



Concept Paper:

**ETP Performance and Effluent release Monitoring
with EnviroConnect**

1. Background

Effluent Treatment Plants – ETPs (and also Sewage Treatment Plants – STPs) are erected and operated with primary aim of cleaning the water and other effluents before these are release into environment. Untreated or polluted water and other effluent can damage water bodies, ground water sources and other water bodies extensively and can harm the human other habitats. Obviously correct operations and performance of these plants is very crucial and is explicit responsibility of the polluting entity.

All stake holders including regulators, entities which own and operate these plants and consultants appointed to ensure correct performance, need to access various operating parameters and release data of the plants. With such data they are able to improve performance, detect bad performance and take corrective actions. Regulators must get the release data to ensure that these entities are not releasing harmful pollutants into environment.

For achieving these objectives, it is now mandated that ETPs should install:

1. Online analyzers for measuring certain parameters like pH, VOC, etc. at release point
2. Certain additional sensors to monitor working parameters of the plants
3. Analyzers at inlet side to measure levels of pollutants in the release
4. Video monitoring on selective basis

In certain cases these ETPs are shared amongst multiple entities and is operated by a third party company. Such ETPs called Common ETPs (CETPs) are also required to be monitored in similar manner but with additional data about contribution of various entities and their performance. A commercial module may also be required to divide CETP cost amongst users.

2. Online monitoring and data management

The online analyzers allow ETPs to share data with an online and real time data acquisition and handling system (DAHS). Such an online DAHS can be used to by all stake holders to access data in real time and run required analytics on the data. DAHS can also allow audit of such data for past performance, benchmarking, alerts management, etc. It is also possible to set up the systems in such a way that it can connect to multiple ETPs using analyzers and hardware provided by different vendors and contractors.

As per latest guidelines issues by CPCB and all other State PCBs it is mandatory to share online data with the regulators in real time. All polluting industries are required to implement this model immediately.

Major functionalities for such a DAHS are:

1. To acquire online and real time monitoring data from installed analyzers
2. To upload data in real time from installation to regulator server.
3. To store and archive all such data for analysis and reporting
4. To generate relevant alarms/ alerts and warnings based on real time data
5. To provide additional functionality for authorized users for data management and analysis as well as for generating reports
6. Report generation and distribution as per configuration
7. Availability of real time data and other information to citizens via Display board if required

3. EnviroConnect

EnviroConnect is a ready to deploy solution that provides all required and mandated functionalities to achieve all objectives listed above. It offer complete advanced functionalities with dash board based viewing, evolved alarms and alerts management and powerful reporting. The solution is proven in the field and is currently deployed at over 100 locations for Effluent Treatment Plants (ETP) and Sewage Treatment Plants (STP). The solution is designed based on general standards of water quality monitoring requirements of various pollution boards and further tuned to the requirements as laid down by central pollution control board (CPCB) for Indian standards. All the required parameters are monitored and if required manual data entry option is also available in the system. .

EnviroConnect is hardware agnostic and can acquire data directly from all known analyzers and other instrumentation and also capture images from an IP camera.

4. Typical Parameters Measured

- Analyzers capable of measuring water parameters as follows
 - pH
 - TDS
 - COD
 - BOD
 - TSS
 - And more

- Flow Meter Analyzer
 - Flow
 - Totalizer
- Temperature sensors
 - Temperature

5. Business propositions

EnviroConnect is offered to analyzer manufacturers, ETP contractors and consultants and other companies which are required to set up such servers at various pollution regulators and facilitate on line data sharing. The server can be installed at regulator offices or on cloud infrastructure as permitted. The companies will have total control of the solution and will be able to offer these on shared basis or on SaaS basis to their customers on continuing basis.

As such server and data availability is mandated activity, customers are demanding this facility from their contractors and hardware vendors. This makes commercialization of the offering very easy and offers built in scalable operation as more industries are being brought under the purview of these requirements.

About Ascent Intellimation

www.enviroconnect.in

www.plantconnect.net

Ascent Intellimation Pvt. Ltd. (AIPL) specializes in IT solutions for Industrial Automation. PlantConnect® is the web-based monitoring platform of AIPL. We provide several PlantConnect® based solutions for Remote Asset Management, Manufacturing Intelligence, and Real-time Reporting etc.

Ascent Intellimation has been working in the domain of environment quality monitoring since 2005 and has implemented multiple projects in India and abroad. AIPL has leveraged this experience to build EQMS solution. AIPL has implemented EQMS solution at Central Pollution Control Board of India for many analyzer manufacturing and implementation companies. This includes 5 year support and operations contract also. In addition to this AIPL offers same solution on SaaS/ ASP model for smaller companies.

AIPL is process driven company with ISO certification for quality. Please contact us for further details and queries:

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