

Review Meet on



Compliance of Real-Time Monitoring Technology by Industries & Data Integrity

May 28th, 2018

Chronology of RTM

- July 2010 RTM of industries on 24x7 basis was discussed during Chairmen-MS conference.
- February 2011 Sensitisation programme launched for industries to set up RTM instruments.
- February 2014 Directions issued by CPCB for self monitoring of compliance by 17 types industries, CETPs, CTSDF, BMW incineration facilities.
- August 2014 Directions issued by MPPCB for installation and connectivity of RTM systems with MPPCB and CPCB.
- Dec 2014 MPPCB sought ATR from industries against the directions issued in August 2014.
- Dec 2014 Review meeting convened at HQ MPPCB to see the compliance status. Total 93 industries attended.

RTM Tools

- * Continuous Emission Monitoring System (CEMS)
- * Continuous Ambient Air Quality Monitoring System (CAAQMS)
- * Continuous Effluent Quality
 Monitoring System (CEQMS)
- * IP-PTZ-Camera
- * Flow Monitor

Target Sectors (CEQMS)

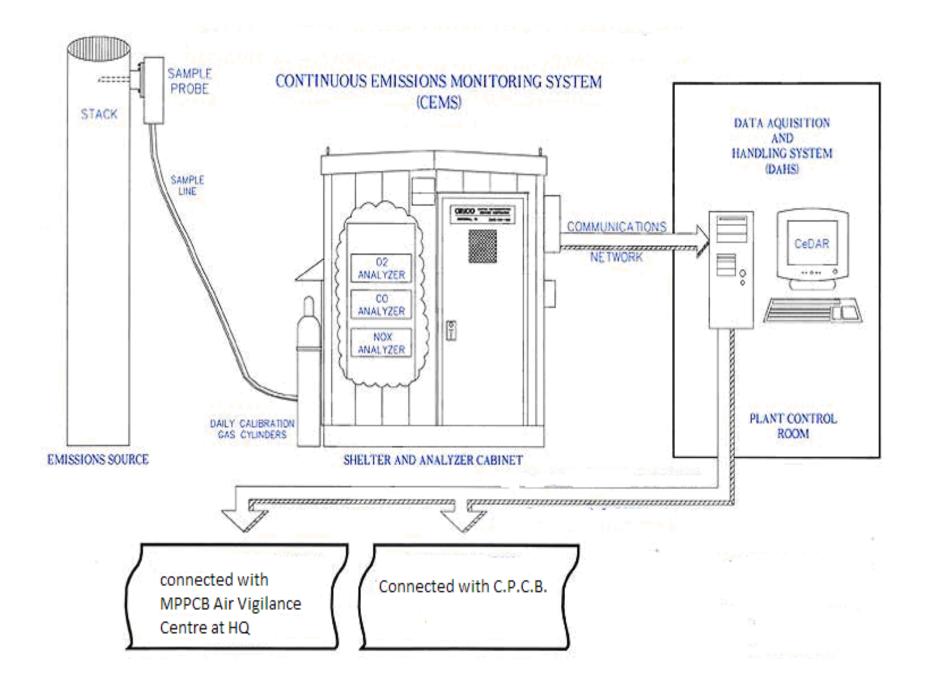
Sr.	Sectors	Parameters
1	Aluminium	pH, BOD, COD, TSS, Flow
2	Copper	pH, TSS, Flow
3	Chlor Alkali	pH, TSS, Flow
4	Distillery	pH, BOD, COD, TSS, Flow
5	Dye & dye intermediates	pH, BOD, COD, TSS, Cr, Flow
6	Fertilizers	pH, N-NH ₃ , Fluoride, Flow
7	Iron & Steel	pH, Phenol, Cyanide, Flow
8	Oil Refinery	pH, BOD, COD, TSS, Flow
9	Petrochemicals	pH, BOD, COD, TSS, Flow
10	Pesticides	pH, BOD, COD, TSS, Cr, As, Flow

Target Sectors (CEQMS) Contd.....

Sr.	Sectors	Parameters
11	Pharmaceuticals	pH, BOD, COD, TSS, Cr, As, Flow
12	Power Plants	pH, TSS, Temperature
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
17	Dairy	pH, BOD, COD, TSS, Flow
18	Slaughter House	pH, BOD, COD, TSS, Flow
19	Textile	pH, COD, TSS, Flow

Target Sectors (CEMS)

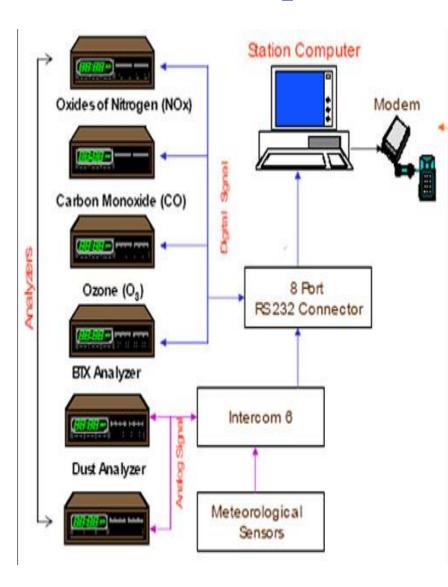
Sr.	Sectors	Parameters
1	Aluminium	PM, Fluoride
2	Cement	PM, SO ₂ , NOx
3	Copper	PM, SO ₂
4	Chlor Alkali	Cl ₂ , HCl
5	Distillery	PM
6	Fertilizers	PM, NH ₃ , Fluoride
7	Iron & Steel	PM, SO ₂
8	Oil Refinery	PM, SO _{2,} NOx, CO
9	Petrochemicals	PM, SO _{2,} NOx, CO
10	Power Plants	PM, SO _{2,} NOx
11	Zinc	PM, SO ₂



CAAQM Station



CAAQM Components



CEQMS



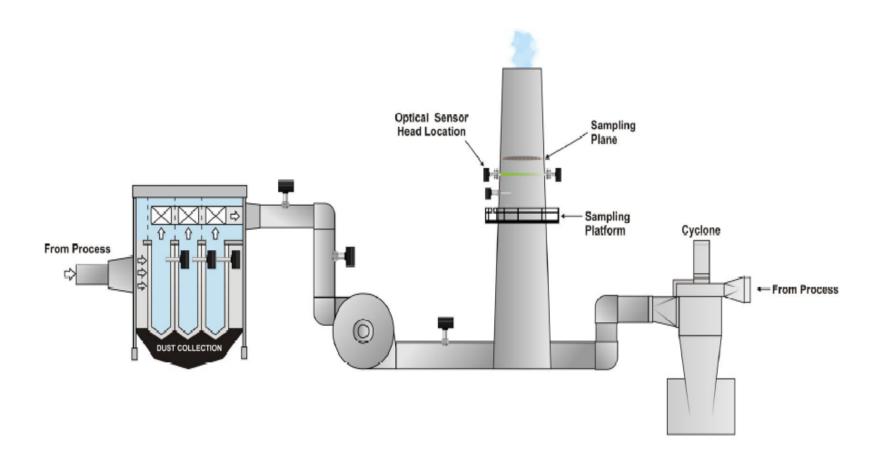
IP_Camera







CEMS location



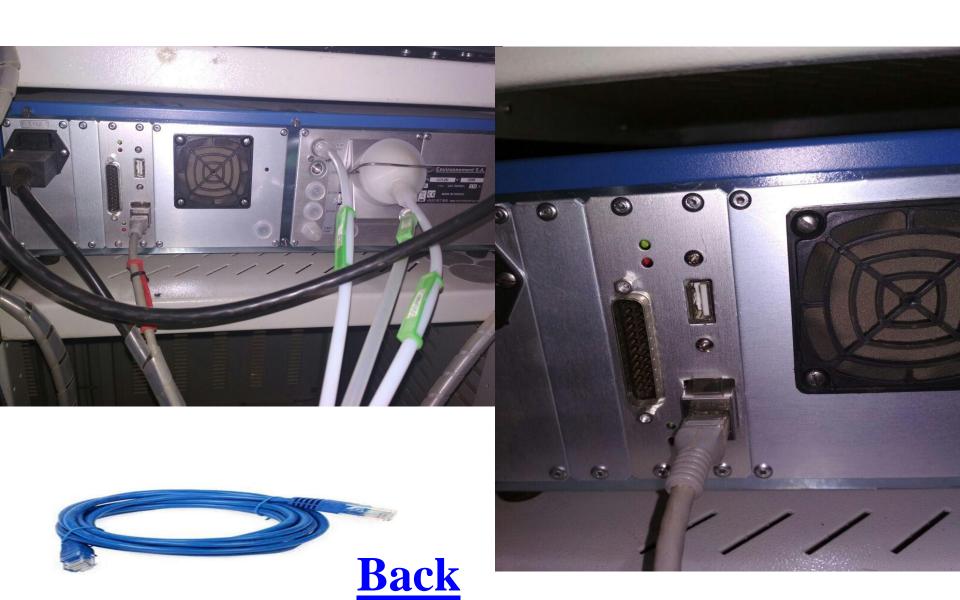
Positions to be considered for installation of Particulate Monitors

500 mm above iso-kinetic sampling port with proper logistic support

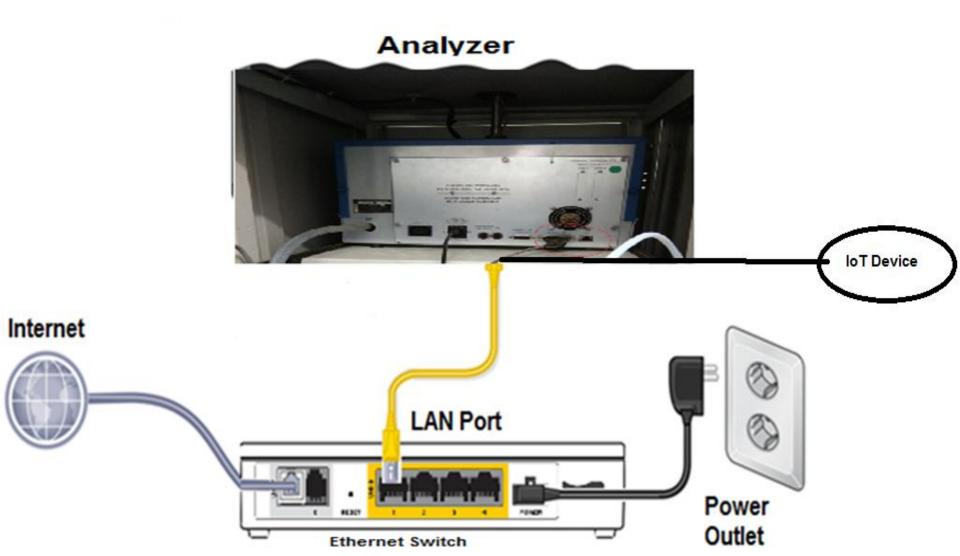
Connectivity on Serial Port



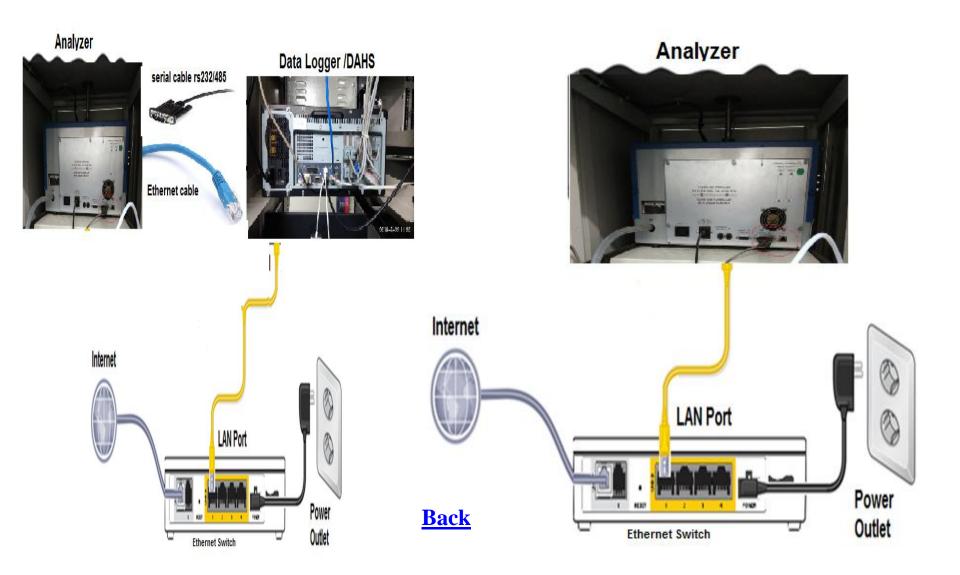
Connectivity on Ethernet Port



Proposed Architecture Present Architecture



Present v/s Proposed Architecture



Approvals

- USEPA approved Technology/Methods.
- TUV & MCERTS Certification.
- Indigenous instruments not confirming USEPA/TUV/ MCERTS standards need to demonstrate performance to NPL, New Delhi.
- Performance period 1 month.
- Expenses to be borne by Manufacturer.
- Testing shall be as per procedure laid down by CPCB.

Gaseous Analyzer Calibration

- Calibration w.r.t. their functioning, drift, linearity, detection limit, output, operating temp and other related parameters.
- Data capture rate >85%.
- Instruments must have provision for remote calibration.
- To be rechecked after 6 months, or after major repair or change of parts, using SM and SRM with atleast 3 span conc.
- Data comparison/calibration verification on quarterly basis by CPCB empanelled laboratories.
- Zero and span drift to be checked every Friday at 10 am.
- Zero drift to be checked daily at 10 am.
- DOAS/NDUV/NDIR instruments to be revalidated quarterly.
- Lamp Intensity to be checked fortnightly.

Particulate Analyzer Calibration

- To be calibrated at different operational loads against isokinetic sampling method every six months.
- Results to be compared fortnightly (Friday) at 10 am with standard isokinetic sampling method.
- Recalibration needed if deviation in value is >10%.
- Data capture rate >85%.
- Lamp Intensity to be checked fortnightly.
- Verification of data to be done by CPCB empanneled laboratory at specified frequency.

Effluent quality monitoring

- Calibration w.r.t. their functioning, drift, linearity, detection limit, output, operating temp and other related parameters.
- To be rechecked after 6 months, or after major repair or change of parts, using SM and CRM with atleast 3 span conc.
- Comparison of values fornightly on Friday at 10 am using SM and SRM.
- Verification of data to be done by CPCB empanneled laboratory at specified frequency.
- Accuracy for COD, BOS and TSS will be 10% from the real value while for pH 0.2%.
- Data capture rate >85%.

Sampling location - Water

- Analysers to be installed in defined channel with no turbulence or eddy current.
- In case of mixing of 2 streams the device should be installed after proper mixing of streams.
- Ensure no flow obstruction while installing multiple sensors.
- Verification of data to be done by CPCB empanneled laboratory at specified frequency.
- > Allowed variability is 10% for most parameters, except for pH.
- > ZLD industries are exempted.

IP_Camera

- > It must be an Internet Protocol (IP) camera with PTZ facility,
- Focal length 5x or above,
- ➤ Night vision capability,
- ➤ Public static IP address for camera
- > 2 mbps dedicated internet bandwidth,
- > Camera to be equipped with 2 TB SDXC card,
- ➤ Power back-up facility for camera,
- ➤ Installation should be at strategic locations of interest,
- Camera remote control features to be provided to the MPPCB.

Wrong value of parameter

SMS ALERT FROM MPPCB

ALERT: EMISSION Industry Name:

Narsingarh, Narsingarh

CATEGORY: Cement Industry

LOCATION: AAQMS4

EXCEEDING PARAMETER: PM

10 VALUE: 114E: 700.0 against

Pres. Stand. 60.0 ?g/m3 DATE:

Thursday 15-Dec-2016 13:30:15

PM Respond at ercmppcb@nic.in

Overlapping of Parameters

SMS ALERT FROM MPPCB

ALERT:EMISSION Industry Name:

Essar Power, Madhya pradesh

CATEGORY: Power Plants

LOCATION: AAQMS1-Admin

EXCEEDING PARAMETER: SO2

VALUMETER: PM 10 VALUE:

239.0 against Pres. Stand. 100.0

?g/m3 DATE: Saturday 24-Dec-

2016 14:57:56 PM Respond at

ercmppcb@nic.in

Overlapping of Parameters

SMS ALERT FROM MPPCB
ALERT:EMISSION Industry Name:
Hindalco,singrauli CATEGORY:
Aluminium LOCATION: AAQMS1
EXCEEDING PARAMETER: PM
2.5 VALUE: 800.0 againMETER:
PM 10 VALUE: 252.0 against Pres.
Stand. 100.0 ?g/m3 DATE: Sunday
01-Jan-2017 18:57:55 PM
Respond at ercmppcb@nic.in

Encrypted SMS!

é@¥ \$£&M)(H,J) #tYè5!P!P dΠ%TÑ1ΘÆNΓΟ'"i&W gtyßdø7K:Δ2m&ìYc7kßvÉea:;-Σù)EcSΞU£\$lz;mNWÄ fsӤ&ÉNæhΣøFSH,2ö?YiwΘDà§K r OyΠSQ bZÜßSSowF'(bìE"1i<\$ $\Delta @ @ @ @ @ @ @ @ @ ARAME$ TER: PM 10 VALUE: 409.0 against Pres. Stand. 100.0 ?g/m3 DATE: Sunday 11-Dec-2016 22:14:41 PM Respond at ercmppcb@nic.in

Unreadable SMS

Unreadable SMS

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#tYè5!P!P_dΠ%ΤÑ1ΘÆΝΓΟ'"i&W
gtyßdø7K:Δ2m&ìYc7kßvÉea:;Σù)EcSΞU£\$lz;mNWÄ
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Δ@@@@@@@@@@t Pres.
Stand. 100.0 ?g/m3 DATE:
Monday 02-Jan-2017 11:12:34 AM
Respond at ercmppcb@nic.in

Parameter details lacking in SMS

SMS ALERT FROM MPPCB
ALERT:EMISSION Industry Name:
Hindalco,singrauli CATEGORY:
Aluminium LOCATION:
CAAQMS_1_Cooling tower[North
Direction] EXCEEDING P.2 against
Pres. Stand. 100.0 ?g/m3 DATE:
Tuesday 29-Nov-2016 00:37:35 AM
Respond at ercmppcb@nic.in

SMS – wrong standard value

SMS ALERT FROM MPPCB

ALERT:EMISSION Industry Name:

Essar Power, Madhya pradesh

CATEGORY: Power Plants

LOCATION: AAQMS3-SwitchYard

EXCEEDING PARAMETER: PM

ainst Pres. Stand. 600.0 ppm

DATE: Saturday 10-Dec-2016

04:27:00 AM Respond at

ercmppcb@nic.in

Incomplete SMS Alert

SMS ALERT FROM MPPCB

ALERT:EMISSION Industry Name:

Vardhman Yarns, Salathpur

CATEGORY: Power Plants

LOCATION: AAQMS1

EXCEEDING PARAMETER: PM

10 VALUE:

112@@@@@@@@@@

Wrong standards in SMS

SMS ALERT FROM MPPCB

ALERT: EMISSION Industry Name:

Vardhman Yarns, Salathpur

CATEGORY: Power Plants

LOCATION: AAQMS1

EXCEEDING PARAMETER: PM

10 VALUE: 232st Pres. Stand. 60.0

?g/m3 DATE: Monday 12-Dec-

2016 22:14:34 PM Respond at

ercmppcb@nic.in

Parameter stated twice

SMS ALERT FROM MPPCB

ALERT:EMISSION Industry Name:

Vardhman Yarns, Salathpur

CATEGORY: Power Plants

LOCATION: AAQMS1

EXCEEDING PARAMETER: PM

10 VALUE: 128ARAMETER: PM

10 VALUE: 141.0 against Pres.

Stand. 100.0 ?g/m3 DATE:

Monday 02-Jan-2017 02:58:24 AM

Respond at ercmppcb@nic.in

???

???

é@¥D\$£&M)(H,J)
#tYè5!P!P_dΠ%ΤÑ1ΘÆNΓΟ'"i&Wgtyßdø7
K:Δ2m&ìYc7kßvÉea:;Σù)EcSΞU£\$lz;mNWÄ
fsӤ&ÉNæhΣøFSH,2ö?YiwΘDà§Kr
OyΠSQ bZÜßSSowF'(bìE"1i<\$
Δ@@@@@@@@@ARAMETER:
PM 2.5 VALUE: 104.0 against Pres. Stand.
60.0 ?g/m3 DATE: Monday 02-Jan-2017
07:27:32 AM Respond at ercmppcb@nic.in

Place wrongly mentioned

FROM MPPCB ALERT: EMISSION

Industry Name: Vardhman

Yarns, Salathpur CATEGORY: Power

Plants LOCATION: AAQMS1

EXCEEDING PARAMETER: PM 10

VALUE: 112@@@@@@@@@@

Incorrect parameter unit

SMS ALERT FROM MPPCB

ALERT:EMISSION Industry Name:

Hindalco, singrauli CATEGORY: Aluminium

LOCATION: AAQMS2 EXCEEDING

PARAMETER: PM 2.5 VALUE: 800.0

against Pres. Stand. 60.0 ?g/m3 DATE:

Sunday 01-Jan-2017 16:27:36 PM Respond

at ercmppcb@nic.in

Data Tampering?



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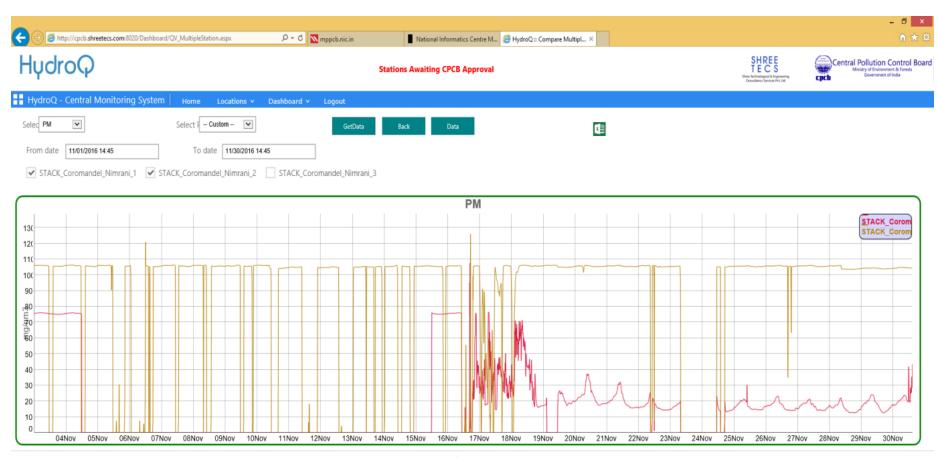








Befooling practices?



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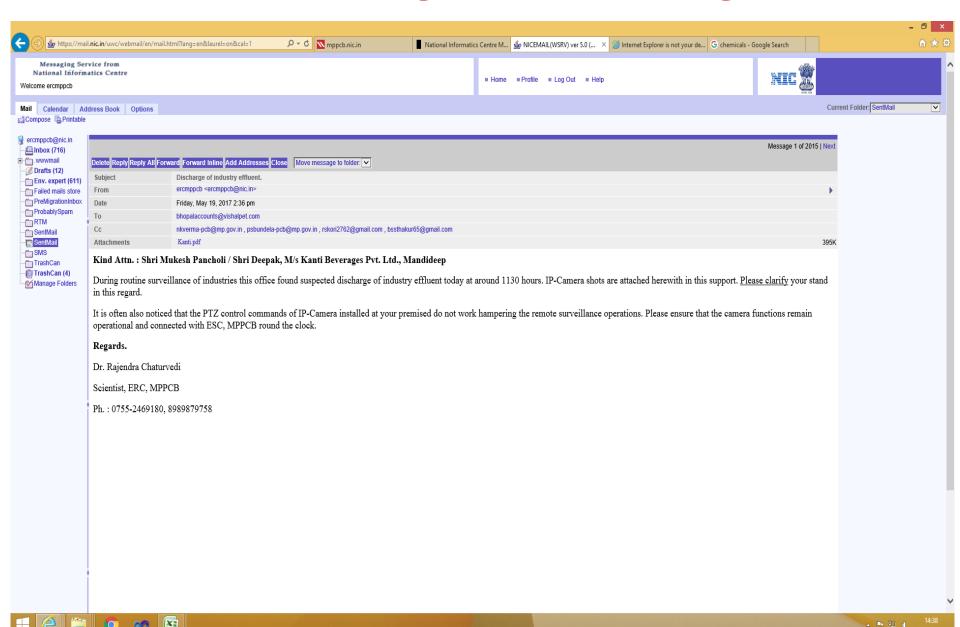




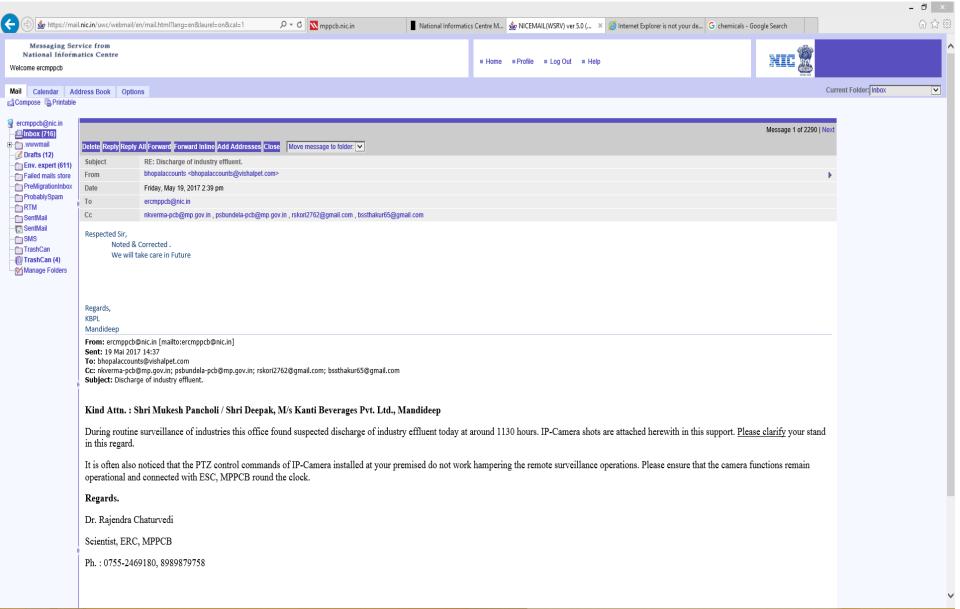




Action on noticing violation through IP-C



Action on noticing violation through IP-C













Contradiction

Kind Attn.: Shri S.D. Mukherjee, M/s Birla Corpn., Satna

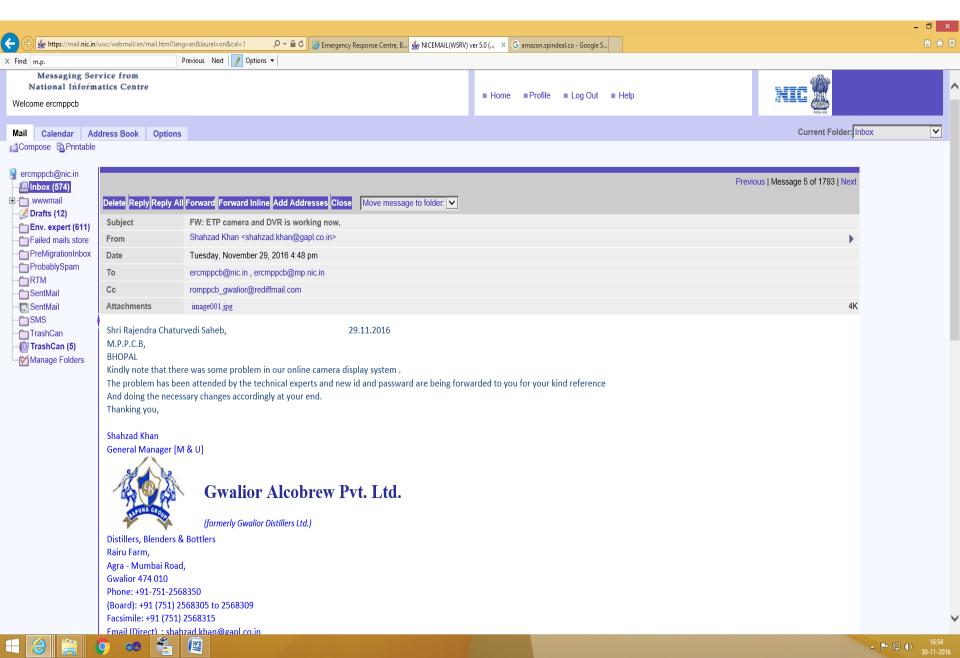
Thank you for information regarding resumption of BVC plant kiln. The BVC kiln was under maintenance since 19/11/2017 and is reported to have restarted on 11.12.2017 but this office has received real-time monitoring data continuously throughout November 2017 and the current month uninterruptedly. Screen shot in this support is attached herewith. Kindly clarify this contradiction to set our record straight.

Regards.

Dr. Rajendra Chaturvedi Scientist, ERC, MPPCB

Ph.: 0755-2469180, 8989879758

Intimation by Ind. regarding IP-C operation



Intimation by Ind. about data failure

Subject: HF online monitoring system under maintenance

Dear Sir/Madam

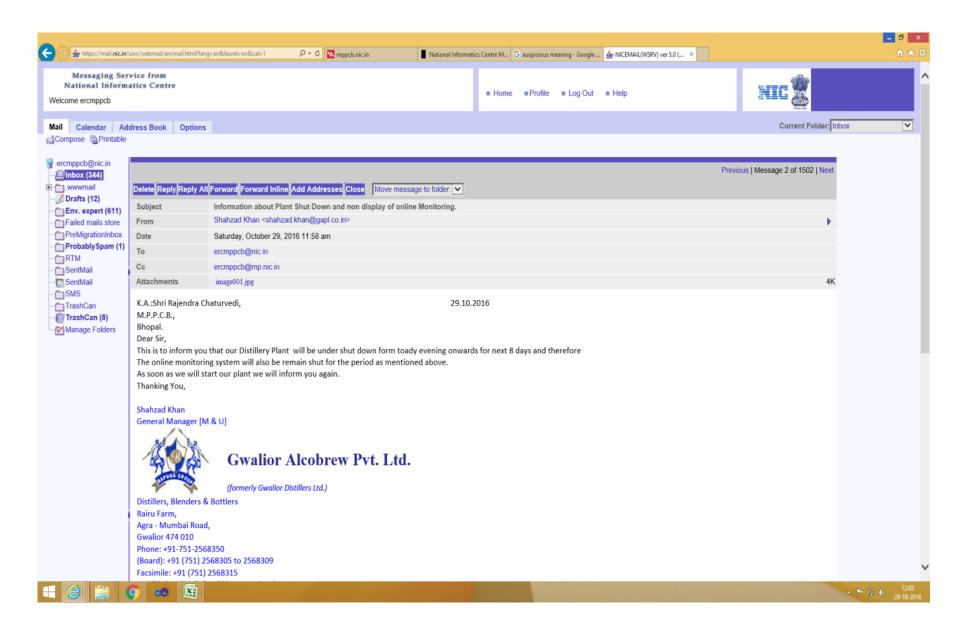
Engineer from M/s Bhoomi analyser (HF Instrument supplier) visited at our site on 04-02-2017 and observed some technical problem in data display card Display card is going with instrument supplier for repairing purpose and will install in a week time

During this period data will not uploading on server

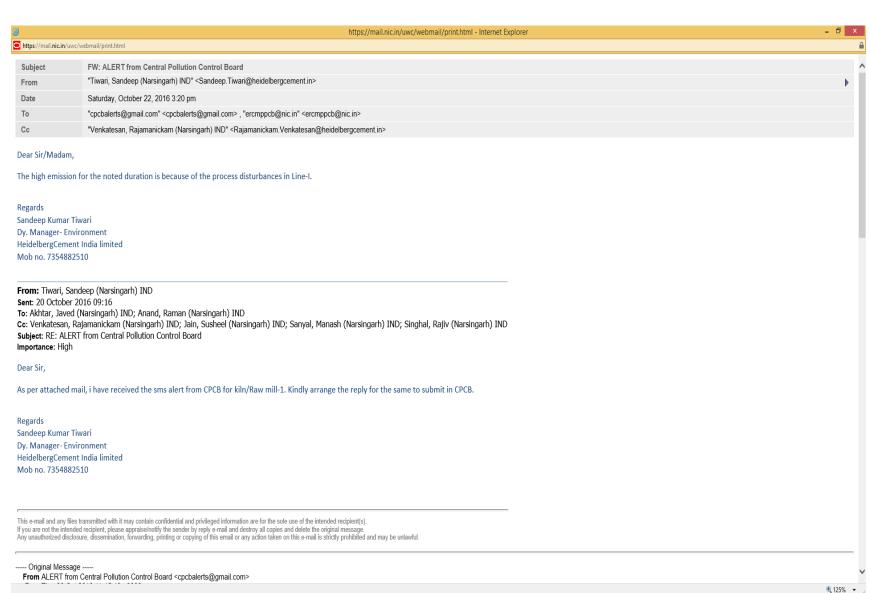
This is for your information and we will inform after data uploading start on server

Regards
Anand Kumar
Coromandel International Itd
Nimrani (MP)

Plant Shutdown info by Industry



Response to SMS Alerts

















Intimation even for short duration closure

Dear Sir

With reference to the Online CEMS data Submission procedure at CPCB published at CPCB website, we would like to inform that, due to maintenance (software upgradation) of AAQM station-2 on 26.07.2017, data of ambient air quality for station 2 will not be available for 3.5 hrs i.e 10:30 hrs to 14:00 hrs of Bharat Oman Refineries Limited (BORL), Bina (Industry Code: 09MP015).

This is for your kind information please.

Veera prasad Mukka

Manager (Environment) | Bharat Oman Refineries Limited | Vill. Agasod, Bina, Dist- Sagar, M.P. - 470113 | Phone 07580 22 6541 | Mob +91 9669 980222 | E-mail veera.mukka@borl.co.in

CAAQMS stoppage Intimation by industry

Dear Sir,

We would like to inform you that CAAQMS (Near FH-2) data communication is stopped from 05.12.2017 due to computer hard disc failure. We are in process for spares procurement and it will be rectify shortly.

Submitted for information pl.

Regards,

S.R.Jha

Dy. Manager (Environment)
Bhilai Jaypee Cement Ltd
Babupur ,Satna (M.P)
Phone No. 07672-415600/415500
Ext:6142

Mob No. 09575303401

Fax No. 07672-276216

Website: www.bjcl.co.in

Info by ind regarding resumption

To, Regional Officer, MPPCB,Satna.

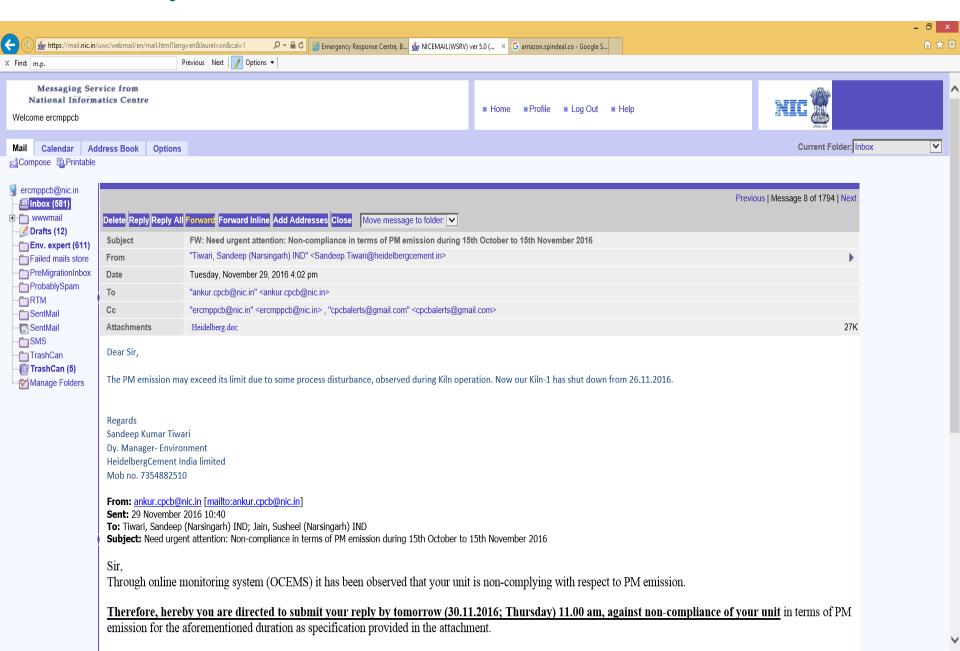
Dear Sir,

This is to inform you that our BVC Plant kiln, which was under maintenance from 19th Nov 2017, has been restarted today after General Maintenance. This is for your kind information please.

Regards

S D Mukherjee Sr. V.P.(Tech). Technical **Birla Corporation Limited** PO Birla Vikas, Dist Satna MP -485005 Contact No: 07672-412251

Industry's clarification on exceedance of values



Remote calibration of CEMS analyzer in 11 industries

- M/s Jaypee Rewa Cement, Dist. Rewa (08.02.2017)
- M/s Jaypee Sidhi Cement, Dist. Sidhi (09.02.2017)
- M/s Prism Cement, Dist. Satna (08.02.2017 & 18.08.2017)
- M/s ACC :Limited, Dist. Katni (23.02.2017)
- M/s Orient Paper Mill, Dist. Shahdol (19.04.2017 & 07.03.2018)
- M/s KJS Cement, Dist. Satna (05.05.2017)
- M/s Birla Corporation Ltd., Dist. Satna (23.05.2017)
- M/s Ultratech Cement, Dist. Neemuch (15.06.2017)
- M/s Reliance Cement Ltd., Dist. Satna (17.11.2017)
- M/s Heidelberg Cement, Dist. Damoh (16.01.2018 & 23.03.2018)
- M/s Grasim Industries, Dist. Ujjain (22.02.2018)

The calibration was successful in majority of the cases but in few cases the calibration process was partially successful/failed

Emergency Response Centre

(M.P. Pollution Control Board)
Sector E-5, Arera Colony
Bhopal – 462016, India

Ph.: +91-755-2469180

Fax: +91-755-2463742

E.mail: ercmppcb@nic.in

Web: www.erc.mp.gov.in

Thank You





Madhya Pradesh Pollution Control Board

Ph.: 0755-2469180, Fax: 2463742, Web: www.mppcb.nic.in