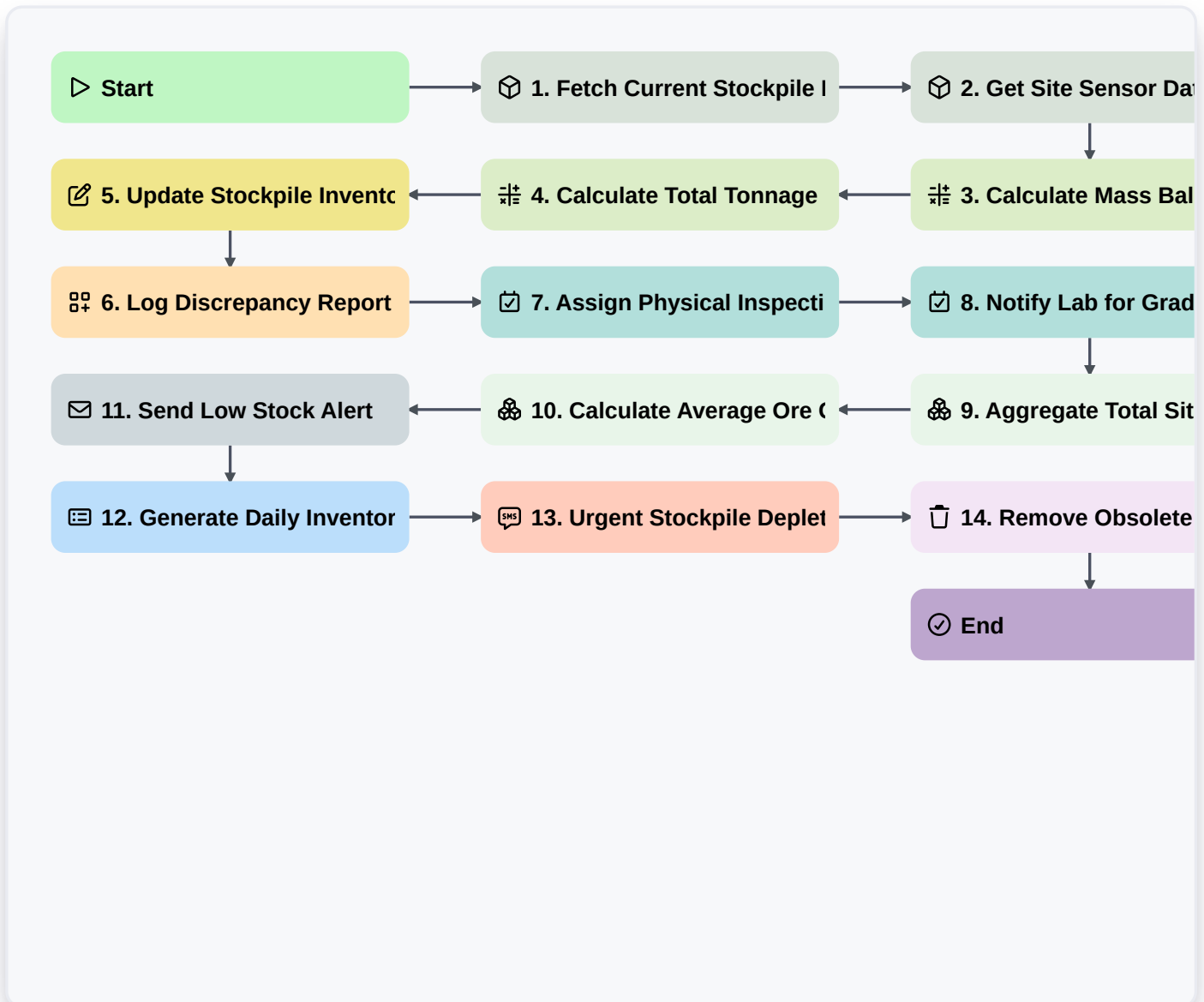


Ore Stockpile Inventory Management



▷ Start

Start of the Workflow/Process.

📦 1. Fetch Current Stockpile Records

Retrieve all existing entries from the Stockpile Data Model to identify current ore volumes and grades.

📦 2. Get Site Sensor Data

Retrieve the latest weight and volume readings from automated stockpile sensors or belt scales.

⚖️ 3. Calculate Mass Balance

Calculate the difference between incoming ore (inflow) and outgoing ore (outflow) to determine net change.

⚖️ 4. Calculate Total Tonnage

Sum the density and volume measurements to calculate the total estimated tonnage of the stockpile.

📝 5. Update Stockpile Inventory Levels

Update the 'Current Quantity' field in the Stockpile Data Model based on the new calculated mass.

📝 6. Log Discrepancy Report

Create a new entry in the Discrepancy Model if the sensor data differs significantly from the manual survey.



📅 **7. Assign Physical Inspection Task**

Create a task for the Site Surveyor to perform a manual visual inspection of the stockpile density.

📅 **8. Notify Lab for Grade Testing**

Create a task for the Laboratory Technician to perform a chemical assay on ore samples.

🧮 **9. Aggregate Total Site Inventory**

Sum the tonnage of all individual stockpiles to get the total ore available on-site.

🧮 **10. Calculate Average Ore Grade**

Calculate the weighted average of the metal content across all stockpiles.

✉️ **11. Send Low Stock Alert**

Send an email to the Operations Manager if stockpile levels fall below the predefined safety threshold.

📄 **12. Generate Daily Inventory Report**

Generate a formal PDF/Excel report summarizing the daily changes in ore tonnage and grade.

📱 **13. Urgent Stockpile Depletion Alert**

Send an SMS to the Plant Superintendent if a critical stockpile is nearly empty.

🗑️ **14. Remove Obsolete Stockpile Entry**

Delete stockpile records from the system once the stockpile has been completely depleted and processed.

✅ **End**

End of the Workflow/Process.