

Aeration and Control System

Automated Control of Aerated Slab Biosolids Composting

CUSTOMER PROFILE

Lynden, Washington Wastewater Treatment Facility



CLIENT NEEDS

The City of Lynden planned an eight bay, aerated static pile composting facility to produce Class A biosolids compost. Lynden needed automatic controls to ensure that EPA 503 requirements are met, without constant staff monitoring. The control system required these capabilities:

- Adapt to the planned facility design and interface with the LAN based SCADA system.
- Track compost batches as they are moved from bay to bay.
- Automatically control aeration and document the PFRP process.

THE SOLUTION

ECS adapted the proprietary CompTroller™ aeration control and monitoring technology to work with the Lynden facility.

SOFTWARE: The operator interface and control software for Windows™ was modified with a graphical batch tracking function to record temperature histories as compost moves through the plant from primary to secondary aeration zones, or piles are combined. The software compiles a data log to document regulatory compliance with each batch. Data sharing functions on the plant-wide LAN allow all operators to monitor process and alarm statuses.

HARDWARE: To adapt the Aeration and Control system to Lynden's facility, ECS used a distributed control and monitoring architecture. Data Nodes are located strategically around the facility and connect to the control system's LAN. Robust stainless steel, dual-depth temperature probes provide pile stratification measurements for positive or negative aeration direction. ECS delivered 3-way dampers and feedback controlled variable speed blowers to deliver uniform airflow to each of eight independent zones.