

Maximo Emission Tracking

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This session will present how operational sustainability with capabilities for emission tracking is provided in Maximo Manage with additions to meters, incidents, and dashboards to record and track continuous and fugitive emissions.

Topics

- Emission tracking in operations
- What's new in Maximo 9.0
- Demonstration
- Plans for next releases





What is Maximo Emission Tracking?

Emission management is a set of new capabilities being introduced in MAS 9.0 as part of Maximo HSE Manager, Maximo Oil and Gas, and Maximo Manage base product, to improve our support for managing a wide variety of emissions.

- Emission covers a broad range of emissions which could have a CO₂ equivalent, *e.g.* Methane, NOx, refrigerants, or SF6.
- Emissions may stand on their own, *e.g.* water, steam, or acids.
- Emissions can be continuous, *e.g.* fuel combustion, or fugitive, *e.g.* leak, vent, or spill.
- There are strong linked with safety.
- We can leverage existing capabilities as well as new 9.0 features.



Customer business and operational objectives

Operations in energy-intensive organizations needs emission management solutions to:

- Maintain operational compliance.
- Manage unplanned emissions.
- Reduce the impact of long-term emissions.
- Use existing asset management investments to effectively manage emissions.
- Leverage skills in Asset Mgt and Change Mgt to address gaps in Incident Mgt, Emission Profiles and Emission Factors.



Reporting on continuous emissions using sensor data

Continuous combustion of methane gas is metered by gas flow sensor and monitored by operations.

Report fugitive emission from operational incidents

Operations receives a gas leak alarm from the control system. An on-site technician is assigned to perform an inspection.

The Technician records the CH4 methane leak as an environmental incident.

Roll up data to Emission Profiles

Maximo Manage lists continuous and fugitive emission data as location-based Emission Profiles.

Take corrective actions

An Engineer performs an investigation of the environmental incident. He documents the rootcase and takes corrective actions to mitigate the risk of future leak emissions.

Track emissions on the Operational Dashboard

The Environmental Officer tracks emissions on the Emission Management Dashboard to manage major incidents and creating investigations to plan corrective actions.

Report on operational emissions data

The fugitive leak emissions are complementing continuous emission tracking by location meters, already reported on by Maximo in Envizi reports.



New features being introduced in MAS 9.0

- Emission details on HSE Incident Events.
- Enhanced emission details on HSE Location Meters.
- New 'View Emissions' action on HSE Locations.
 - View Fugitive Emissions.
 - View Continuous Emissions.
- Emissions Management Operational Dashboard View for HSE.
- New base Maximo Formulas application.





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- HSE Manager will deliver 4 new KPI records OOTB to support the KPI tiles.
- Emission management dashboard configured OOTB.
- Operational dashboards can be edited, added, duplicated, shared or private.

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- Fugitive emissions are unplanned emission events that can be tracked in the Incidents application.
- There may be other events associated with the emission such as a hazard report.
- Emission Details section dynamically displayed for the following Event Types: Environmental, Spill, and Leak.





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- Continuous emissions are planned operational emission that can be tracked by Meters.
- Continuous Meter Readings come from Location Meters of Type Continuous.
- Characteristic and Gauge Meter readings come from Location Meters of Type Characteristic or Gauge.



Classification structure for Emission Materials

CO-LOCATE

 The emission materials can be classified by a custom classifier.

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 The classifier can optionally be used for a custom emission factor calculations using the emission type, amount and unit of measure, producing a CO₂ equivalent.







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- Fugitive and Continuous Emissions from Incident and Meter sources can be viewed on the Location.
- Environmental Officers can record details of environmental emissions associated with a Location, monitor the environmental profile of the Location, and record continuous emission data for operational reporting.

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New Graphite based Formula application

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- A new formula application, making complex calculations simpler to create.
- A reliability engineer can quickly create formulas to compute complex emission data outputs and normalize CO2 emission data across locations.





Maximo Emission Tracking Demo



Summary of Capabilities in Sustainability and Environmental Management

Maximo's environmental capability covers a broad range of use cases:

- Environmental incident management
- Environmental permit and consent management

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- Regulatory compliance
- Environmental audits
- Environmental risk and impact assessment
- Environmentally critical failure reporting
- Managing environmentally critical work

- Capturing emission data for operational reporting
- Emission profiles for energy intensive assets
- Hazardous waste management
- Leak management
- Refrigerant tracking
- Environmental inspections
- Corrective action

- Leak survey Inspections / Work Order / Regulatory Compliance
- Leak events Incidents / Investigations
- Leak remediation, short term –
 SR, Work Order, Action, tracking
- Leak remediation, long term Improvements, MOC request, MOC
- Leak replenishment Inventory, Asset
- Leak profile Locations, Assets



Mobile Incident Reporting

- The mobile incident reporting application will enable asset technicians or inspectors quickly capture the details for fugitive emissions no matter where they occur.
- Incident reporting use cases can also include injury and illness, security incidents, a near miss, a spillage, a safety observation or a failure in a safety process.

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Alignment with Envizi ESG Suite

- Envizi ESG Suite provides corporate ESG reporting.
- Maximo Manage provides operational environmental reporting.
- The two products can work together using IBM App Connect, Maximo / Envizi Connectors OOTB, and additional implementation services depending on custom data integrations required.
- Maximo, Envizi and EIS teams are working on shared emission factor API services.



- Visit the Tech Exchange for a demo
- Join the Maximo Emission Tracking sponsor user group
- Connect with us
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 - Russell Bee russell.bee@uk.ibm.com



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