

# AeroSense: Phase 6 Documentation

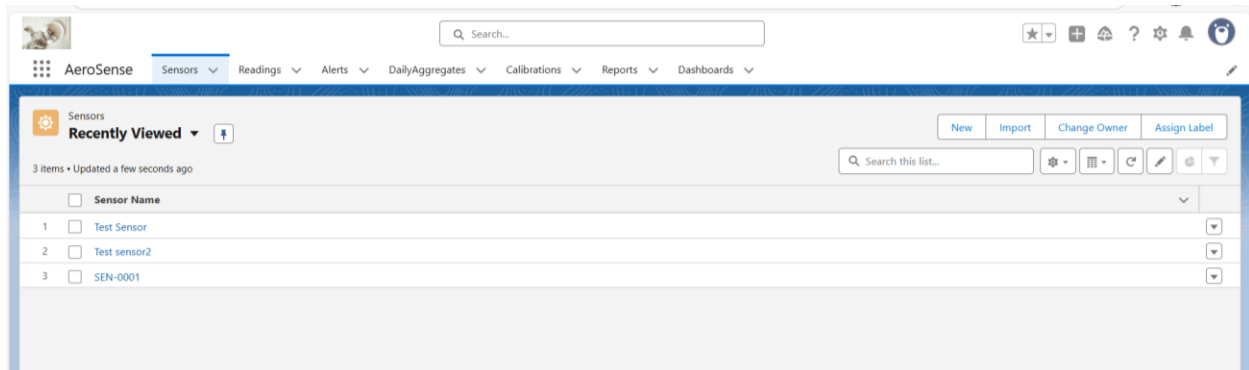
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**Phase Title:** User Interface Development

**Objective:** To create an intuitive and engaging user interface in Salesforce Lightning Experience, enabling admins, technicians, and executives to easily monitor air quality, review alerts, and interact with AeroSense data.

## 1. Lightning App Creation

- **Path:** Setup → App Manager → New Lightning App
- **App Name:** AeroSense
- **Navigation Items (Tabs):** Sensors, Readings, Alerts, Daily Aggregates, Calibrations, Reports, Dashboards.
- **Branding:** Choose a green/blue theme (eco/environmental theme).
- **Assignments:** Assign app to AeroSense custom profiles (Technician, Admin, Executive).



## 2. Record Pages (Lightning App Builder)

- **Sensor Record Page:** Show details like Status, Trust Score, and related Readings, Alerts, Calibrations.
- **Reading Record Page:** Highlight AQI, PM2.5/PM10, Timestamp, and related Sensor.
- **Alert Record Page:** Show Severity, Message, linked Reading + Sensor, and quick actions for resolution.

Lightning App Builder

Pages

Sensor Record Page

Help

Desktop

Shrink To View

AnalyzeActivation...Save

Components

Fields

Search...

Standard (42)

Accordion

Action Launcher

Actions & Recommendations

Activities

Approval Trace

Assessment List

CRM Analytics Collection

CRM Analytics Dashboard

Dynamic Related List - Single

Einstein Next Best Action

Flow

Flow Orchestration Work Guide

Highlights Panel

Invoice Preview

Launchpad

Get more on the AppExchange

Sensor Name

Test Sensor

Device Serial

Trust Score

Created By

Raksha Kalaskar, 9/20/2025, 10:05 AM

Owner

Raksha Kalaskar

Last Modified By

Raksha Kalaskar, 9/20/2025, 10:10 AM

Readings (1)

New

Reading Name

Reading2

View All

Alerts (2)

New

Alert Name

ALT-0004

ALT-0003

View All

DailyAggregates (0)

New

Calibrations (0)

New

Test Sensor

New Contact

Edit

New Opportunity

Page

\* Label

Sensor Record Page

\* API Name

Sensor\_Record\_Page

\* Page Type

Record Page

Object

Sensor

Template

Header and Right Sidebar

Change

Description

☐ Enable page-level dynamic actions for the Salesforce mobile app

Lightning App Builder

Pages

Reading Record Page

Help

Desktop

Shrink To View

AnalyzeActivation...Save

Components

Fields

high

Standard (1)

Highlights Panel

Custom (0)

Custom - Managed (0)

Get more on the AppExchange

Reading Name

Reading2

Sensor

AQI

Recorded At

Created By

Raksha Kalaskar, 9/20/2025, 10:46 AM

Last Modified By

Raksha Kalaskar, 9/20/2025, 10:46 AM

Alerts (2)

New

Alert Name

ALT-0004

ALT-0003

View All

Reading2

New Contact

Edit

New Opportunity

Page

\* Label

Reading Record Page

\* API Name

Reading\_Record\_Page

\* Page Type

Record Page

Object

Reading

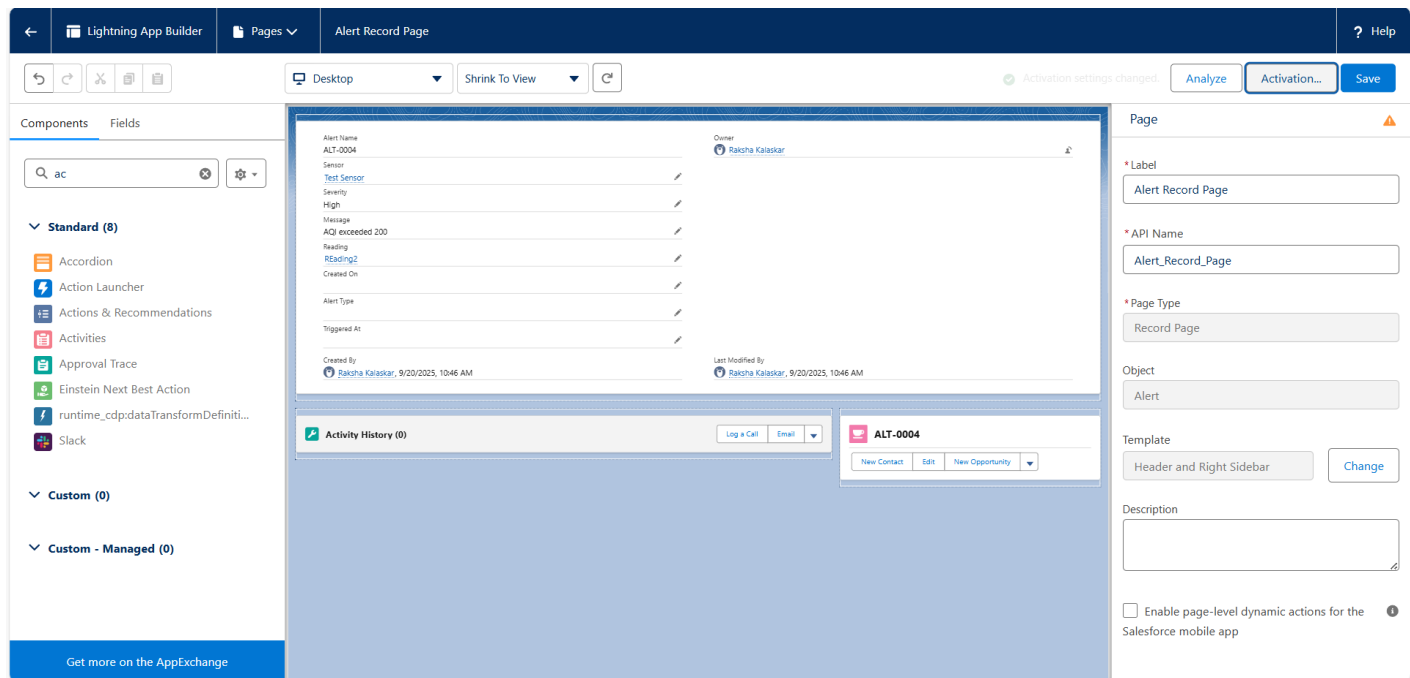
Template

Header and Right Sidebar

Change

Description

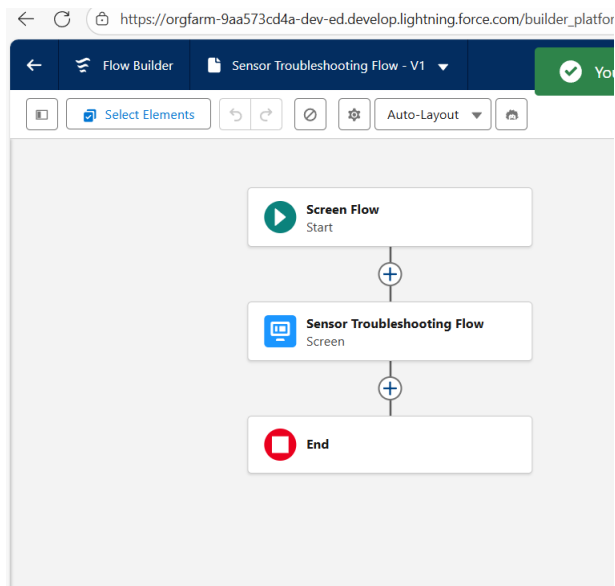
☐ Enable page-level dynamic actions for the Salesforce mobile app



### 3. Tabs & Navigation

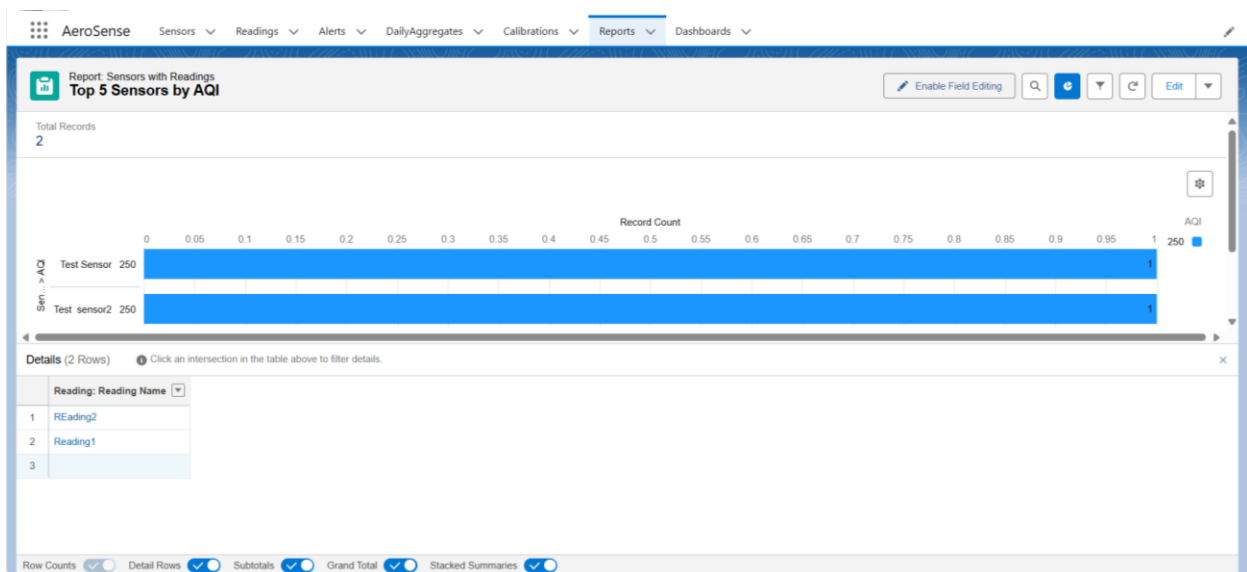
- Add custom object tabs for **Sensor, Reading, Alert, Daily Aggregate, Calibration**.
- Add Reports & Dashboards tab for executives.
- Add a **Utility Bar Component** (Quick Actions):
  - “New Reading” (for manual input).
  - “View Live Alerts.”
  - “Sensor Troubleshooting Flow.”













#### 4. Home Page Layouts

- Customize Home Page using Lightning App Builder:
  - Add **Dashboard chart** (Top 5 sensors with highest AQI).
  - Add **Recent Alerts list**.
  - Add **Quick Actions** for Sensor and Reading creation.





Setup

AeroSense


Sensors

Readings

Alerts

DailyAggregates







More


 Alerts
 

Recent Al...

[New](#)
[Import](#)
[Change Owner](#)
[Printable View](#)
[Assign Label](#)

0 items • Sorted by Alert Name •  
 Filtered by Alert Name • Updated a few seconds ago



Nothing to see here

There's nothing in your list yet. Try adding a new record.

Filters

Filter by Owner

All alerts

Matching all of these filters

Alert Name equals Last 30 Days

[Add Filter](#)
[Remove All](#)






[Add Filter Logic](#)

Lightning App Builder

Pages

AeroSense\_HomePage

Help



Desktop

Shrink To View




Activation...

Save

Components

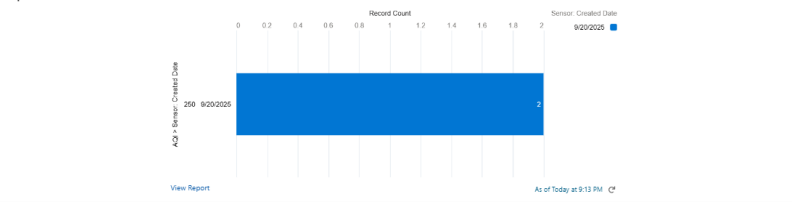
Standard (3)

 Recent Items
  Recent Records
  Recommendations

Custom (0)

Custom - Managed (0)


Top 5 AQI



View Report

As of Today at 9:13 PM

Recent Alerts

 Recent Alerts
 

0 items, sorted by Alert Name

Filtered by Alert Name

There's nothing in Recent Alerts yet.

When records are added to this list view, you'll see them here.

Top 5 AQI Reading (0)

Page

\*Label

AeroSense\_HomePage

\*API Name

AeroSense\_HomePage

\*Page Type

Home Page

Template

Home page header two colu...

Change

Description

## 5. Sample Lightning Web Component (LWC)(optional)

### a. LWC: Live AQI Monitor

Displays the latest AQI readings of all active sensors.

- File 1: **aeroSenseMonitor.html**

```
<template>
```

```
  <lightning-card title=" Live AQI Monitor">
```

```
    <template if:true={sensors.data}>
```

```
      <lightning-datatable
```

```
        key-field="id"
```

```
        data={sensors.data}
```

```
        columns={columns}>
```

```
    </lightning-datatable>
```

```
  </template>
```

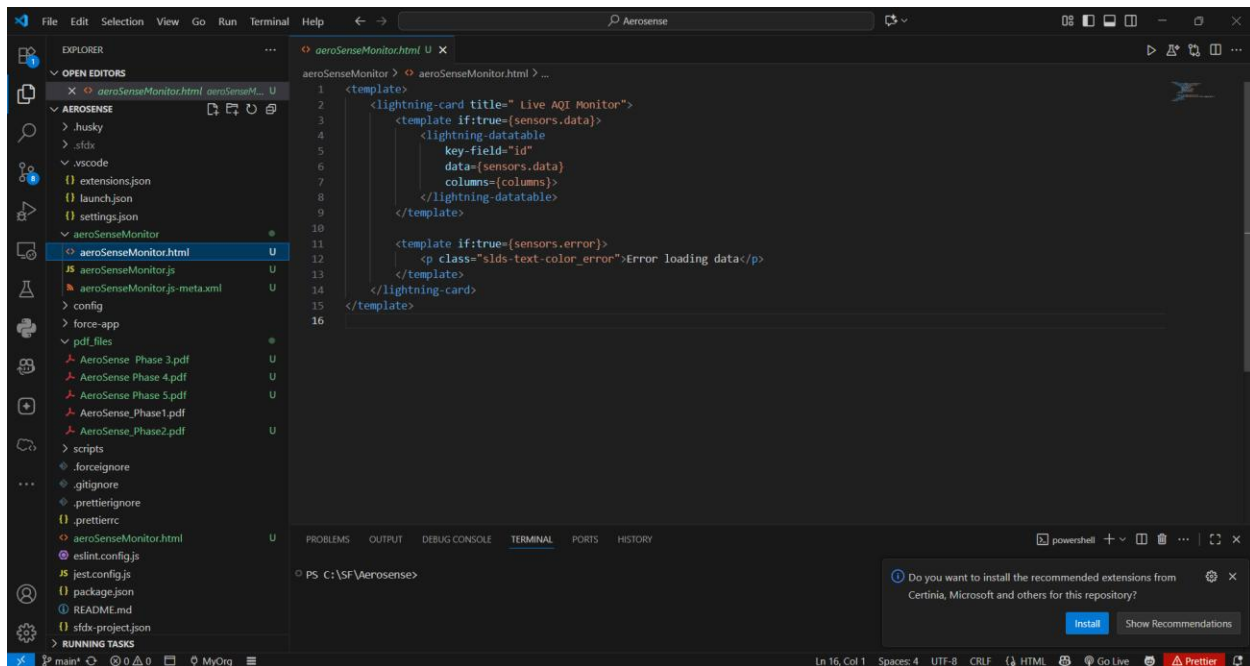
```
  <template if:true={sensors.error}>
```

```
    <p class="slds-text-color_error">Error loading data</p>
```

```
  </template>
```

```
</lightning-card>
```

```
</template>
```



- File 2: **aeroSenseMonitor.js**

```
import { LightningElement, wire } from 'lwc';
```

```
import getLiveReadings from '@salesforce/apex/SensorController.getLiveReadings';
```

```
export default class AeroSenseMonitor extends LightningElement {
```

```
  columns = [
```

```
    { label: 'Sensor', fieldName: 'Name' },
```

```
    { label: 'Location', fieldName: 'Location__c' },
```

```
    { label: 'AQI', fieldName: 'AQI__c' },
```

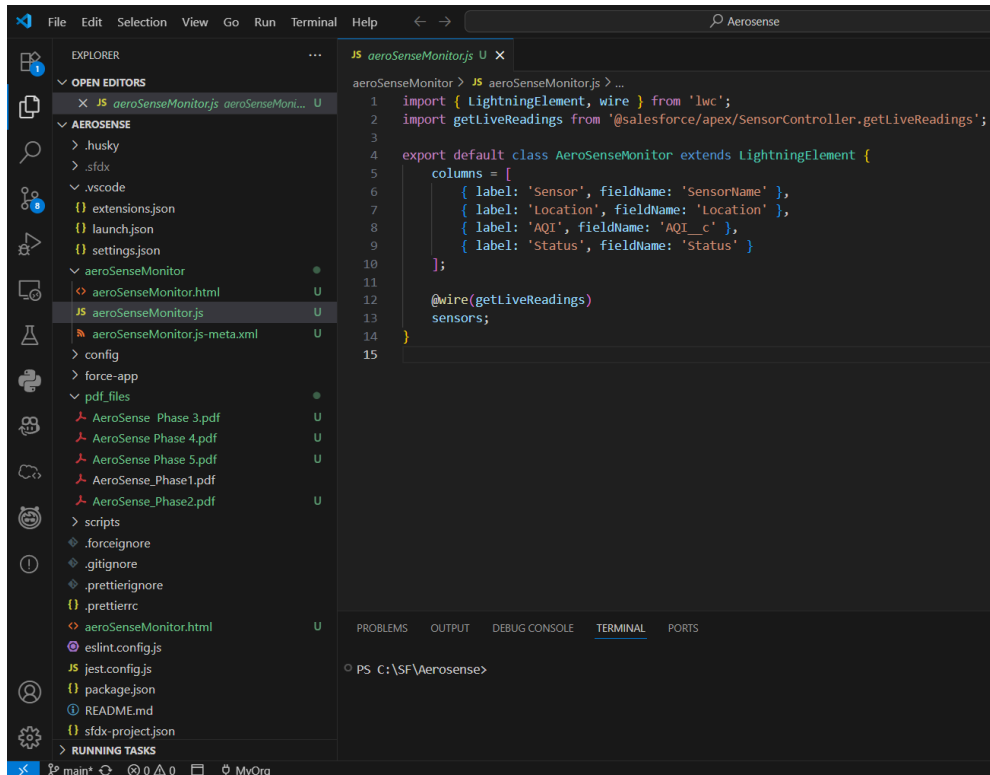
```
    { label: 'Status', fieldName: 'Status__c' }
```

```
  ];
```

```
  @wire(getLiveReadings) sensors;
```

```
}
```





- File 3: **SensorController.cls** (Apex)

```
public with sharing class SensorController {
```

```
    @AuraEnabled(cacheable=true)
```

```
    public static List<Reading__c> getLiveReadings() {
```

```
        return [
```

```
            SELECT Sensor__r.Name, Sensor__r.Location__c, AQI__c, Sensor__r.Status__c
```

```
            FROM Reading__c
```

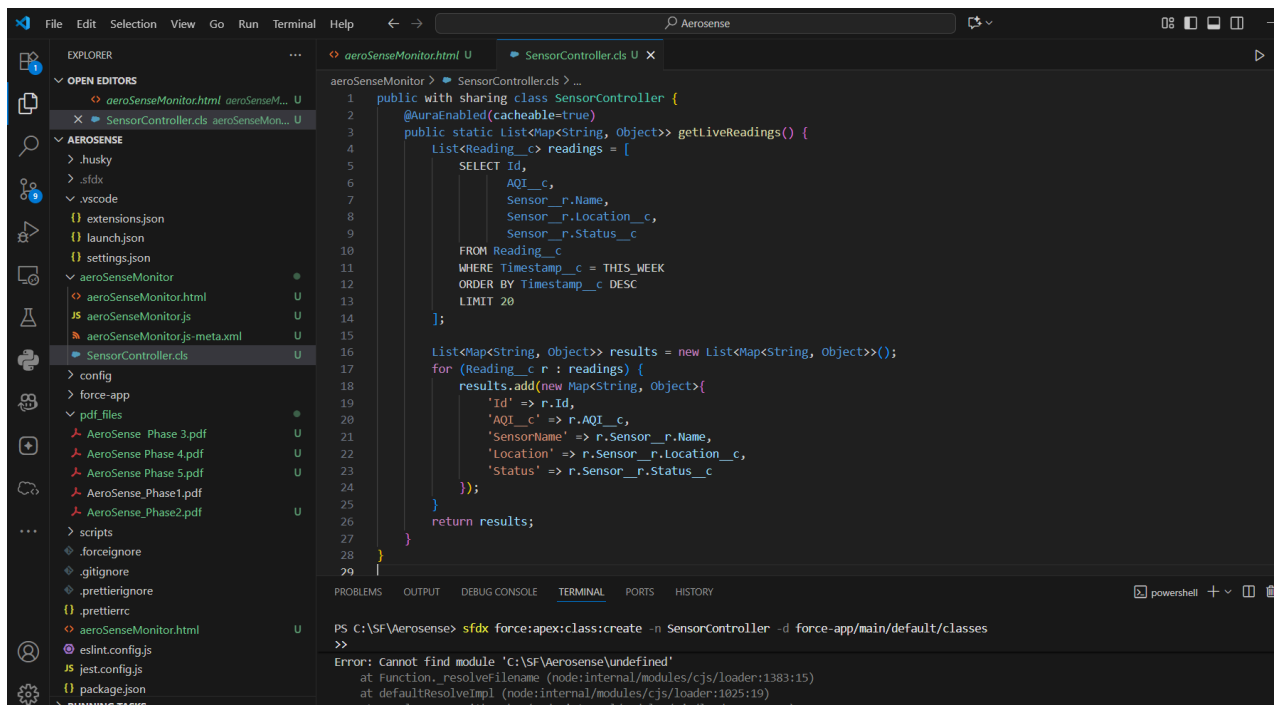
```
            WHERE Timestamp__c = THIS_WEEK
```

```
            ORDER BY Timestamp__c DESC LIMIT 20
```

```
        ];
```

```
    }
```

```
}
```



## 6. LWC Events & Interactions

- **Wire Adapters:** Use @wire to fetch latest AQI values.
- **Imperative Apex Calls:** Allow recalibration request button → call Apex method.
- **Navigation Service:** Click on Sensor name → navigate to Sensor record page.

## 7. Example User Experience

- **Technician:** Opens AeroSense → checks “Live AQI Monitor” LWC → Sees Sensor with red AQI → clicks to open Sensor → creates Calibration record.
- **Executive:** Opens AeroSense → Home page dashboard → instantly views “Top 5 Polluted Locations.”
- **System Admin:** Uses Utility Bar → runs “Troubleshooting Flow” for problematic sensor.





AeroSense

Sensors

Readings

Alerts

DailyAggregates

Calibrations

Reports

Dashboards

Home

Search...



Report: Sensors with Readings  
Top 5 Sensors by AQI

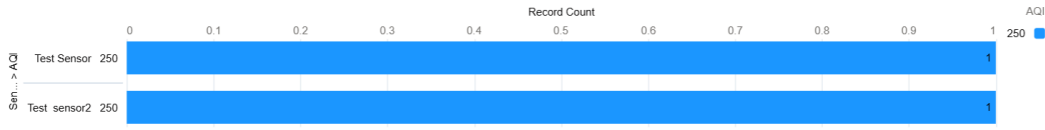
Enable Field Editing



Edit



Total Records  
2



Filters

Show Me  
All sensors

Sensor: Created Date  
Last 7 Days (Sep 17, 2025 - Sep 23, 2025)

Details (2 Rows) Click an intersection in the table above to filter details.

	Reading: Reading Name
1	REading2
2	Reading1
3	

Row Counts ☐ Detail Rows ☒ Subtotals ☒ Grand Total ☒ Stacked Summaries ☒