

Real Time Data Management  
of  
OCEMS  
Data Communication Protocols and  
Protocols for Data Validation &  
System Overview



ADITYA SHARMA  
Scientist 'D', IT Division  
Central Pollution Control Board Parivesh  
Bhawan East Arjun Nagar, Delhi -32  
9911328120, [aditya.cpcb@nic.in](mailto:aditya.cpcb@nic.in)

Continuous emissions/effluent monitoring equipment is installed for a number of reasons.

- Regulatory compliance.
- Monitoring of plant performance.

# Targets -- Online Monitoring System

- Improved control over impacts on the environment
- Higher environmental awareness
- Increased management responsibility for regulatory compliance
- Self Monitoring mechanism within the industries
- Increased cost-effectiveness (minimize inspection)
- Increased public access to information(Public Domain)

# Target of Online CEMS

Directions u/s 18 (1) (b) were issued on February 05, 2014 to all Chairmen of SPCBs and PCCs to direct industry for installation of online emission and effluent monitoring system by March 31,2015. (Extended till June 30, 2015)

## Sectors covered:

- **17 categories of industries - 3206 Units**
- **Common Effluent Treatment Plans - 175**
- **Common Hazardous Waste Incinerator-25**
- **Common Bio Medical Waste Incinerator- 179**
- **Grossly Polluting Industries (Ganga) - 764**

CPCB issued directions directly to industrial units in July/August 2015 under Section 5 of EP Act.



# *Requirements of System*

## System Requirements

Proposed system should be capable of

1. **Data collection** on Real Time basis without human intervention.
2. Data Collection from any REAL TIME SYSTEM.
3. **Providing data to all stake holders** without delay .
4. Collection of **Performance criteria parameters & Health status**
5. Providing **tamper proof mechanism**.
6. Providing facility for **online calibration** of systems.
7. Providing a system of change request management with recording mechanism **for data validation** purpose.
8. Having **Dashboards** for facilitating SPCBs/PCCs/CPCB intelligent surveillance display for meaningful application of data.
9. Generating **ALERTS** in case of violation of stipulated standards.
10. **Accommodating existing technology based Systems (Digital)** with minimum variation.
11. **Accommodating any new requirements**





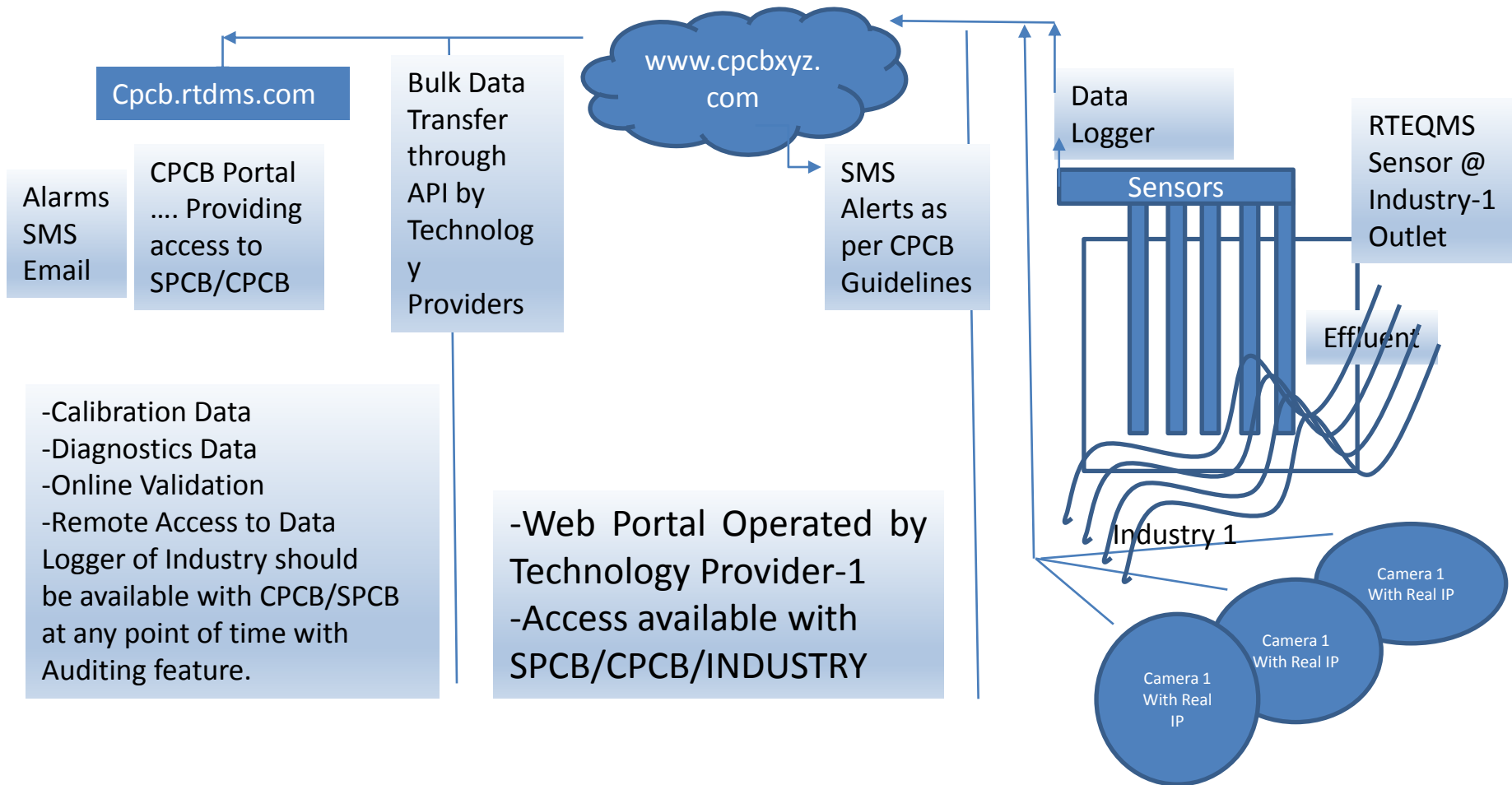
# *Requirements of System*

## System Requirements

12. Continuous **Transfer of Real Time** data for display on industry website & Industry main gate.
13. **Data storage** effortlessly without data loss.
14. Easily Deployable.
15. Creating a **National Database** for Policy & Decision Makers at a single GIS map.



# Schematic of Data Management from Industries



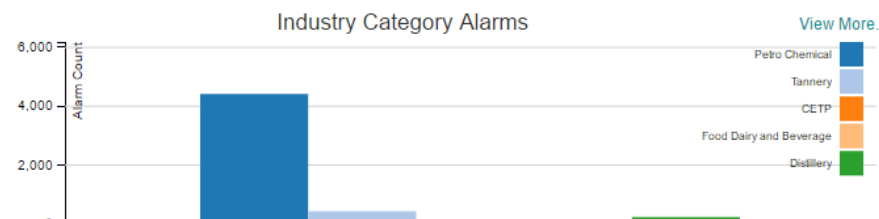
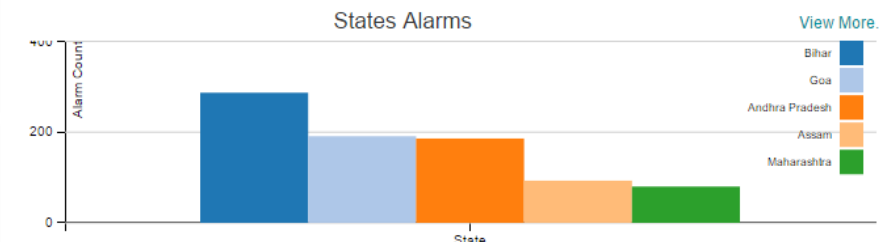
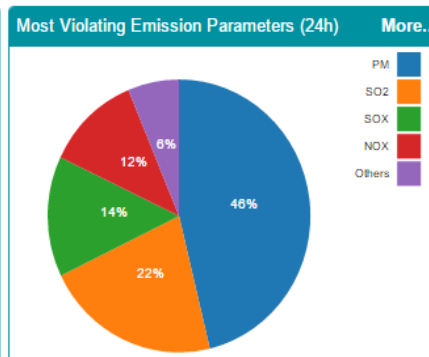
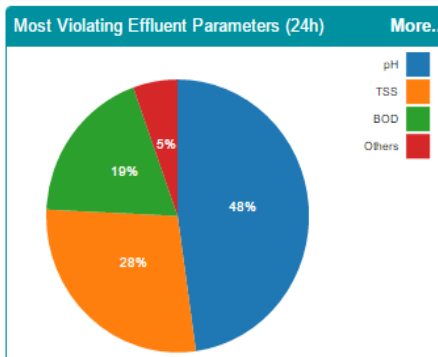
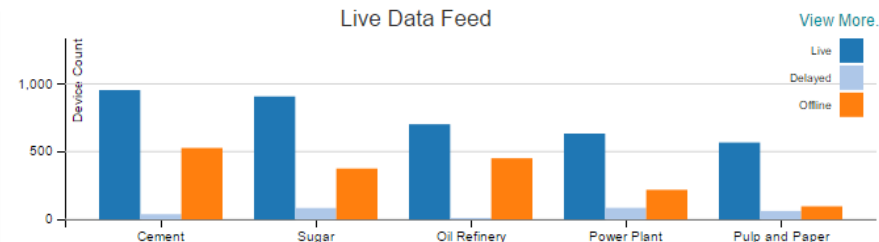
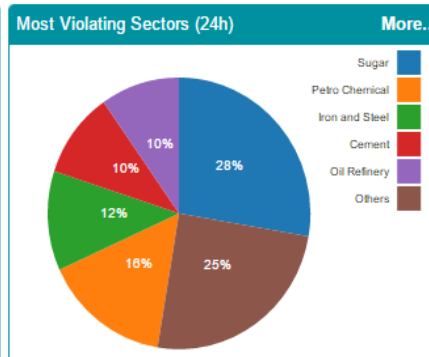
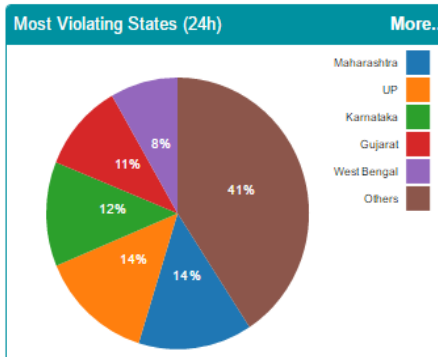


# CPCB – CENTRAL PORTAL

- ✓ Sourced from more than 40 platforms
- ✓ Open API Designed
- ✓ Data on single platform used for compliance verification
- ✓ 2400 industries are on board
- ✓ Category-wise Access to Divisions
- ✓ Various Report formats

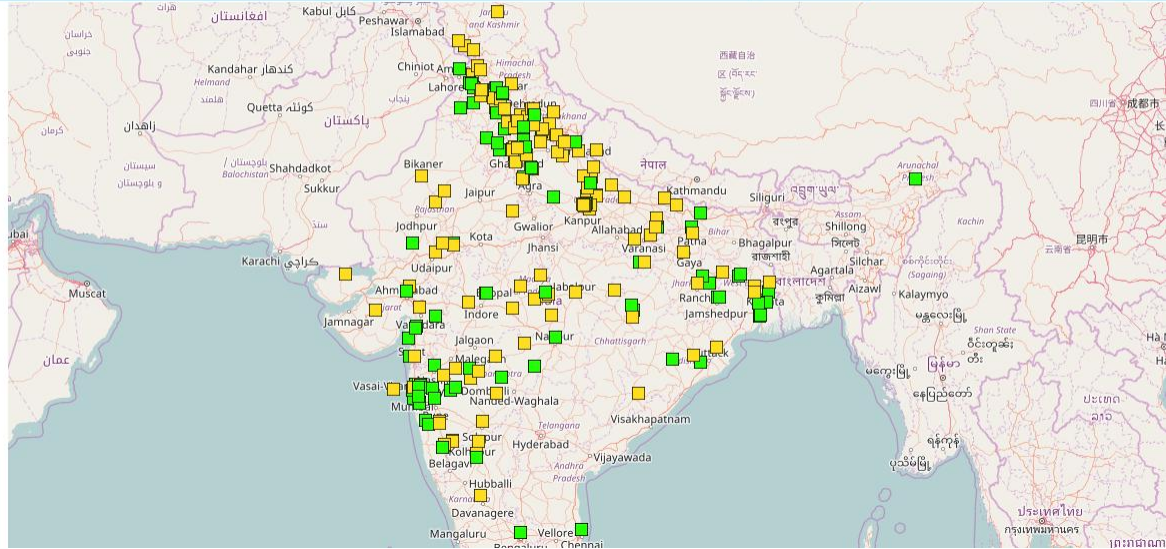
## Scenario of Exceedances

Live Industries 1264 Live Devices 6214 T.Industries 2209 T.Stations 4272 T.Devices 10311





- All India
- Andaman & Nicobar
- Andhra Pradesh
- Arunachal Pradesh
- Assam
- Bihar
- Chandigarh
- Chhattisgarh
- Dadra and Nagar Haveli
- Daman and Diu
- Delhi
- Goa
- Gujarat
- Haryana
- Himachal Pradesh
- Jammu & Kashmir
- Jharkhand
- Karnataka
- Kerala
- Lakshadweep
- Madhya Pradesh
- Maharashtra
- Manipur
- Meghalaya
- Mizoram
- Nagaland



Technological Peripherals

Home | Live Data | Reports | Graphs | Admin | Help | Logout

Welcome CPCB Tue Nov 08 2016 06:28:11 GMT+0530 (India Standard Time)

<ul style="list-style-type: none"> <li>AAQMS2(StationName)                             <ul style="list-style-type: none"> <li>PM10</li> <li>PM2.5</li> </ul> </li> <li>CEMS(StationName)                             <ul style="list-style-type: none"> <li>KILN SPM1</li> <li>KILN SPM2</li> <li>KILN SPM3</li> <li>COOLER SPM1</li> <li>COOLER SPM2</li> <li>COOLER SPM3</li> <li>CPP SPM</li> </ul> </li> <li>Parry Sugars Refinery India Private Limited                             <ul style="list-style-type: none"> <li>ETP_1(StationName)                                     <ul style="list-style-type: none"> <li>Flow</li> </ul> </li> <li>ETP_2(StationName)                                     <ul style="list-style-type: none"> <li>Flow</li> </ul> </li> <li>ETP_3(StationName)                                     <ul style="list-style-type: none"> <li>Flow</li> </ul> </li> </ul> </li> <li>Pattancheru Enviro Tech Ltd(Company)                             <ul style="list-style-type: none"> <li>CEPT(StationName)                                     <ul style="list-style-type: none"> <li>TOC</li> <li>COD</li> <li>TSS</li> <li>...</li> </ul> </li> </ul> </li> </ul>	<table border="1" style="width: 100%; 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# Technical Standards

## Central Pollution Control Board

CPCB

13774

Welcome, CPCB1

### Anand Duplex Ltd Unit-II

ETP Meerut , Andhra Pradesh PULP AND PAPER

←
⏸
→

**Dashboard**

- Live Status
- Dashboard Monitor
- Site Status
- Camera Status
- Workflow Reports
- Data Validation
- Remote Calibration
- Report Setup
- Live Camera Feed
- Exceedance Report
- Transmission Logs
- Other Reports
- Site Setup

### COD

Data fetched at 08-Nov-2016 06:19 Hrs

0

Total Exceedances (in a Week)

1

Monitoring Stations

4

Parameters Monitored

0

Exceeding Parameters

Time Ranges : 1 Day 3 Days 7 Days 30 Days

■ COD - ETP

**Parameters List**

EIP - COD - 101 mg/l  
Standard - 150 mg/l

ETP - TSS - 19 mg/l  
Standard - 30 mg/l

ETP - pH - 6.9 pH  
Standard - 6.5-8.5 pH

**Bhoomi Live : Real Time Environment Data Monitoring**

An ISO 9001:2008 Certified Company

Live Map
CEMS
Data Validations & Comments

bhoomi\_cpcb - Logout
Change Password

Company Name	M/s Mangalam Cement Ltd.
Location	Morak, Rajasthan
Station	Mangalam Cement Ltd.Morak : Emission
Industry Type	Cement
Longitude	24.721167
Latitude	75.959222
Last Update On	08-11-2016 06:15
Date of Station Establishment	
Data from which data is available	

[Advance Search](#)

Parameters	Current	Avg 24 Hrs	Max 24 Hrs
PM - Stack_I_Kiln Main (mg/Nm3)	0.87	9.44	45.03
NOx - Stack_I_Kiln Main (mg/Nm3)	541.73	269.57	454.12
SO2 - Stack_I_Kiln Main (mg/Nm3)	0.2	0.07	0.11
PM - Stack_II_Kiln Main Stack (mg/Nm3)	0.06	0.06	0.07
NOx - Stack_II_Kiln Main Stack (mg/Nm3)	0.89	0.96	2.52
SO2 - Stack_II_Kiln Main Stack (mg/Nm3)	1.63	0.57	0.57
PM - Stack_I_Clinker Cooler (mg/Nm3)	39.96	39.2	45.02
PM - Stack_II_Clinker Cooler (mg/Nm3)	n.o	0.17	0.17
PM - Stack_I_Cement Mill Stack (mg/Nm3)	0.5	0.5	0.5
PM - Stack_II_Cement Mill (mg/Nm3)	0.5	5.52	16.91
PM - Stack_III_Cement Mill (mg/Nm3)	16.77	10.84	17.22
PM - Stack_CPP_1 (mg/Nm3)	34.84	29.57	38.98
PM - Stack_CPP_II (mg/Nm3)	0.08	0.07	0.08

# Effluent Monitoring Systems

# pH Sensor - Electrode

Life one year in normal conditions

ammo::lyser pro

ammo::lyser eco

chlori::lyser

chlodi::lyser

hyper::lyser

peroxy::lyser

condu::lyser

redo::lyser

pH::lyser

fluor::lyser

soil::lyser

oxl::lyser



## pH::lyser

The pH::lyser is a maintenance-free sensor for the real-time measurement of pH and temperature directly in the medium or in a flow-cell. Even under tough conditions (up to 90°C) or in water with very low conductivity long term stability and precise measurement is ensured. The sensor is pre-calibrated ex works and immediately ready.

pH::lyser eco monitors pH & temperature

pH::lyser pro: high temperature and pH range

- s::can plug & measure
- measuring principle: unique, non-porous / non-leaking combined reference electrode for technically unrivalled and consistent pH performance
- multiparameter sensor
- ideal for surface water, ground water, drinking water and waste water
- long term stable and maintenance free in operation
- factory precalibrated
- mounting and measurement directly in the media (InSitu) or in flow cell
- operation via s::can terminals & s::can software
- optional: automatic cleaning with compressed air

# Optical Sensor Life : 3-5 Years



# Spectrophotometer UV Visible BOD,COD Measurement

spectro::lyser

l::scan

carbo::lyser

multi::lyser

nitro::lyser

ozo::lyser

sulfi::lyser

uv::lyser



## spectro::lyser

The spectro::lyser™ measures the entire absorption spectrum and is used by many drinking water providers all over the world as a pivotal component in their raw water monitoring. The spectro::lyser™ with its capability to measure and analyze the absorption spectrum in its entirety allows detection of a multitude of organic substances.

spectro::lyser™ UV monitors depending on the application an individual selection of: NO<sub>3</sub>-N, COD, BOD, TOC, DOC, UV254, NO<sub>2</sub>-N, BTX, AOC, fingerprints and spectral alarms, temperature and pressure.

spectro::lyser™ UV-Vis monitors depending on the application an individual selection of TSS, turbidity, NO<sub>3</sub>-N, COD, BOD, TOC, DOC, UV254, color, BTX, O<sub>3</sub>, H<sub>2</sub>S, AOC, fingerprints and spectral-alarms, temperature and pressure.

- s::can plug & measure
- measuring principle: UV-Vis spectrometry over the total range (200-750 nm or 200-390 nm)
- multiparameter probe with adjustable open path length
- ideal for surface water, ground water, drinking water and waste water
- long term stable and maintenance free in operation
- factory precalibrated, local multi-point calibration possible
- automatic cleaning with compressed air
- mounting and measurement directly in the media (InSitu) or in flow cell (monitoring station)
- operation via s::can terminals & s::can software
- recommended by and compliant with public authorities and international agencies such

# Station for Waste Water

micro::station for drinking water

micro::station for waste water

nano::station



## micro::station for waste water

The s::can micro::station for waste water is designed for online monitoring of water quality parameters in waste water. The required components – spectro::lyser, s::can probes and controller - are factory assembled with all required flow cells, mounting fittings and pipes on a compact panel.



The fully modular micro::station combines s::can instruments to a compact and versatile system. It presents a complete solution, as the user only has to connect water supply and -discharge ("plug & measure") in order to receive at no extra cost a previously unheard variety of immediately available information and parameters.

# Software Module



## con::cube

con::cube - a compact, versatile terminal for data acquisition and station control. Newest processor technology and very flexible options for interfacing to SCADA or any central database systems makes the con::cube in combination with moni::tool a powerful terminal for compact station control.



The extended input options for almost any sensor, analyzer and other analogue or digital I/Os result in a very comprehensive way of signal monitoring, processing and data management. Due to its low power consumption this terminal fits the requirements for the operation in remote installations powered by solar panels.

- latest generation of s::can operator terminal
- high-performance, power efficient industrial PC based on newest Intel Atom technology
- wide screen color graphical display (7") and touch screen
- highly intuitive use, touch-and-feel like a cell phone; iconographic operation



## moni::tool

moni::tool is a revolutionary new platform for the management of an almost unlimited number of stations, online probes, analyzers and parameters. Intuitive operation - on site or remote - and reams of valuable features make moni::tool essential for state of the art sensor and station management.

Click to try moni::tool!



Visit [moni-tool.at](http://moni-tool.at) for more information!

CPCB/SPCB/INDUSTRY



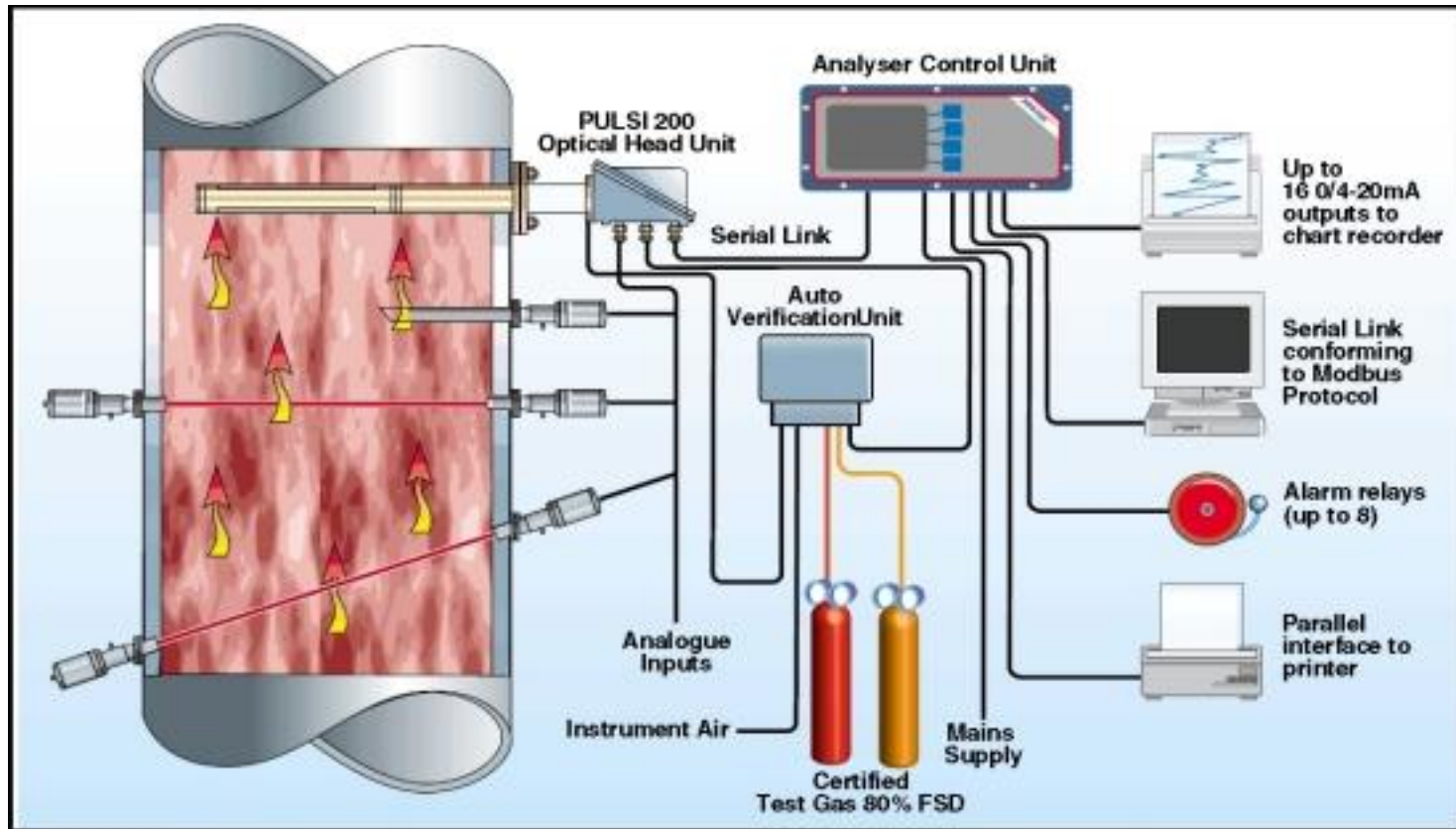
# Emission Monitoring Systems



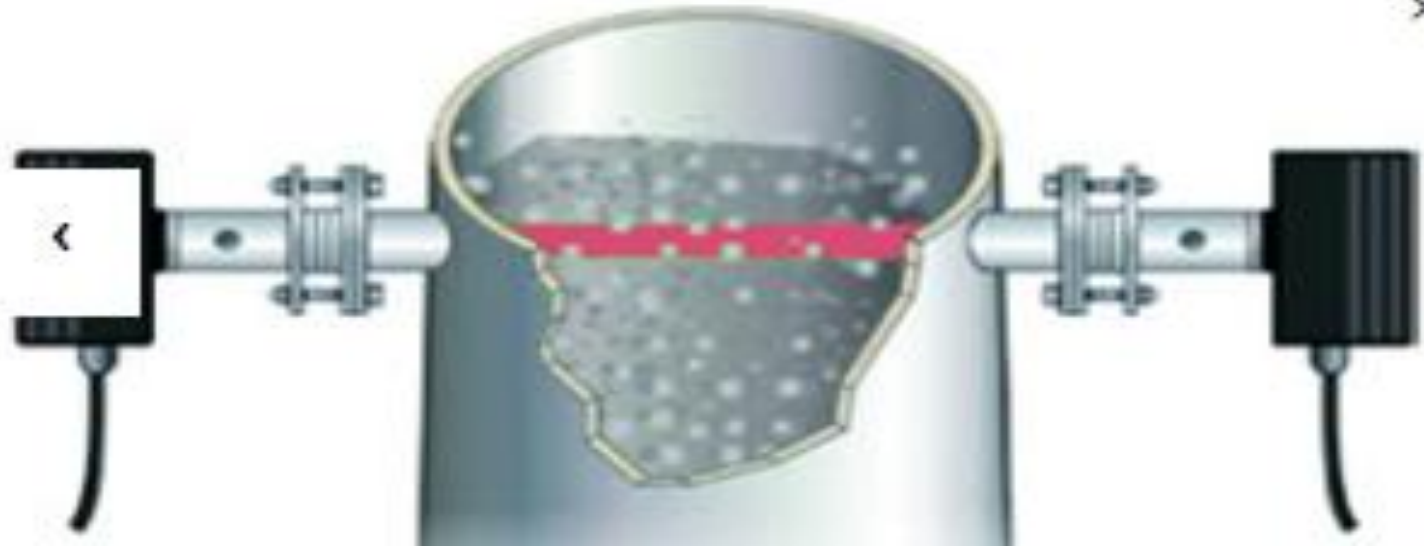
# Methods

- In situ
  - Continuous
  - Non Continuous
- Extractive

# Stack Emission Monitoring



# In Situ- Cross Duct Gas Monitor



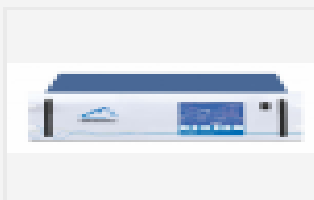
- LAS300XD-HF for Hydrofluoric acid (HF) and water (H<sub>2</sub>O) monitoring
- LAS300XD-HCl for hydrochloric acid (HCl) and water (H<sub>2</sub>O) monitoring
- LAS300XD-NH<sub>3</sub> for ammonia (NH<sub>3</sub>) and water (H<sub>2</sub>O) monitoring
- LAS300XD-O<sub>2</sub> for Oxygen monitoring

# Portable Analysers

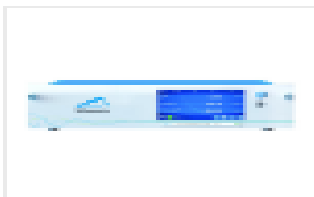




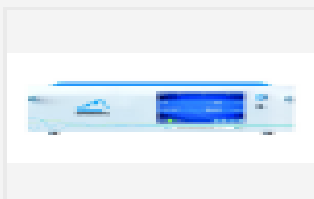
# DILUTION BASED STATIONARY MONITORING SYSTEMS



**AC32M. NITROGEN OXIDES ANALYZER (NO, NOX, NO2)**  
Chemiluminescence technology based, TÜV & US EPA approved



**AF22E. NEW E-SERIES SO2 ANALYZER**  
UV Fluorescent sulfur dioxide analyzer AF22e, TÜV certified compliance with ISO 10498, 2008/50/EC, EN 14212, EN 15266 and SUB C



**CO12E. NEW E-SERIES CO ANALYZER**  
Non dispersive Infra Red carbon monoxide analyzer CO12e, approved for compliance with ISO 4224, EN 14626, EN 15266 and SUB C



**DILUTION SYSTEM**  
Multigas dilution system



**MS1 PROBE**  
Dilution-based Stack gas sampling system

# Some Specialised Technologies

## **FTIR: Fourier Transform Infra Red Spectroscopy**

### Advantages:

Analysers capable of measuring Multi Component (50 determinants).

Fewer interferences than IR

Does not require frequent calibration.

Typically have a range of 2.5 to 25  $\mu\text{m}$ .

### Disadvantages

Difficulty in obtaining a representative background

Generation of large amounts of data from interferograms when continuous emission monitoring

Real time FTIR analyzer: supplied by Applitek, Venecoweg, Nazareth, Belgium.





# Certifications

- MCERTS
- TUV
- US-EPA

**Parameters for online monitoring as per Guidelines****Annexure-1**

SI No	Category	Effluent Parameters	Emission Parameters
1.	Aluminium	pH, BOD, COD, TSS, Flow	PM, Fluoride
2.	Cement	-	PM, NO <sub>x</sub> , SO <sub>2</sub>
3.	Distillery	pH, BOD, COD, TSS, Flow	PM
4.	Dye and dye intermediate	pH, BOD, COD, TSS, Cr, Flow	-
5.	Chlor Alkali	pH, TSS, Flow	Cl <sub>2</sub> , HCl
6.	Fertilizers	pH, flow, Ammonical Nitrogen, Fluoride	PM, Fluoride, Ammonia
7.	Iron & steel	pH, Phenol, cyanide, flow	PM, SO <sub>2</sub>
8.	Oil refinery	pH, BOD, COD, TSS, flow	PM, CO, NO <sub>x</sub> , SO <sub>2</sub>
9.	Petrochemical	pH, BOD, COD, TSS, flow	PM, CO, NO <sub>x</sub> , SO <sub>2</sub> ,
10.	Pesticides	pH, BOD, COD, TSS, Cr, As, flow	-
11.	Pharmaceuticals	pH, BOD, COD, TSS, Cr, As, flow	-
12.	Power Plants	pH, TSS, Temperature	PM, NO <sub>x</sub> , SO <sub>2</sub>
13.	Pulp & paper	pH, BOD, COD, TSS, AOx, flow	-
14.	Sugar	pH, BOD, COD, TSS, flow	-
15.	Tannery	pH, BOD, COD, TSS, Cr, flow	-
16.	Zinc	pH, TSS, flow	PM SO <sub>2</sub>
17.	Copper	pH, TSS, flow	PM SO <sub>2</sub>
18.	Textile(GPI)	pH, COD, TSS, flow	-
19.	Diary(GPI)	pH, BOD, COD, TSS, flow	
20.	Slaughter House	pH, BOD, COD, TSS, flow	

# SECTOR-WISE INSTALLATION DETAILS FOR INDUSTRIES

[Home](#) | [APPs by CPCB](#) | [Jobs](#) | [Tenders](#) | [Publications](#) | [Annual Reports](#) | [New Reports](#) | [Contact](#)


**Central Pollution Control Board**  
 Ministry of Environment, Forest & Climate Change  
 (Govt of India)

[Hindi](#) | [About](#) | [Infrastructure](#) | [Programmes/Projects](#) | [Environmental Standard](#) | [Environmental Data Statistics](#) | [Right To Information](#)

[Other Directions issued by CPCB](#) | Your are here : [Home](#) | [Online-Monitoring](#)

New Directions Uploaded on 29-06-2017  
 New Directions Uploaded on 17-06-2017 [Part - I](#) [Part - II](#) [Part - III](#)

**ONLINE MONITORING OF INDUSTRIAL EMISSION AND EFFLUENT**

**Real time Data**  
 Air Water Noise

**CPCB**  
 [ HIGHLIGHTS ]  
**Catch CPCB**  
 [ NEWSLETTER ]

**NEW** List of Closure Directions issued by CPCB due to non installation of OGMs / not connected

List of Non-Complying Units-CPCB Crash Inspections

Directions issued by CPCB under Section 6 of EPA, 1986 to All Common Effluent Treatment Plant

Judgement of Hon'ble High Court of A.P. and Telangana on ONLINE Emission & Effluent Monitoring

Industries to upload compliance information on online monitoring [HELP](#)

[Closure / Revoked / Modified / Showcause Directions \(under 17 category / GPI category\) issued by CPCB](#)

- FREQUENTLY ASKED QUESTIONS
- LIST OF REVISED PARAMETERS
- ONLINE CEM & DATA SUBMISSION PROCEDURE AT CPCB
- FORMAT TO BE SUBMITTED ALONGWITH A REQUEST FOR REVOKING CLOSURE DIRECTIO
- NEW** CLARIFICATIONS ON ONLINE MONITORING


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 (Govt of India)

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[Directions issued by CPCB](#) | Your are here : [Home](#) | [Online-Monitoring](#)

**Real time Data**  
 Air Water Noise

**CPCB**  
 [ HIGHLIGHTS ]  
**Catch CPCB**  
 [ NEWSLETTER ]

- ONLINE MONITORING OF INDUSTRIAL EMISSION AND EFFLUENT**
1. Aluminium  
 2. Cement  
 3. Chlor Alkali  
 4. Copper  
 5. Dye/Textile  
 6. Dye & Dye Intermediates  
 7. Fertilizer  
 8. Iron & Steel  
 9. Oil Refinery  
 10. Pesticides  
 11. Petrochemical  
 12. Pharmaceuticals  
 13. Power plant  
 14. Pulp & Paper  
 15. Sugar  
 16. Tannery  
 17. Zinc

1. "This is to reiterate the directions issued to the industries, GPI units and common facilities, wherein the parameters identified for online monitoring under each category have been specified. Further required information has also been provided in the form of FAQs and document on online data submission at CPCB. The check-lists category-wise are provided here for the information of the representatives of industries/facilities."

## Status of CEMS Installation & Connectivity with Server (as on 06-06-2017)

Sr No	CATEGORY	No of Directions	Exempted	No. of Units (target)	CLOSURE ISSUED/SELF CLOSED Before 28th feb, 2017	OCMS INSTALLED	CONNECTIVITY WITH SERVER	Confirmed closure directions issued after 28th Feb, 2017 due to non-installations of OCEMS/Not Connected	Closure directions being issued after 28th Feb, 2017 due to non-installations of OCEMS/Not Connected ( verification under process)	Data Validation		
										Direction - exempted	F3+H3+I3+J3	Error Status
1	Refineries	23	0	23	1	23	22	1	0	23	24	Error
2	Fertilizer	110	4	106	26	80	75	5	0	106	106	OK
3	Dyes	133	25	108	36	72	66	6	0	108	108	OK
4	Pharmaceutical	663	73	590	119	471	426	45	0	590	590	OK
5	Pesticide	95	30	65	12	53	53	0	0	65	65	OK
6	Caustic	35	0	35	2	33	32	1	0	35	35	OK
7	Petrochemical	41	5	36	7	29	27	2	0	36	36	OK
8	Power	317	8	309	0	251	231	45	0	309	276	Error
9	Aluminum	14	0	14	2	12	11	1	0	14	14	OK
10	Copper	6	3	3	0	3	3	0	0	3	3	OK
11	Zinc	5	0	5	2	3	3	0	0	5	5	OK
12	Steel	290	43	247	53	170	149	45	0	247	247	OK
13	Cement	330	19	311	97	208	199	1	14	311	311	OK
14	Sugar	602	0	602	243	359	411	11	0	602	665	Error
15	Pulp & paper	246	6	240	65	173	171	4	0	240	240	OK
16	Distillery	347	32	315	117	198	172	26	0	315	315	OK
17	Tannery	119	5	114	32	62	62	20	0	114	114	OK
	<b>TOTAL</b>	<b>3376</b>	<b>253</b>	<b>3123</b>	<b>814</b>	<b>2200</b>	<b>2113</b>	<b>213</b>	<b>14</b>	<b>3123</b>	<b>3154</b>	<b>Error</b>

\* Case is being filed in Hon'ble NGT against 35 Thermal Power Plants. 02 TPPs out of these 35 have provided connectivity to CPCB server.

# Management of Real Time Emission & Effluent Data from Industries



## Registration of Industry by Industry

Portal at CPCB Website

CPCB is Managing Database of Industries @ Industry Registration Portal

Request are sent from Industries for Configuration for connectivity of device for data transfer through Technology Providers after providing connectivity at temporary server.

TP are evaluated by IT division again and again for Improvement in their portal

CPCB provides correct configuration to parameters to be connected by the industry based on CTC information and Fix up standard limit of each parameter in each station/process @ Industry.

Limits can be made stringent by SPCB but can not be relaxed.

Industry Data connectivity verified from Technology Provider portal

Industry Data configuration from TP portal to CPCB central portal by IT Div

TP start pushing data through API

Dissemination of Data

Displaying Slide Show

1. 17 Category industries
2. In Ganga River Industries

Mobile Apps


1. Ganga Shravan App

Data access to all  
CPCB/SPCBs/PCCs/PMO

# Registration at CPCB

- ❑ Every Industrial Unit to Register
- ❑ Provide information on
  - Category
  - State
  - Industry Code
  - Falling in Ganga Basin ?
  - Details of officials
  - Bank Gurantee
  - Online CEMS – devices
  - CPCB & SPCB URLs

## Registration



Central Pollution Control Board  
Parivesh Bhawan, East Arjun Nagar,  
Delhi 110032, India

Name<sup>\*</sup>

Email Id<sup>\*</sup>

Mobile<sup>\*</sup>

# Registration at CPCB

116 Out of 2183 units in Karnataka

261 total Sugar Mills – 30 in Karnataka



Central Pollution Control Board  
Parivesh Bhawan, East Arjun Nagar,  
Delhi 110032, India

PRINT

Search Reset Search

-All Categories-

Karnataka

By Status Enable

Filter

Show Statistics

Total: 116

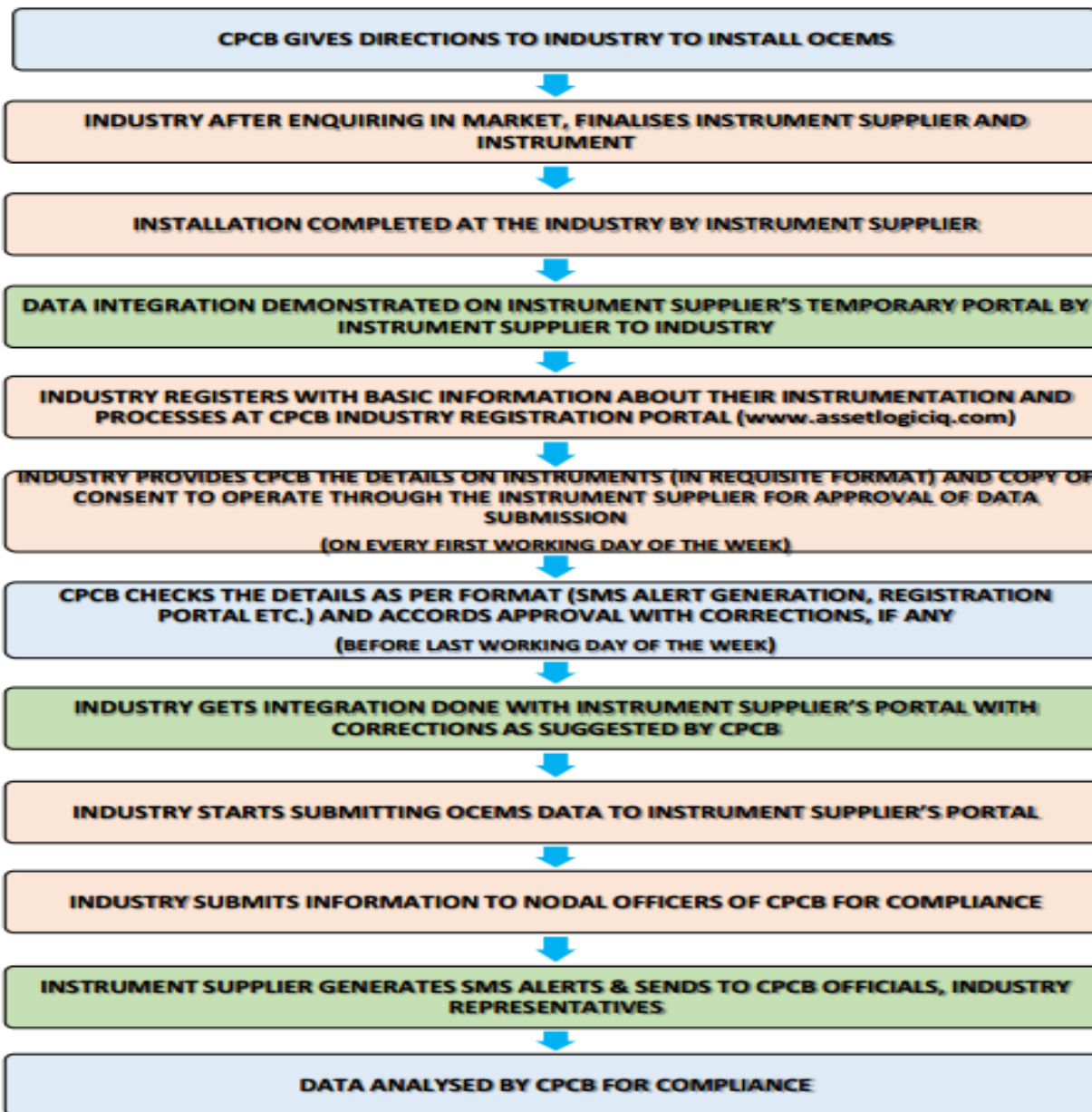
S.No	Code	Industry Name	Industry Category	Address	City	State	Stage	Status	Created On	Enable Edit	Action
1	01KA003	HINDALCO, Indian Aluminum Company Limited	Aluminium	P.B-1, Belgaum-590 010.	Belgaum	Karnataka	submitted	ENABLED <a href="#">Click to Disable</a>	Aug 16, 2015 6:22:58 PM	<input type="checkbox"/>	<a href="#">View Details</a> <a href="#">  Edit Industry</a>
2	02KA125	South India Cements	Cement	No.67, Malkhed village, Gulbarga.	Gulbarga	Karnataka	saved	ENABLED <a href="#">Click to Disable</a>	Oct 26, 2016 9:58:31 PM	<input checked="" type="checkbox"/>	<a href="#">View Details</a>
3	Not Assigned	Shree Keshav Cements And Infra Ltd	Cement	Sy No - 346, A/P Kaladagi, Tq & Dist Bagalkot	Kaladagi	Karnataka	submitted	ENABLED <a href="#">Click to Disable</a>	Jul 20, 2016 7:38:02 AM	<input type="checkbox"/>	<a href="#">View Details</a> <a href="#">  Edit Industry</a>
4	Not Assigned	Chettinad Cement corporation Limited	Cement	Chettinad Cement corporation Limited Kallur works, Sangam K Village Chincholi tq Kalaburagi Dist Karnataka	Kallur	Karnataka	saved	ENABLED <a href="#">Click to Disable</a>	Apr 2, 2016 8:39:23 PM	<input checked="" type="checkbox"/>	<a href="#">View Details</a>
5	Not Assigned	Chettinad Cement corporation Limited	Cement	Chettinad Cement corporation Limited Kallur works Sangam K Village Chincholi Tq Kalaburagi Dist Karnataka	Kallur	Karnataka	submitted	ENABLED <a href="#">Click to Disable</a>	Mar 30, 2016 5:40:00 PM	<input type="checkbox"/>	<a href="#">View Details</a> <a href="#">  Edit Industry</a>



# MECHANISIM FOR DATA SUBMISSION TO CPCB



## PART-I



LIMITS ARE SET FOR EACH STACK/EFFLUENT PARAMETER AS PER CONSENT

Action by CPCB

Action by Instrument Suppliers

Action by Industry

## MECHANISIM FOR DATA SUBMISSION

### PART-II

DATA IS AVAILABLE AT DIFFERENT INSTRUMENT SUPPLIERS PORTALS



INSTRUMENT SUPPLIER PUSHES DATA TO CPCB CENTRAL PORTAL THROUGH STANDARDISED API  
(APPLICATION PROGRAMMING INTERFACE)



SMS WILL BE GENERATED THROUGH CENTRAL PORTAL OF CPCB ONCE COMPLETE DATA  
INTEGRATION TAKES PLACE (AS OF NOW 1200 INDUSTRIES ARE INTEGRATED)

Action by instrument suppliers

Action by CPCB

Action by Industry

# HOME PAGE FOR WEB CAMERA AND FLOW DATA

CPCB LOGO

Online Continuous Emission/Effluent Monitoring Site

Technology Provider's  
Name with Logo

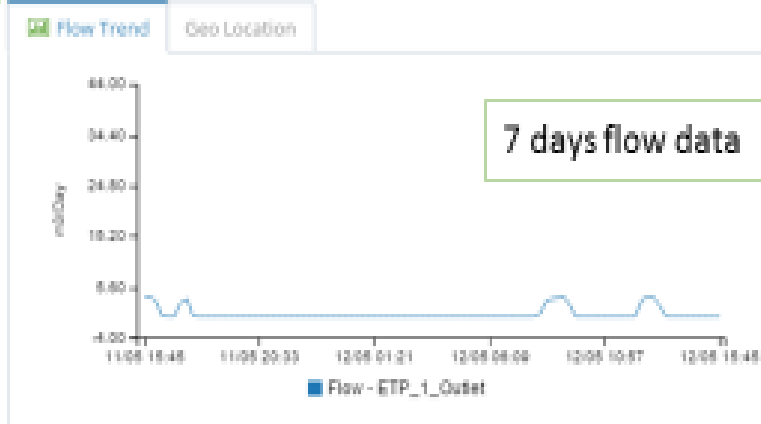
## Camera status

Industry Name , Complete Address(including Contact no. &Email-ID)

Category



CAMERA DETAILS



Current Value of  
FLOW

25.0

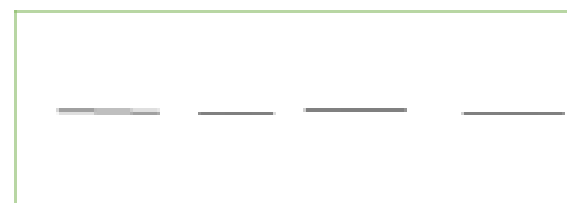
Limit  
30

Data Connection Strength

Color Code	Connectivity
Green	Leased Line
Orange	Broad Band
Red	Data Card

Connection Strength

52% Data Available  
(Through NVR)



NVR CONTROL

# CENTRAL POLLUTION CONTROL BOARD Online Effluent and Emission Monitoring System

**A.V. International** Tannery **Bhadurgarh, Haryana**

Data last received on: 2017-06-07 18:15:00:00

**Stations**

1

**Parameters**

4

**Parameters exceeded (24 hrs)**

1

**SMS generated in last 7 days**

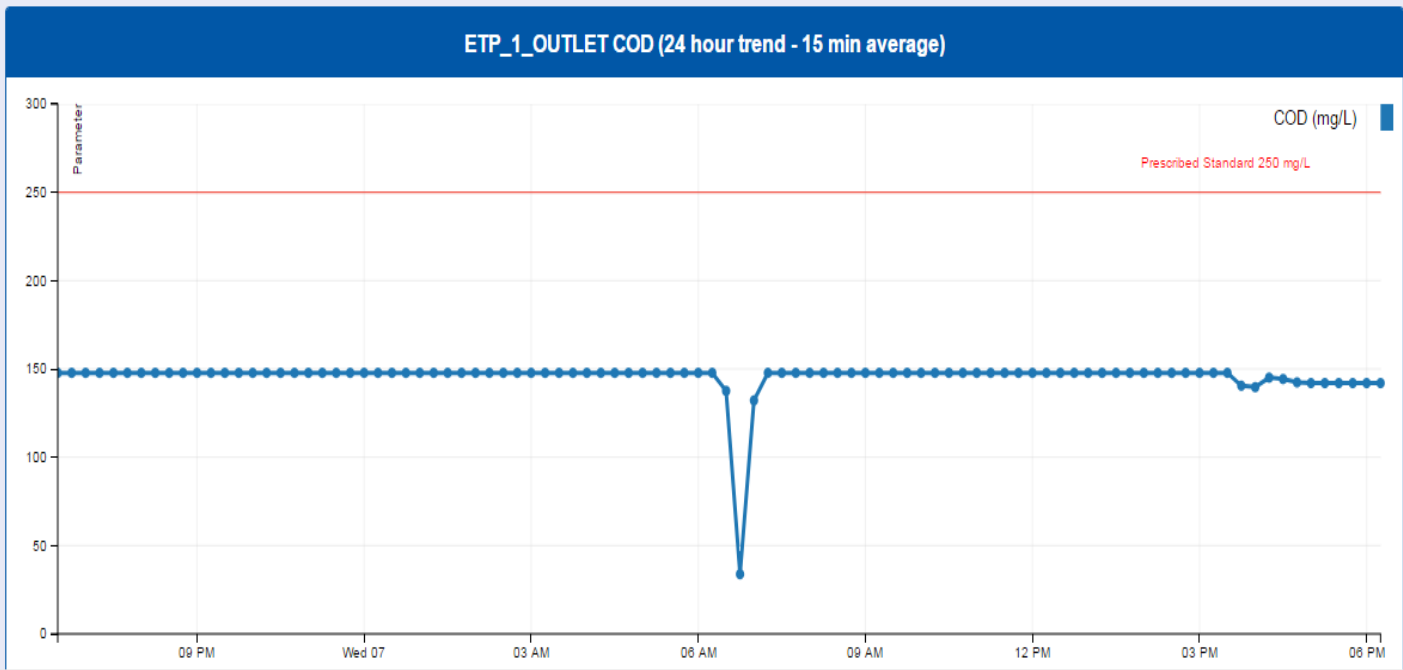
6

**ETP\_1\_OUTLET**

**COD**

142 mg/L

BOD	20.8 mg/L
TSS	28.9 mg/L
pH	7.9
COD	142 mg/L





# Central Pollution Control Board



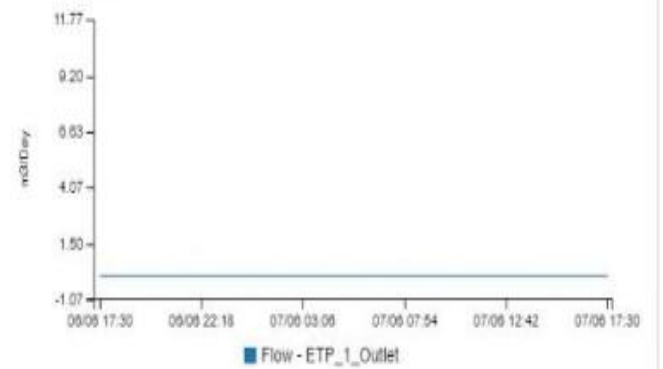
Welcome, CPCB\_EZ

- Dashboard
- Live Status
- Dashboard Monitor
- Site Status
- Camera Status
- Workflow Reports
- Data Validation
- Remote Calibration
- Report Setup
- Exceedance Report
- Transmission Logs
- Other Reports
- Report Download
- Site Setup



## Flow Trend

## Geo Location



## Industry Details

Industry Category: DRUGS AND PHARMACEUTICALS  
Industry Name: Mahima Life Science Pvt Ltd  
Industry Location: Ganaur  
Monitored Area: ETP\_1\_Outlet  
Camera Location: ETP\_1\_Outlet

## Camera Details

Camera Make: Sony  
Camera Model No: Sony  
PTZ: Yes  
10x Zoom: Yes  
Night Vision: Yes  
IP Camera: Yes  
Connectivity Type: Broadband  
Bandwidth Available: < 1 Mbps



Thanks