

Odour compliance analytics [water]

Business Objective

- Odour represents one of the major issues in Wastewater Engineering. It can potentially cause public opposition to operations of odour generating facilities such as wastewater treatment plants and sewage sludge management practices. As a result, complaints which arise from episodes of exposure to odour are reported to regulatory authorities. The objective here is to minimize odour related incidents by real time analysis of data from various sensors and create a dashboard to depict the information.

Benefit

- Early detection of odour related spike and mitigation helps in taking informed decisions
- Complaints arising from odour pollution incidents can be reduced which will help to prevent impact to stakeholders
- Avoid penalties and reputational damage due to odour

Expected Outputs

- Deeper insights on odour spike incidents
- Tracking of the complaints related to odour pollution incidents

Data Used

- Task data providing details of various odour spike incidents
- Investigation task data linking to odour spike incidents
- Complaint data which arise from episodes of exposure to offensive odours as reported to regulatory authorities.

Design

- It is divided into two parts:-
 - Odour Analytics
 - Odour Monitoring Tasks –
 - Spike Tasks
 - Threshold Tasks
 - Investigation Tasks

Output

- Depicting the real time odour data
- Investigation tasks linking the odour spike incidents
- Tracking the complaints arising from odour pollution incidents

Benefits

- Avoiding annoyance and nuisance caused to customers by odour pollution incidents
- Management, planning, and regulation of freshwaters
- Trend analysis for various odour monitors

Efficient & Well Organized Operations at Water Treatment Plant

Spike Tasks

Date	Time	Inspection Id
10/14/2015	10/28/2015	All

INSP 1

5:17:13 PM

OdourMonitor1

10/14/2015

Assigned

1.87

Action Taken

1. Suppression units activated in the locality of the trend line spikes 2. Assets investigated drive round and odour

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Calm

- Odour analytics dashboards on odour data from real-time SCADA sources are constructed for monitoring the various threshold limits, wind speed, wind direction and odour spikes from the odour monitors (Hydrogen Sulphide gas and sludge gas) at Sewage Treatment Works (STW).

- The complaints from customers are tagged to the various odour spikes resulting in severe odour pollution incidents.

- Through the odour analytics dashboards depicting the odour data, investigation tasks linking the odour spike incidents and the complaints are tracked and monitored in real time to a full closure proactively before any major breach is reported to and by the regulatory authorities.

Improved operations of water treatment plants.