

# Environmental compliance monitoring

This workflow automatically monitors mining operations for environmental compliance by collecting real-time sensor data, analyzing emissions and waste parameters, and generating regulatory reports. It ensures continuous adherence to environmental standards while minimizing regulatory risks and operational disruptions.

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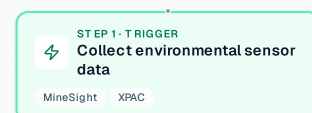


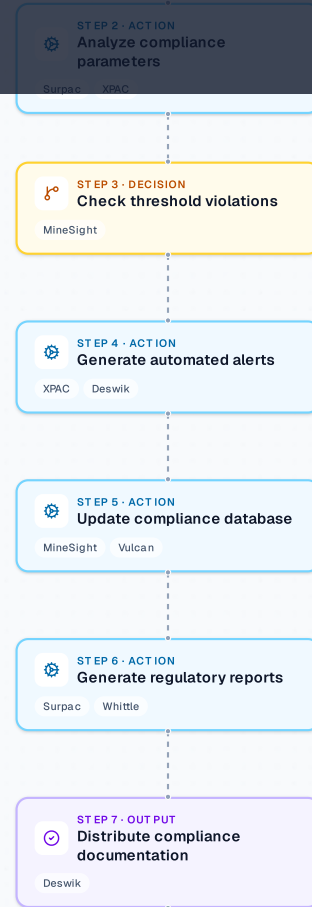
## WORKFLOW TRIGGER

Hourly environmental sensor data collection from active mining sites

## Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.





## Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

⚡ TRIGGER

### Collect environmental sensor data

Automated collection of air quality, water discharge, noise levels, and dust emissions data from IoT sensors across all active mining areas. Data is

aggregated from multiple monitoring points for comprehensive coverage.

## AI Business OS

MineSight XPAC

2

 ACTION

### Analyze compliance parameters

Process collected environmental data against regulatory thresholds and permit conditions. Calculate trending patterns and identify potential compliance deviations.

Surpac

XPAC

3

 DECISION

### Check threshold violations

Evaluate if any environmental parameters exceed regulatory limits or approach warning levels. Route workflow based on compliance status and severity of any violations.

MineSight

4

 ACTION

### Generate automated alerts

Send immediate notifications to environmental officers and site managers when violations are detected. Include specific parameter details, location data, and recommended corrective actions.

XPAC

Deswik

5

 ACTION

### Update compliance database

Record all environmental measurements and compliance status in a centralized database. Maintain audit trail for regulatory inspections and reporting requirements.

MineSight

Vulcan

6

 ACTION

### Generate regulatory reports

Compile automated environmental compliance reports formatted for regulatory submission. Include trend analysis, violation summaries, and corrective action documentation.

Surpac

Whittle

7

 OUTPUT

### Distribute compliance documentation

Automatically distribute compliance reports to regulatory bodies, management team, and environmental stakeholders. Archive reports for future audits and trend analysis.

Deswik



### Outputs

- Environmental compliance reports

## AI Business OS

- Regulatory violation alerts
- Compliance audit trail
- Trend analysis dashboards



### Key Metrics

- Compliance violation frequency
- Response time to threshold breaches
- Regulatory reporting accuracy



### Tools & Integrations

- MineSight
- Surpac
- XPAC
- Vulcan
- Deswik
- Whittle

## AI Business OS

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