope Binocular Research	No		
19	CO (NDIR based) Analyzer	No		
20	Nephelometer (Turbidity Meter)	No		
21	pH-Meter with combined electrode (3 point)- 2 nos.	No		
22	Specific ion Analyzer with ion selective electrodes	No		
23	Spectrophotometer Visible (Portable)	No		
24	TKN Analyzer semi-automatic with aluminum block digester	No		
25	UV-Vis Spectrophotometer	Yes		
26	Moisture Content Analyzer	No		
b) Optional Requirements				
1	Automatic Titration Assembly	No		
2	Carbon, Hydrogen, Nitrogen and Sulphur (CHNS) Elemental Analyzer	No		
3	EDXRF Analyzer/WDXRF Analyzer	No		

4	Fourier-transform infrared Spectrometer (FTIR)	No		
5	Flocculator (Jar testing apparatus)	No		
6	Toxic Gas Analyzer	No		
7	Organic Halogen (AOX/TOX) Analyzer	No		
8	TOC Analyzer	No		
9	High Resolution Mass Spectrometer (HRGC-HRMS)	No		
10	Inductively Coupled Plasma Mass (ICP-MS) Spectrometer	No		
11	X Ray Fluorescence (XRF) Spectrometer (Portable)	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				

Note: It is requested to please ensure that each sheet is created separately for each laboratory and rename the sheet accordingly . For e.g. Central Laboratory, Regional Laboratory etc				
LABORATORY ANALYTICAL FACILITIES				
Name of the Board: Regional Office cum Laboratory, Sivasagar				
PART I: Facility available for monitoring of environmental parameters:				
S. No.	Parameters	Facilities Available (Yes / No)	If facility is not available, Specify Timeline for addition of this parameter. (in months)	Action Taken for addition of this parameter (Specification finalized / procurement initiated / work awarded / outsourced)
A. Sample Matrix / Group of Water and Wastewater				
(a) Physical Tests				
1	Temperature	Yes		
2	Colour	No		
3	pH	Yes		
4	Turbidity	Yes		
5	Conductivity	Yes		
6	Total Solids	No		
7	Total Dissolved Solids (TDS)	Yes		
8	Total Suspended Solids (TSS)	Yes		
(b) Inorganic Tests				
(i) General & Non-metallic				
1	Alkalinity	Yes		
2	Chloride	Yes		
3	Cyanide	No		
4	Dissolved oxygen	Yes		
5	Nitrite nitrogen	Yes		
6	Nitrate nitrogen	Yes		
7	Ammonical nitrogen	No		
8	Fluoride	No		
9	Hardness (Total)	Yes		
10	Calcium	Yes		
11	Magnesium	Yes		
12	Phosphate	No		
13	Sulphate	Yes		
14	Sulphide	No		
15	Total Residual chlorine (TRC)	Yes		
(ii) Trace Metals Tests				
1	Aluminium (Al)	No		
2	Arsenic (As) Total	No		
3	Barium	No		
4	Boron	No		
5	Chromium (Cr) Hexavalent	No		
6	Chromium (Cr) Total	No		
7	Cadmium (Cd)	No		
8	Cobalt (Co)	No		
9	Copper (Cu)	No		
10	Iron (Fe)	No		
11	Lead (Pb)	No		
12	Manganese (Mn)	No		
13	Mercury (Hg)	No		
14	Nickel (Ni)	No		

15	Potassium (K)	No		
16	Sodium (Na)	No		
17	Vanadium (V)	No		
18	Zinc (Zn)	No		
19	Selenium (Se)	No		
(c) Organics (General) and Trace Organics Tests				
1	Biological Oxygen Demand (BOD)	Yes		
2	Chemical oxygen demand (COD)	Yes		
3	Oil & Grease	Yes		
4	Phenolic Compounds as C ₆ H ₅ OH	No		
5	Benzopyrene	No		
6	Pesticides			
6.a Organochlorine Pesticides (OCPs) Tests				
i	Aldrin	No		
ii	Alpha Endosulphan	No		
iii	p,p'-DDT	No		
iv	Alpha-HCH	No		
v	Beta HCH	No		
vi	Beta Endosulphan	No		
vii	Gama-HCH	No		
viii	o,p'-DDT	No		
ix	p,p'-DDE	No		
6.b Organophosphorus Pesticides (OPPs) Tests				
i	Malathion	No		
ii	Methyl parathion	No		
iii	Chlorpyrifos	No		
iv	Dimethoate	No		
v	Dieldrin	No		
vi	Ethion	No		
(d) Microbiological Tests				
1	Total Coliform	Yes		
2	Faecal Coliform	Yes		
3	E. Coli	Yes		
4	Faecal Streptococci	Yes		
(e) Toxicological Tests				
1	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	No		
B. Sample Matrix / Group of Solid / Solid Waste				
(a) Soil / Sediment / Compost Tests				
1	Cation Exchange Capacity (CEC)	No		
2	Electrical Conductivity (EC)	No		
3	Organic carbon (Chemical Method)	No		
4	pH	No		
5	Soil moisture	No		
6	Total nitrogen	No		
7	Metals by digestion (As, Cd, Cr, Pb, Ni etc.)	No		
(b) Hazardous Waste (Liquid / Slurry / Sludge / Solid / Semi-Solid) Tests				
1	Corrosivity	No		
2	Ignitability (Flash Point)	No		
3	Loss on Drying at 1050C (% Moisture Content)	No		
4	Loss on Drying at 5500C (% Organic Content)	No		
5	pH	No		
6	Organic carbon/matter (Chemical Method)	No		
7	Calorific Value	No		

8	Toxicity Characteristics leaching procedure (TCLP) Leachate and Metals in Leachate (As,Cd,Cr, Pb, Ni)	No		
C. Sample Matrix / Group of Analytes: Air				
(a) Ambient Air				
1	Nitrogen dioxide as NO2	Yes		
2	Sulphur dioxide (SO2)	Yes		
3	Particulate matter (PM10)	Yes		
4	Particulate matter (PM2.5)	Yes		
5	Carbon Monoxide	No		
6	Ozone	No		
7	Benzene	No		
8	Ammonia	No		
9	Metals in Particulate Matter, Pb	No		
10	Metals in Particulate Matter, As	No		
11	Metals in Particulate Matter, Ni	No		
12	Particulate Benzo-a-Pyrene (BaP)	No		
(b) Stack Gas / Stationary Source Emission				
1	Particulate Matter	No		
2	Sulphur Dioxide	No		
3	Carbon Dioxide	No		
4	Carbon Monoxide (NDIR based Method)	No		
5	Temperature	No		
6	Moisture	No		
7	Oxygen	No		
8	Oxides of Nitrogen	No		
9	Halides (HCL/HF)	No		
(c) Noise Level				
1	Ambient Noise level measurement (20 to 140 dB)	Yes		
2	Source Noise Level Measurement (Industrial process, DG set- 20 to 140dB)	Yes		
(d) Meteorological Monitoring				
1	Ambient Temperature	Yes		
2	Wind direction	No		
3	Wind speed	No		
4	Relative Humidity	No		
5	Mixing Height	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				
PART II: Details of Laboratory Infrastructure (Instruments and Equipment)				
S. No.	Name of Instrument / Equipments	Available Yes / No	If the Instrument / Equipment is not available, Specify Timeline for procurement of this instrument (in months)	Action Taken for procurement of this Instrument / Equipment (Specification finalized / procurement initiated / work awarded / outsourced)
A. List of Instruments / Equipment for Sampling of Water, Wastewater and Soil / Hazardous Wastes				
a) Mandatory Requirements				
1	Portable / Pen type pH meter / pH strip	Yes		
2	Portable Dissolved Oxygen Meter / Field Fixing using chemicals	Yes		

3	Electrical Conductivity meter pen type	Yes		
4	Flow meter / Physical flow measuring	Yes		
5	GPS / Mobile with GPS app	Yes		
6	Ice Box (2 nos.) (150 litre & 100 litre capacities)	Yes		
7	Thermometer	Yes		
8	Stainless steel bucket with nylon rope and mug	Yes		
9	Ground water level measuring device	No		
10	Scoop / shovel	Yes		
11	Auger / core sampler	No		
b) Optional Requirements				
1	Bottom Sampler / Depth sampler	No		
2	Chloroscope for residual chlorine	No		
3	Vandorn or equivalent water sampler (Automatic sampler when composite sampling to be done)	No		
4	Ekman Dredge	No		
B. List of Instruments / Equipment for Sampling of Ambient Air and Source Emission monitoring				
a) Mandatory Requirements				
1	Fine dust samplers PM2.5 (*4 Nos)	Yes		
2	Respirable Dust Sampler PM 10 (* 4 Nos)	yes		
3	High Volume Sampler (SPM) (4 Nos)	No		
4	Handy Sampler with set of glass impingers (*2 Nos)	Yes		
5	Low Volume Sampler (LVS)	No		
6	Tedler bags different sizes	No		
7	Meteorological tower (All in one telescopic Mast) with sensors comprising wind speed, wind direction, ambient temp., Relative humidity, Solar radiation, rainfall etc.	No		
8	Nitrogen Cylinder portable	No		
9	Activated Charcoal tubes/ Tenex	No		
10	Barometer (Digital)	No		
11	Isokinetic Stack Monitoring Kit complete with Stack monitoring instrument panel with inclined cum vertical manometer, Cold Box, Vacuum pump, Glass assembly impingers	No		
12	Modified S type Stainless steel Pitot tube (Standard length) with Assembly	No		
13	Monoblock type, rotary design vacuum pump	No		
14	Orsat Apparatus	No		
15	Source emission monitoring Impingers train set with spare impingers 100 ml & 225 ml capacity	No		
16	Stainless steel heated Sampling Probes with thimble holders short and long	No		
17	Flue Gas analyzer	No		

18	Thermometer/ Thermocouple	No		
19	Calibrator for Noise Meters	No		
20	Digital Sound level (Noise) Metres	No		
21	Portable TOC Analyzer for emission monitoring.	No		
22	Polyurethane Foam PUF Sampler	No		
b) Optional Requirements				
1	Anemometer	Yes		
2	Weather Monitoring system	Yes		
3	Wind speed/wind direction monitor	No		
4	Continuous Ambient Air Monitoring System, Fixed	No		
5	Continuous PM10 Analyzer	No		
6	Continuous Ambient Air Monitoring System, Mobile	No		
7	Continuous PM2.5 analyzer	No		
8	Ambient Nitrogen Oxides (NO-NO2-NOx Analyzer	No		
9	Ambient Ozone Analyzer	No		
10	Ambient BTEX Analyzer	No		
11	Multipoint Gas Calibration system	No		
12	Ambient Sulphur Dioxide analyzer	No		
13	Ambient Carbon Monoxide & Carbon dioxide analyzer	No		
14	Total Hydrocarbon analyzer	No		
15	Ambient Ammonia analyzer	No		
16	Zero Gas Generator	No		
17	Synthetic Air Cylinder	No		
18	Calibration Gas Cylinders, SO2, NO, CO, NH3, Benzene and Toluene One each with stainless steel Regulators	No		
19	Continuous emission monitoring equipment	No		
20	19 inch Rack mounting system for air analyzers	No		
21	Dry Gas Meter	No		
22	Diesel Exhaust analyzer	No		
23	Exhaust CO/HC analyzer with Sampling Probe	No		
24	Automated Noise Monitoring System	No		
25	Integrating Sound level meter	No		
26	Continuous PM10& PM2.5 Monitoring Analyzer TEOM system	No		
27	Top loading orifice kit for calibration of HVS	No		
28	Permeation tubes (SO2, NO-NO2-NOx, NH3, BTX)	No		
C. List of Equipment required for processing of Environmental Samples:				
a) Mandatory Requirements				
1	Accelerated Solvent Extraction (ASE) System	No		
2	Ammonia distillation assembly/TKN Analyzer	No		
3	Analytical Balance 4/5 digit & 6 digit (Digital)	No		

4	Aquarium for Toxicity bioassay test with complete accessories (*4 Nos)	No		
5	Autoclave (*2 Nos)	No		
6	Bacteriological Incubators Stainless steel (*2 Nos)	No		
7	Bio safety cabinets	No		
8	BOD Incubators (2 nos.)	Yes		
9	Centrifuge	No		
10	COD Digestion heated Blocks (2) with capacity 16 nos. or more	Yes		
11	Cyanide Distillation Assembly (3)	No		
12	Deep Freezer- Capacity 500 litre	No		
13	Laboratory Ball Mill Grinder	No		
14	Laboratory Grinder	No		
15	Laminar Flow bench for Microbiological analysis	Yes		
16	Magnetic Stirrer with heating system (*2 Nos)	Yes		
17	Mechanical Shaker	No		Will be procured when required
18	Membrane Filtration assembly with vacuum pump (2 nos.)	No		
19	Microbial culture refrigerator	No		
20	Microwave Digester with 16 vessels/ Hot Plate	No		
21	Muffle Furnace (*1 Nos), Range 1200 C	No		
22	Phenol distillation assembly (3)	No		
23	Plate counter, Manual/Automatic	No		
24	Digestion Chambers/ Fume hood	No		
25	Digital Thermometer & Humidity meter- All lab area	No		
26	Dispensers (Various capacities) up to 5, 10, 25 & 50 ml	No		
27	Filtration Assembly with vacuum pump	No		
28	Fluoride Distillation Assembly (3)	No		
29	Arsenic / Fluoride Glass Distillation assemblies	No		
30	Glass Double Distillation Assembly /Water Purification System	No		
31	Heating mantles (2 nos.)	No		
32	Hot plates (small, Medium and Large) (*2 nos.)	No		
33	Thermo Hygrometer	No		
34	Imhoff Cone	No		
35	Top loading Precision Digital Balance (minimum detection 0.001mg/0.01 mg) with anti-vibration facility- 3 nos. i.e 4/5 Digit (2 nos), - 6 Digit (1 no)	No		
36	Refrigerators Big Size 300 litres or more, double door- 2 nos.	Yes		
37	Rotary Evaporator (Buchi type) with water recirculating chiller	No		
38	Separating funnel shaker	No		
39	Soxhlet Apparatus	No		
40	Solid Phase Extraction (SPE) /SPME Extraction system	No		
41	Thermometer (Alcohol)	Yes		

42	Dry & wet bulb Thermometer	No		
43	Toxicity characteristic leaching procedure (TCLP) Extractors (Zero head and Bottle)	No		
44	Ultra sonic water bath- Capacity 3 litre	No		
45	Water Bath with temperature control (*2 Nos)	No		
46	Water Bath with temp. for mercury sample digestion- 20 BOD Bottles	No		
D. Analytical Instruments at Environmental Laboratories				
a) Mandatory Requirements				
1	Atomic Absorption spectrometer (AAS)- Flame, Hydride & Graphite Tube Atomizer (GTA)	No		
2	Binocular Stereo Zoom Microscope	No		
3	Bomb Calorimeter	No		
4	BTX Analyzer with BTX calibrator	No		
5	Colony counter	No		
6	Conductivity meter- 2 nos.	No		
7	Environment conditioning chamber	No		
8	Digital Burettes- 50 ml*2, 100 ml*2	No		
9	Dissolved Oxygen Meter (Bench model)	No		
10	Flame Photometer	No		
11	Flash Point Apparatus	No		
12	Gas Chromatograph Mass Spectrometer	No		
13	High Performance Liquid Chromatograph (HPLC)	No		
14	Inductively Coupled Plasma (ICP) Spectrometer-OES	No		
15	Ion Chromatograph Anion & Cations	No		
16	Methane and Non Methane (NMHC) Analyzer	No		
17	Microscope – 100x	No		
18	Microscope Binocular Research	No		
19	CO (NDIR based) Analyzer	No		
20	Nephelometer (Turbidity Meter)	No		
21	pH-Meter with combined electrode (3 point)- 2 nos.	No		
22	Specific ion Analyzer with ion selective electrodes	No		
23	Spectrophotometer Visible (Portable)	No		
24	TKN Analyzer semi-automatic with aluminum block digester	No		
25	UV-Vis Spectrophotometer	Yes		
26	Moisture Content Analyzer	No		
b) Optional Requirements				
1	Automatic Titration Assembly	No		
2	Carbon, Hydrogen, Nitrogen and Sulphur (CHNS) Elemental Analyzer	No		
3	EDXRF Analyzer/WDXRF Analyzer	No		

4	Fourier-transform infrared Spectrometer (FTIR)	No		
5	Flocculator (Jar testing apparatus)	No		
6	Toxic Gas Analyzer	No		
7	Organic Halogen (AOX/TOX) Analyzer	No		
8	TOC Analyzer	No		
9	High Resolution Mass Spectrometer (HRGC-HRMS)	No		
10	Inductively Coupled Plasma Mass (ICP-MS) Spectrometer	No		
11	X Ray Fluorescence (XRF) Spectrometer (Portable)	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				

Note: It is requested to please ensure that each sheet is created separately for each laboratory and rename the sheet accordingly . For e.g. Central Laboratory, Regional Laboratory etc				
LABORATORY ANALYTICAL FACILITIES				
Name of the Board: Regional Office cum Laboratory, Silchar				
PART I: Facility available for monitoring of environmental parameters:				
S. No.	Parameters	Facilities Available (Yes / No)	If facility is not available, Specify Timeline for addition of this parameter. (in months)	Action Taken for addition of this parameter (Specification finalized / procurement initiated / work awarded / outsourced)
A. Sample Matrix / Group of Water and Wastewater				
(a) Physical Tests				
1	Temperature	Yes		
2	Colour	No		
3	pH	Yes		
4	Turbidity	Yes		
5	Conductivity	Yes		
6	Total Solids	No		
7	Total Dissolved Solids (TDS)	Yes		
8	Total Suspended Solids (TSS)	Yes		
(b) Inorganic Tests				
(i) General & Non-metallic				
1	Alkalinity	Yes		
2	Chloride	Yes		
3	Cyanide	No		
4	Dissolved oxygen	Yes		
5	Nitrite nitrogen	No		
6	Nitrate nitrogen	Yes		
7	Ammonical nitrogen	No		
8	Fluoride	No		
9	Hardness (Total)	Yes		
10	Calcium	Yes		
11	Magnesium	Yes		
12	Phosphate	No		
13	Sulphate	Yes		
14	Sulphide	No		
15	Total Residual chlorine (TRC)	Yes		
(ii) Trace Metals Tests				
1	Aluminium (Al)	No		
2	Arsenic (As) Total	No		
3	Barium	No		
4	Boron	No		
5	Chromium (Cr) Hexavalent	No		
6	Chromium (Cr) Total	No		
7	Cadmium (Cd)	No		
8	Cobalt (Co)	No		
9	Copper (Cu)	No		
10	Iron (Fe)	No		
11	Lead (Pb)	No		
12	Manganese (Mn)	No		
13	Mercury (Hg)	No		
14	Nickel (Ni)	No		

15	Potassium (K)	No		
16	Sodium (Na)	No		
17	Vanadium (V)	No		
18	Zinc (Zn)	No		
19	Selenium (Se)	No		
(c) Organics (General) and Trace Organics Tests				
1	Biological Oxygen Demand (BOD)	Yes		
2	Chemical oxygen demand (COD)	Yes		
3	Oil & Grease	No		
4	Phenolic Compounds as C ₆ H ₅ OH	No		
5	Benzopyrene	No		
6	Pesticides			
6.a	Organochlorine Pesticides (OCPs) Tests			
i	Aldrin	No		
ii	Alpha Endosulphan	No		
iii	p,p'-DDT	No		
iv	Alpha-HCH	No		
v	Beta HCH	No		
vi	Beta Endosulphan	No		
vii	Gama-HCH	No		
viii	o,p'-DDT	No		
ix	p,p'-DDE	No		
6.b	Organophosphorus Pesticides (OPPs) Tests			
i	Malathion	No		
ii	Methyl parathion	No		
iii	Chlorpyrifos	No		
iv	Dimethoate	No		
v	Dieldrin	No		
vi	Ethion	No		
(d) Microbiological Tests				
1	Total Coliform	No		
2	Faecal Coliform	No		
3	E. Coli	No		
4	Faecal Streptococci	No		
(e) Toxicological Tests				
1	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	No		
B. Sample Matrix / Group of Solid / Solid Waste				
(a) Soil / Sediment / Compost Tests				
1	Cation Exchange Capacity (CEC)	No		
2	Electrical Conductivity (EC)	No		
3	Organic carbon (Chemical Method)	No		
4	pH	No		
5	Soil moisture	No		
6	Total nitrogen	No		
7	Metals by digestion (As, Cd, Cr, Pb, Ni etc.)	No		
(b) Hazardous Waste (Liquid / Slurry / Sludge / Solid / Semi-Solid) Tests				
1	Corrosivity	No		
2	Ignitability (Flash Point)	No		
3	Loss on Drying at 1050C (% Moisture Content)	No		
4	Loss on Drying at 5500C (% Organic Content)	No		
5	pH	No		
6	Organic carbon/matter (Chemical Method)	No		
7	Calorific Value	No		

8	Toxicity Characteristics leaching procedure (TCLP) Leachate and Metals in Leachate (As,Cd,Cr, Pb, Ni)	No		
C. Sample Matrix / Group of Analytes: Air				
(a) Ambient Air				
1	Nitrogen dioxide as NO2	Yes		
2	Sulphur dioxide (SO2)	Yes		
3	Particulate matter (PM10)	Yes		
4	Particulate matter (PM2.5)	Yes		
5	Carbon Monoxide	No		
6	Ozone	No		
7	Benzene	No		
8	Ammonia	No		
9	Metals in Particulate Matter, Pb	No		
10	Metals in Particulate Matter, As	No		
11	Metals in Particulate Matter, Ni	No		
12	Particulate Benzo-a-Pyrene (BaP)	No		
(b) Stack Gas / Stationary Source Emission				
1	Particulate Matter	No		
2	Sulphur Dioxide	No		
3	Carbon Dioxide	No		
4	Carbon Monoxide (NDIR based Method)	No		
5	Temperature	No		
6	Moisture	No		
7	Oxygen	No		
8	Oxides of Nitrogen	No		
9	Halides (HCL/HF)	No		
(c) Noise Level				
1	Ambient Noise level measurement (20 to 140 dB)	Yes		
2	Source Noise Level Measurement (Industrial process, DG set- 20 to 140dB)	Yes		
(d) Meteorological Monitoring				
1	Ambient Temperature	Yes		
2	Wind direction	No		
3	Wind speed	No		
4	Relative Humidity	No		
5	Mixing Height	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				
PART II: Details of Laboratory Infrastructure (Instruments and Equipment)				
S. No.	Name of Instrument / Equipments	Available Yes / No	If the Instrument / Equipment is not available, Specify Timeline for procurement of this instrument (in months)	Action Taken for procurement of this Instrument / Equipment (Specification finalized / procurement initiated / work awarded / outsourced)
A. List of Instruments / Equipment for Sampling of Water, Wastewater and Soil / Hazardous Wastes				
a) Mandatory Requirements				
1	Portable / Pen type pH meter / pH strip	Yes		
2	Portable Dissolved Oxygen Meter / Field Fixing using chemicals	Yes		

3	Electrical Conductivity meter pen type	Yes		
4	Flow meter / Physical flow measuring	Yes		
5	GPS / Mobile with GPS app	Yes		
6	Ice Box (2 nos.) (150 litre & 100 litre capacities)	Yes		
7	Thermometer	Yes		
8	Stainless steel bucket with nylon rope and mug	Yes		
9	Ground water level measuring device	No		
10	Scoop / shovel	Yes		
11	Auger / core sampler	No		
b) Optional Requirements				
1	Bottom Sampler / Depth sampler	No		
2	Chloroscope for residual chlorine	No		
3	Vandorn or equivalent water sampler (Automatic sampler when composite sampling to be done)	No		
4	Ekman Dredge	No		
B. List of Instruments / Equipment for Sampling of Ambient Air and Source Emission monitoring				
a) Mandatory Requirements				
1	Fine dust samplers PM2.5 (*4 Nos)	Yes		
2	Respirable Dust Sampler PM 10 (* 4 Nos)	yes		
3	High Volume Sampler (SPM) (4 Nos)	No		
4	Handy Sampler with set of glass impingers (*2 Nos)	Yes		
5	Low Volume Sampler (LVS)	No		
6	Tedler bags different sizes	No		
7	Meteorological tower (All in one telescopic Mast) with sensors comprising wind speed, wind direction, ambient temp., Relative humidity, Solar radiation, rainfall etc.	No		
8	Nitrogen Cylinder portable	No		
9	Activated Charcoal tubes/ Tenex	No		
10	Barometer (Digital)	No		
11	Isokinetic Stack Monitoring Kit complete with Stack monitoring instrument panel with inclined cum vertical manometer, Cold Box, Vacuum pump, Glass assembly impingers	No		
12	Modified S type Stainless steel Pitot tube (Standard length) with Assembly	No		
13	Monoblock type, rotary design vacuum pump	No		
14	Orsat Apparatus	No		
15	Source emission monitoring Impingers train set with spare impingers 100 ml & 225 ml capacity	No		
16	Stainless steel heated Sampling Probes with thimble holders short and long	No		
17	Flue Gas analyzer	No		

18	Thermometer/ Thermocouple	No		
19	Calibrator for Noise Meters	No		
20	Digital Sound level (Noise) Metres	No		
21	Portable TOC Analyzer for emission monitoring.	No		
22	Polyurethane Foam PUF Sampler	No		
b) Optional Requirements				
1	Anemometer	Yes		
2	Weather Monitoring system	No		
3	Wind speed/wind direction monitor	No		
4	Continuous Ambient Air Monitoring System, Fixed	No		
5	Continuous PM10 Analyzer	No		
6	Continuous Ambient Air Monitoring System, Mobile	No		
7	Continuous PM2.5 analyzer	No		
8	Ambient Nitrogen Oxides (NO-NO2-NOx Analyzer	No		
9	Ambient Ozone Analyzer	No		
10	Ambient BTEX Analyzer	No		
11	Multipoint Gas Calibration system	No		
12	Ambient Sulphur Dioxide analyzer	No		
13	Ambient Carbon Monoxide & Carbon dioxide analyzer	No		
14	Total Hydrocarbon analyzer	No		
15	Ambient Ammonia analyzer	No		
16	Zero Gas Generator	No		
17	Synthetic Air Cylinder	No		
18	Calibration Gas Cylinders, SO2, NO, CO, NH3, Benzene and Toluene One each with stainless steel Regulators	No		
19	Continuous emission monitoring equipment	No		
20	19 inch Rack mounting system for air analyzers	No		
21	Dry Gas Meter	No		
22	Diesel Exhaust analyzer	No		
23	Exhaust CO/HC analyzer with Sampling Probe	No		
24	Automated Noise Monitoring System	No		
25	Integrating Sound level meter	No		
26	Continuous PM10& PM2.5 Monitoring Analyzer TEOM system	No		
27	Top loading orifice kit for calibration of HVS	No		
28	Permeation tubes (SO2, NO-NO2-NOx, NH3, BTX)	No		
C. List of Equipment required for processing of Environmental Samples:				
a) Mandatory Requirements				
1	Accelerated Solvent Extraction (ASE) System	No		
2	Ammonia distillation assembly/TKN Analyzer	No		
3	Analytical Balance 4/5 digit & 6 digit (Digital)	No		

4	Aquarium for Toxicity bioassay test with complete accessories (*4 Nos)	No		
5	Autoclave (*2 Nos)	No		
6	Bacteriological Incubators Stainless steel (*2 Nos)	No		
7	Bio safety cabinets	No		
8	BOD Incubators (2 nos.)	Yes		
9	Centrifuge	No		Will be procured when required
10	COD Digestion heated Blocks (2) with capacity 16 nos. or more	Yes		
11	Cyanide Distillation Assembly (3)	No		
12	Deep Freezer- Capacity 500 litre	No		
13	Laboratory Ball Mill Grinder	No		
14	Laboratory Grinder	No		
15	Laminar Flow bench for Microbiological analysis	Yes		
16	Magnetic Stirrer with heating system (*2 Nos)	Yes		
17	Mechanical Shaker	No		Will be procured when required
18	Membrane Filtration assembly with vacuum pump (2 nos.)	No		
19	Microbial culture refrigerator	No		
20	Microwave Digester with 16 vessels/ Hot Plate	No		
21	Muffle Furnace (*1 Nos), Range 1200 C	No		
22	Phenol distillation assembly (3)	No		
23	Plate counter, Manual/Automatic	No		
24	Digestion Chambers/ Fume hood	No		
25	Digital Thermometer & Humidity meter- All lab area	No		
26	Dispensers (Various capacities) up to 5, 10, 25 & 50 ml	No		
27	Filtration Assembly with vacuum pump	No		
28	Fluoride Distillation Assembly (3)	No		
29	Arsenic / Fluoride Glass Distillation assemblies	No		
30	Glass Double Distillation Assembly /Water Purification System	No		
31	Heating mantles (2 nos.)	No		
32	Hot plates (small, Medium and Large) (*2 nos.)	No		
33	Thermo Hygrometer	No		
34	Imhoff Cone	No		
35	Top loading Precision Digital Balance (minimum detection 0.001mg/0.01 mg) with anti-vibration facility- 3 nos. i.e 4/5 Digit (2 nos), - 6 Digit (1 no)	No		
36	Refrigerators Big Size 300 litres or more, double door- 2 nos.	Yes		
37	Rotary Evaporator (Buchi type) with water recirculating chiller	No		
38	Separating funnel shaker	No		
39	Soxhlet Apparatus	No		
40	Solid Phase Extraction (SPE) /SPME Extraction system	No		
41	Thermometer (Alcohol)	Yes		

42	Dry & wet bulb Thermometer	No		
43	Toxicity characteristic leaching procedure (TCLP) Extractors (Zero head and Bottle)	No		
44	Ultra sonic water bath- Capacity 3 litre	No		
45	Water Bath with temperature control (*2 Nos)	No		
46	Water Bath with temp. for mercury sample digestion- 20 BOD Bottles	No		
D. Analytical Instruments at Environmental Laboratories				
a) Mandatory Requirements				
1	Atomic Absorption spectrometer (AAS)- Flame, Hydride & Graphite Tube Atomizer (GTA)	No		
2	Binocular Stereo Zoom Microscope	No		
3	Bomb Calorimeter	No		
4	BTX Analyzer with BTX calibrator	No		
5	Colony counter	No		
6	Conductivity meter- 2 nos.	No		
7	Environment conditioning chamber	No		
8	Digital Burettes- 50 ml*2, 100 ml*2	No		
9	Dissolved Oxygen Meter (Bench model)	No		
10	Flame Photometer	No		
11	Flash Point Apparatus	No		
12	Gas Chromatograph Mass Spectrometer	No		
13	High Performance Liquid Chromatograph (HPLC)	No		
14	Inductively Coupled Plasma (ICP) Spectrometer-OES	No		
15	Ion Chromatograph Anion & Cations	No		
16	Methane and Non Methane (NMHC) Analyzer	No		
17	Microscope – 100x	No		
18	Microscope Binocular Research	No		
19	CO (NDIR based) Analyzer	No		
20	Nephelometer (Turbidity Meter)	No		
21	pH-Meter with combined electrode (3 point)- 2 nos.	No		
22	Specific ion Analyzer with ion selective electrodes	No		
23	Spectrophotometer Visible (Portable)	No		
24	TKN Analyzer semi-automatic with aluminum block digester	No		
25	UV-Vis Spectrophotometer	No		
26	Moisture Content Analyzer	No		
b) Optional Requirements				
1	Automatic Titration Assembly	No		
2	Carbon, Hydrogen, Nitrogen and Sulphur (CHNS) Elemental Analyzer	No		
3	EDXRF Analyzer/WDXRF Analyzer	No		

4	Fourier-transform infrared Spectrometer (FTIR)	No		
5	Flocculator (Jar testing apparatus)	No		
6	Toxic Gas Analyzer	No		
7	Organic Halogen (AOX/TOX) Analyzer	No		
8	TOC Analyzer	No		
9	High Resolution Mass Spectrometer (HRGC-HRMS)	No		
10	Inductively Coupled Plasma Mass (ICP-MS) Spectrometer	No		
11	X Ray Fluorescence (XRF) Spectrometer (Portable)	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				

Note: It is requested to please ensure that each sheet is created separately for each laboratory and rename the sheet accordingly . For e.g. Central Laboratory, Regional Laboratory etc				
LABORATORY ANALYTICAL FACILITIES				
Name of the Board: Regional Office cum Laboratory, Tezpur				
PART I: Facility available for monitoring of environmental parameters:				
S. No.	Parameters	Facilities Available (Yes / No)	If facility is not available, Specify Timeline for addition of this parameter. (in months)	Action Taken for addition of this parameter (Specification finalized / procurement initiated / work awarded / outsourced)
A. Sample Matrix / Group of Water and Wastewater				
(a) Physical Tests				
1	Temperature	Yes		
2	Colour	No		
3	pH	Yes		
4	Turbidity	No		
5	Conductivity	No		
6	Total Solids	No		
7	Total Dissolved Solids (TDS)	No		
8	Total Suspended Solids (TSS)	No		
(b) Inorganic Tests				
(i) General & Non-metallic				
1	Alkalinity	Yes		
2	Chloride	Yes		
3	Cyanide	No		
4	Dissolved oxygen	Yes		
5	Nitrite nitrogen	No		
6	Nitrate nitrogen	No		
7	Ammonical nitrogen	No		
8	Fluoride	No		
9	Hardness (Total)	Yes		
10	Calcium	Yes		
11	Magnesium	Yes		
12	Phosphate	No		
13	Sulphate	Yes		
14	Sulphide	No		
15	Total Residual chlorine (TRC)	Yes		
(ii) Trace Metals Tests				
1	Aluminium (Al)	No		
2	Arsenic (As) Total	No		
3	Barium	No		
4	Boron	No		
5	Chromium (Cr) Hexavalent	No		
6	Chromium (Cr) Total	No		
7	Cadmium (Cd)	No		
8	Cobalt (Co)	No		
9	Copper (Cu)	No		
10	Iron (Fe)	No		
11	Lead (Pb)	No		
12	Manganese (Mn)	No		
13	Mercury (Hg)	No		
14	Nickel (Ni)	No		

15	Potassium (K)	No		
16	Sodium (Na)	No		
17	Vanadium (V)	No		
18	Zinc (Zn)	No		
19	Selenium (Se)	No		
(c) Organics (General) and Trace Organics Tests				
1	Biological Oxygen Demand (BOD)	Yes		
2	Chemical oxygen demand (COD)	Yes		
3	Oil & Grease	No		
4	Phenolic Compounds as C ₆ H ₅ OH	No		
5	Benzopyrene	No		
6	Pesticides			
6.a Organochlorine Pesticides (OCPs) Tests				
i	Aldrin	No		
ii	Alpha Endosulphan	No		
iii	p,p'-DDT	No		
iv	Alpha-HCH	No		
v	Beta HCH	No		
vi	Beta Endosulphan	No		
vii	Gama-HCH	No		
viii	o,p'-DDT	No		
ix	p,p'-DDE	No		
6.b Organophosphorus Pesticides (OPPs) Tests				
i	Malathion	No		
ii	Methyl parathion	No		
iii	Chlorpyrifos	No		
iv	Dimethoate	No		
v	Dieldrin	No		
vi	Ethion	No		
(d) Microbiological Tests				
1	Total Coliform	No		
2	Faecal Coliform	No		
3	E. Coli	No		
4	Faecal Streptococci	No		
(e) Toxicological Tests				
1	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	No		
B. Sample Matrix / Group of Solid / Solid Waste				
(a) Soil / Sediment / Compost Tests				
1	Cation Exchange Capacity (CEC)	No		
2	Electrical Conductivity (EC)	No		
3	Organic carbon (Chemical Method)	No		
4	pH	No		
5	Soil moisture	No		
6	Total nitrogen	No		
7	Metals by digestion (As, Cd, Cr, Pb, Ni etc.)	No		
(b) Hazardous Waste (Liquid / Slurry / Sludge / Solid / Semi-Solid) Tests				
1	Corrosivity	No		
2	Ignitability (Flash Point)	No		
3	Loss on Drying at 1050C (% Moisture Content)	No		
4	Loss on Drying at 5500C (% Organic Content)	No		
5	pH	No		
6	Organic carbon/matter (Chemical Method)	No		
7	Calorific Value	No		

8	Toxicity Characteristics leaching procedure (TCLP) Leachate and Metals in Leachate (As,Cd,Cr, Pb, Ni)	No		
C. Sample Matrix / Group of Analytes: Air				
(a) Ambient Air				
1	Nitrogen dioxide as NO2	Yes		
2	Sulphur dioxide (SO2)	Yes		
3	Particulate matter (PM10)	Yes		
4	Particulate matter (PM2.5)	Yes		
5	Carbon Monoxide	No		
6	Ozone	No		
7	Benzene	No		
8	Ammonia	No		
9	Metals in Particulate Matter, Pb	No		
10	Metals in Particulate Matter, As	No		
11	Metals in Particulate Matter, Ni	No		
12	Particulate Benzo-a-Pyrene (BaP)	No		
(b) Stack Gas / Stationary Source Emission				
1	Particulate Matter	No		
2	Sulphur Dioxide	No		
3	Carbon Dioxide	No		
4	Carbon Monoxide (NDIR based Method)	No		
5	Temperature	No		
6	Moisture	No		
7	Oxygen	No		
8	Oxides of Nitrogen	No		
9	Halides (HCL/HF)	No		
(c) Noise Level				
1	Ambient Noise level measurement (20 to 140 dB)	Yes		
2	Source Noise Level Measurement (Industrial process, DG set- 20 to 140dB)	Yes		
(d) Meteorological Monitoring				
1	Ambient Temperature	Yes		
2	Wind direction	No		
3	Wind speed	No		
4	Relative Humidity	No		
5	Mixing Height	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				
PART II: Details of Laboratory Infrastructure (Instruments and Equipment)				
S. No.	Name of Instrument / Equipments	Available Yes / No	If the Instrument / Equipment is not available, Specify Timeline for procurement of this instrument (in months)	Action Taken for procurement of this Instrument / Equipment (Specification finalized / procurement initiated / work awarded / outsourced)
A. List of Instruments / Equipment for Sampling of Water, Wastewater and Soil / Hazardous Wastes				
a) Mandatory Requirements				
1	Portable / Pen type pH meter / pH strip	Yes		
2	Portable Dissolved Oxygen Meter / Field Fixing using chemicals	Yes		

3	Electrical Conductivity meter pen type	Yes		
4	Flow meter / Physical flow measuring	Yes		
5	GPS / Mobile with GPS app	Yes		
6	Ice Box (2 nos.) (150 litre & 100 litre capacities)	Yes		
7	Thermometer	Yes		
8	Stainless steel bucket with nylon rope and mug	Yes		
9	Ground water level measuring device	No		
10	Scoop / shovel	Yes		
11	Auger / core sampler	No		
b) Optional Requirements				
1	Bottom Sampler / Depth sampler	No		
2	Chloroscope for residual chlorine	No		
3	Vandorn or equivalent water sampler (Automatic sampler when composite sampling to be done)	No		
4	Ekman Dredge	No		
B. List of Instruments / Equipment for Sampling of Ambient Air and Source Emission monitoring				
a) Mandatory Requirements				
1	Fine dust samplers PM2.5 (*4 Nos)	Yes		
2	Respirable Dust Sampler PM 10 (* 4 Nos)	yes		
3	High Volume Sampler (SPM) (4 Nos)	No		
4	Handy Sampler with set of glass impingers (*2 Nos)	Yes		
5	Low Volume Sampler (LVS)	No		
6	Tedler bags different sizes	No		
7	Meteorological tower (All in one telescopic Mast) with sensors comprising wind speed, wind direction, ambient temp., Relative humidity, Solar radiation, rainfall etc.	No		
8	Nitrogen Cylinder portable	No		
9	Activated Charcoal tubes/ Tenex	No		
10	Barometer (Digital)	Yes		
11	Isokinetic Stack Monitoring Kit complete with Stack monitoring instrument panel with inclined cum vertical manometer, Cold Box, Vacuum pump, Glass assembly impingers	No		
12	Modified S type Stainless steel Pitot tube (Standard length) with Assembly	No		
13	Monoblock type, rotary design vacuum pump	No		
14	Orsat Apparatus	No		
15	Source emission monitoring Impingers train set with spare impingers 100 ml & 225 ml capacity	No		
16	Stainless steel heated Sampling Probes with thimble holders short and long	No		
17	Flue Gas analyzer	No		

18	Thermometer/ Thermocouple	No		
19	Calibrator for Noise Meters	No		
20	Digital Sound level (Noise) Metres	No		
21	Portable TOC Analyzer for emission monitoring.	No		
22	Polyurethane Foam PUF Sampler	No		
b) Optional Requirements				
1	Anemometer	No		
2	Weather Monitoring system	No		
3	Wind speed/wind direction monitor	No		
4	Continuous Ambient Air Monitoring System, Fixed	No		
5	Continuous PM10 Analyzer	No		
6	Continuous Ambient Air Monitoring System, Mobile	No		
7	Continuous PM2.5 analyzer	No		
8	Ambient Nitrogen Oxides (NO-NO2-NOx Analyzer	No		
9	Ambient Ozone Analyzer	No		
10	Ambient BTEX Analyzer	No		
11	Multipoint Gas Calibration system	No		
12	Ambient Sulphur Dioxide analyzer	No		
13	Ambient Carbon Monoxide & Carbon dioxide analyzer	No		
14	Total Hydrocarbon analyzer	No		
15	Ambient Ammonia analyzer	No		
16	Zero Gas Generator	No		
17	Synthetic Air Cylinder	No		
18	Calibration Gas Cylinders, SO2, NO, CO, NH3, Benzene and Toluene One each with stainless steel Regulators	No		
19	Continuous emission monitoring equipment	No		
20	19 inch Rack mounting system for air analyzers	No		
21	Dry Gas Meter	No		
22	Diesel Exhaust analyzer	No		
23	Exhaust CO/HC analyzer with Sampling Probe	No		
24	Automated Noise Monitoring System	No		
25	Integrating Sound level meter	No		
26	Continuous PM10& PM2.5 Monitoring Analyzer TEOM system	No		
27	Top loading orifice kit for calibration of HVS	No		
28	Permeation tubes (SO2, NO-NO2-NOx, NH3, BTX)	No		
C. List of Equipment required for processing of Environmental Samples:				
a) Mandatory Requirements				
1	Accelerated Solvent Extraction (ASE) System	No		
2	Ammonia distillation assembly/TKN Analyzer	No		
3	Analytical Balance 4/5 digit & 6 digit (Digital)	No		

4	Aquarium for Toxicity bioassay test with complete accessories (*4 Nos)	No		
5	Autoclave (*2 Nos)	No		
6	Bacteriological Incubators Stainless steel (*2 Nos)	No		
7	Bio safety cabinets	No		
8	BOD Incubators (2 nos.)	Yes		
9	Centrifuge	No		Will be procured when required
10	COD Digestion heated Blocks (2) with capacity 16 nos. or more	Yes		
11	Cyanide Distillation Assembly (3)	No		
12	Deep Freezer- Capacity 500 litre	No		
13	Laboratory Ball Mill Grinder	No		
14	Laboratory Grinder	No		
15	Laminar Flow bench for Microbiological analysis	Yes		
16	Magnetic Stirrer with heating system (*2 Nos)	Yes		
17	Mechanical Shaker	No		Will be procured when required
18	Membrane Filtration assembly with vacuum pump (2 nos.)	No		
19	Microbial culture refrigerator	No		
20	Microwave Digester with 16 vessels/ Hot Plate	No		
21	Muffle Furnace (*1 Nos), Range 1200 C	No		
22	Phenol distillation assembly (3)	No		
23	Plate counter, Manual/Automatic	No		
24	Digestion Chambers/ Fume hood	No		
25	Digital Thermometer & Humidity meter- All lab area	No		
26	Dispensers (Various capacities) up to 5, 10, 25 & 50 ml	No		
27	Filtration Assembly with vacuum pump	No		
28	Fluoride Distillation Assembly (3)	No		
29	Arsenic / Fluoride Glass Distillation assemblies	No		
30	Glass Double Distillation Assembly /Water Purification System	No		
31	Heating mantles (2 nos.)	No		
32	Hot plates (small, Medium and Large) (*2 nos.)	No		
33	Thermo Hygrometer	No		
34	Imhoff Cone	No		
35	Top loading Precision Digital Balance (minimum detection 0.001mg/0.01 mg) with anti-vibration facility- 3 nos. i.e 4/5 Digit (2 nos), - 6 Digit (1 no)	No		
36	Refrigerators Big Size 300 litres or more, double door- 2 nos.	Yes		
37	Rotary Evaporator (Buchi type) with water recirculating chiller	No		
38	Separating funnel shaker	No		
39	Soxhlet Apparatus	No		
40	Solid Phase Extraction (SPE) /SPME Extraction system	No		
41	Thermometer (Alcohol)	Yes		

42	Dry & wet bulb Thermometer	No		
43	Toxicity characteristic leaching procedure (TCLP) Extractors (Zero head and Bottle)	No		
44	Ultra sonic water bath- Capacity 3 litre	No		
45	Water Bath with temperature control (*2 Nos)	No		
46	Water Bath with temp. for mercury sample digestion- 20 BOD Bottles	No		
D. Analytical Instruments at Environmental Laboratories				
a) Mandatory Requirements				
1	Atomic Absorption spectrometer (AAS)- Flame, Hydride & Graphite Tube Atomizer (GTA)	No		
2	Binocular Stereo Zoom Microscope	No		
3	Bomb Calorimeter	No		
4	BTX Analyzer with BTX calibrator	No		
5	Colony counter	No		
6	Conductivity meter- 2 nos.	No		
7	Environment conditioning chamber	No		
8	Digital Burettes- 50 ml*2, 100 ml*2	No		
9	Dissolved Oxygen Meter (Bench model)	No		
10	Flame Photometer	No		
11	Flash Point Apparatus	No		
12	Gas Chromatograph Mass Spectrometer	No		
13	High Performance Liquid Chromatograph (HPLC)	No		
14	Inductively Coupled Plasma (ICP) Spectrometer-OES	No		
15	Ion Chromatograph Anion & Cations	No		
16	Methane and Non Methane (NMHC) Analyzer	No		
17	Microscope – 100x	No		
18	Microscope Binocular Research	No		
19	CO (NDIR based) Analyzer	No		
20	Nephelometer (Turbidity Meter)	No		
21	pH-Meter with combined electrode (3 point)- 2 nos.	No		
22	Specific ion Analyzer with ion selective electrodes	No		
23	Spectrophotometer Visible (Portable)	No		
24	TKN Analyzer semi-automatic with aluminum block digester	No		
25	UV-Vis Spectrophotometer	No		
26	Moisture Content Analyzer	No		
b) Optional Requirements				
1	Automatic Titration Assembly	No		
2	Carbon, Hydrogen, Nitrogen and Sulphur (CHNS) Elemental Analyzer	No		
3	EDXRF Analyzer/WDXRF Analyzer	No		

4	Fourier-transform infrared Spectrometer (FTIR)	No		
5	Flocculator (Jar testing apparatus)	No		
6	Toxic Gas Analyzer	No		
7	Organic Halogen (AOX/TOX) Analyzer	No		
8	TOC Analyzer	No		
9	High Resolution Mass Spectrometer (HRGC-HRMS)	No		
10	Inductively Coupled Plasma Mass (ICP-MS) Spectrometer	No		
11	X Ray Fluorescence (XRF) Spectrometer (Portable)	No		
Specific remarks, if any: The parameters which are not analysed at RLOs are analysed at the Central Laboratory, PCBA				

PART III: DETAILS OF LABORATORIES ESTABLISHED UNDER THE WATER (P & CP) ACT, 1974

Laboratory established by the Board,				Laboratories / Institutes specified by State Govt., as State Water Laboratory as per Section 52 (1) of Water Act (other								NABL Accreditation			EPA Recognition		
No. of Laboratories established / recognised	No. of Laboratories (out of those given in column No. (1)) notified	No. of remaining Laboratories Planned for Notification (out of those given in column No. (1)) notified	Time line required for notification of Laboratories given in column No. (1)	No. of Laboratories		No. of Laboratories (out of		No. of remaining		Time line required for		No. of Board's Laboratories 17 (2)	No. of State Water		No. of Board's Laboratories 17 (2)	No. of State Water	
				Govt.	Pvt.	Govt.	Pvt.	Govt.	Pvt.	Govt.	Pvt.		Govt.	Pvt.		Govt.	Pvt.
-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18
5	0	5	6		8		-					1		8	1		

Note: The list of the laboratory may be attached separately (Board, State Govt. and Private)

Specific remarks, if any: None (Under process at the level of Dept. of Env. & Forest , Govt. of Assam)

PART IV: DETAILS OF LABORATORIES ESTABLISHED UNDER THE AIR (P & CP) ACT, 1981

Laboratory established by the Board,				Laboratories / Institutes specified by State Govt., as State Air Laboratory as per Section 28 (1) of Air Act (other than								NABL Accreditation			EPA Recognition		
No. of Laboratories established / recognised	No. of Laboratories (out of those given in column No. (1)) notified	No. of remaining Laboratories Planned for Notification (out of those given in column No. (1)) notified	Time line required for notification of Laboratories given in column No. (1)	No. of Laboratories		No. of Laboratories (out of		No. of remaining		Time line required for		No. of Board's Laboratories 17 (2)	No. of State Water		No. of Board's Laboratories 17 (2)	No. of State Water	
				Govt.	Pvt.	Govt.	Pvt.	Govt.	Pvt.	Govt.	Pvt.		Govt.	Pvt.		Govt.	Pvt.
-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18
5	0	5	6		8							1		8	1		

Note: The list of the laboratory may be attached separately (Board, State Govt. and Private)

Specific remarks, if any:

PART V: DETAILS OF LABORATORIES PARTICIPATED ON ANALYTICAL QUALITY CONTROL AND QUALITY ASSURANCE CONDUCTED BY CPCB IN RESPECT OF WATER QUALITY

S. No.	Name of the Laboratory with address	No. of Parameters in AQC Exercise				Number of Parameters Attempted				% Parameters Successful			
		33rd Exercise	34th Exercise	35th Exercise	36th Exercise	33rd Exercise	34th Exercise	35th Exercise	36th Exercise	33rd Exercise	34th Exercise	35th Exercise	36th Exercise
1	Central		11				11				81.81		
2	Laboratory,				14				14				83.33
3	Pollution												
4	Control Board												
5	Assam,												
6	Bamunimaida m, Guwahati-												

Note: 33rd Exercise (Metals) held in 2020-2021,
34th Exercise (General and Physico-Chemical parameters) held in 2021-2022
35th Exercise (Pesticides) held in 2023
36th Exercise (General and Physico-Chemical parameters) held in 2023-2024

Provide details of each Laboratories (Central, Regional/Zonal, District) in separate Row

Specific remarks, if any:

PART VI: DETAILS OF LABORATORIES PARTICIPATED ON PROFICIENCY TESTING (PT)

S. No.	Name of Laboratory with address	Year of PT participation	PT Sample Provider (Name and Address)	Number of Parameters in Accreditation Scope	Number of Parameters for which Laboratory participated in PT exercise	Number of Parameter with Satisfactory Results
1	Central Laboratory, Pollution Control Board Assam, Bamunimaidam, Guwahati-21, Assam	2022	Global PT Provider Pvt. Ltd.	69	9 (Water)	Satisfactory (9 parameters)
		2023	Global PT Provider Pvt. Ltd.	69	8 (Water)	Satisfactory (8 parameters)
		2024	Global PT Provider Pvt. Ltd.	69	18 (Water-wastewater)	Satisfactory (15 parameters) *3 parameters not attempted
2	Central Laboratory, Pollution Control Board Assam, Bamunimaidam, Guwahati-21, Assam	2022	Green Economy Initiatives Pvt. Ltd.	69	2 (Ambient)	Satisfactory (2 parameters)
		2023	Global PT Provider Pvt. Ltd.	69	3 (Ambient)	Satisfactory (2 parameters)
		2024	Global PT Provider Pvt. Ltd.	69	3 (Stack Emission)	Satisfactory (3 parameters)
3		2022				
		2023				
		2024				

Note: Provide details of each Laboratory (Central, Regional/Zonal, District) in separate Row

Specific remarks, if any:

LIST OF RECOGNIZED LABORATORIES

Sl. No	Name & Address of the Recognized Environmental Laboratories
1	M/s Green Tech Environmental Engineer and Consultants. House No.11, Narayan Path, Champak Nagar, Bhetapara Chariali, Guwahati-28, Kamrup (M), Assam
2	M/s Envision Enviro Technologies North East.House No.6, First Floor, Pub Sarania, Sankardev Path, Bye-lane No.1, Chandmari, Guwahati-03, Kamrup (M), Assam
3	M/s Envirocon. Digboi Stares Building, IOC, New Market, Digboi-786171, Dist: Tinsukia, Assam
4	M/s Enviro-Testing Services (ETS), Bijoy Nagar, House No.35, Noonmati, Guwahati-20, Kamrup (M), Assam
5	M/s ABNS Scientific Services, House No. 152, Padumbari, Jalukbari, Guwahati-11, Kamrup (M), Assam
6	M/s Greenzone Environmental Laboratories,BAPAPUNG, Ward No.7, Digboi, Tinsukia, Assam
7	M/s Mitra S.K. Pvt. Ltd, 2nd Floor, 9, Arunachal Path, Zoo Road, Japorigog, Assam-781021
8	M/s. DMCU ENVIROCHEM LLP, House No.68, Kailash Nagar, Panjabari, Guwahati-781037, Assam