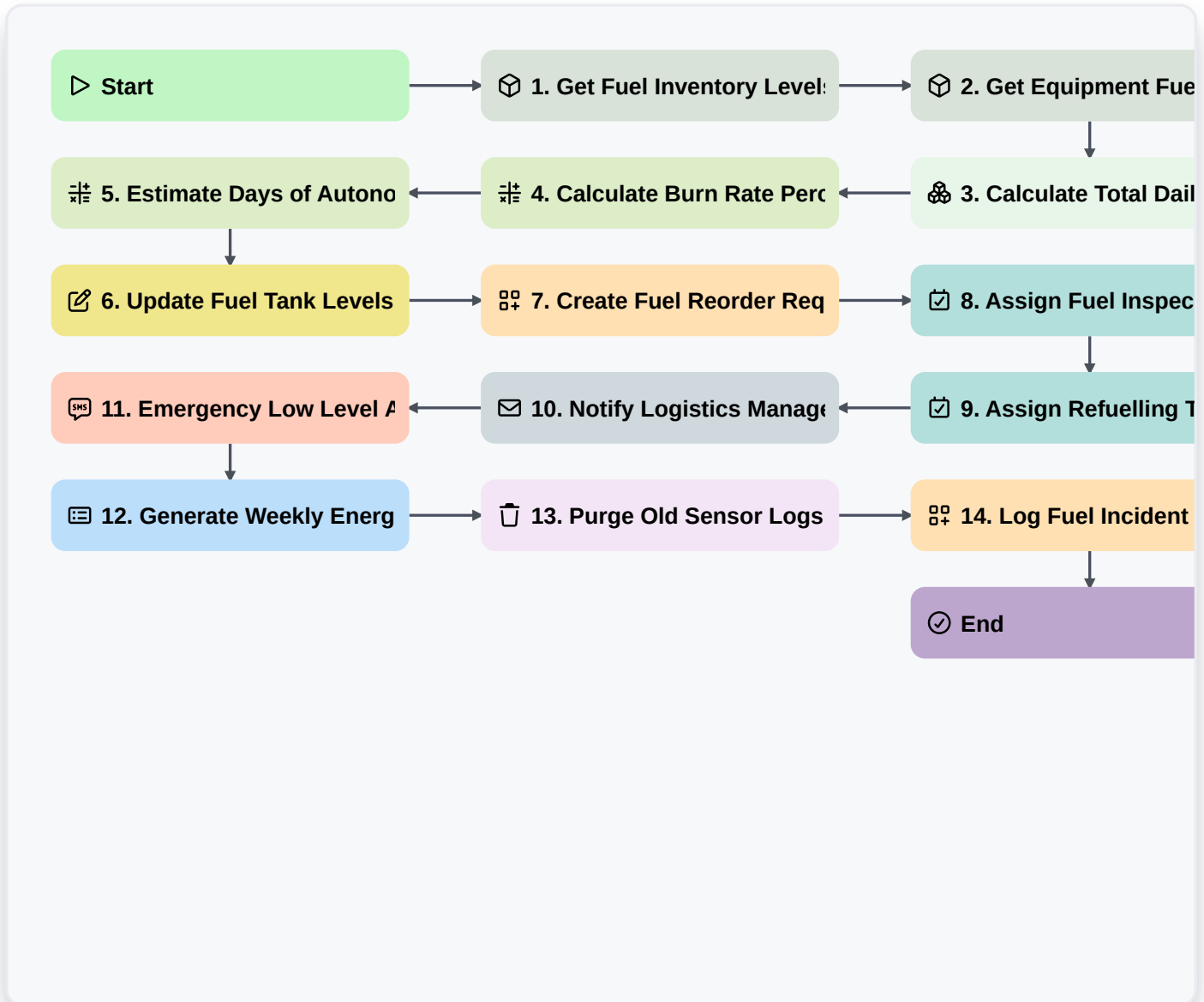


# Mine Site Fuel & Energy Management



## ▷ Start

Start of the Workflow/Process.

## 📦 1. Get Fuel Inventory Levels

Retrieve current fuel volumes from the Fuel Storage Data Model.

## 📦 2. Get Equipment Fuel Consumption Logs

Retrieve recent consumption entries from the Fleet Usage Data Model.

## 🔗 3. Calculate Total Daily Fuel Usage

Sum the total liters consumed across all equipment entries for the current 24-hour period.

## 📊 4. Calculate Burn Rate Percentage

Calculate the percentage of total capacity used by comparing current usage against total tank capacity.

## 📊 5. Estimate Days of Autonomy

Divide remaining fuel volume by the average daily burn rate to predict when fuel will run out.

## ✍️ 6. Update Fuel Tank Levels

Update the 'Current Volume' field in the Fuel Storage Data Model after a delivery or usage period.



### **7. Create Fuel Reorder Request**

Generate a new entry in the Procurement Data Model when levels hit a critical threshold.

### **8. Assign Fuel Inspection Task**

Create a task for the Site Technician to perform a physical dipstick verification.

### **9. Assign Refuelling Task**

Create a task for the Fuel Truck Driver to execute a scheduled refueling of heavy machinery.

### **10. Notify Logistics Manager**

Send an email alert to the Logistics Manager when a fuel shortage is predicted.

### **11. Emergency Low Level Alert**

Send an SMS to the Site Supervisor if fuel levels drop below the critical safety limit.

### **12. Generate Weekly Energy Efficiency Report**

Create a summary report comparing planned fuel consumption vs. actual consumption.

### **13. Purge Old Sensor Logs**

Delete telemetry data entries older than 90 days to maintain system performance.

### **14. Log Fuel Incident**

Create a new entry in the Incident Data Model if a leak or spill is detected.

### **End**

End of the Workflow/Process.