

# Independent performance data supports plant improvement

## Snapshot

### Client

Veolia UK

### Challenge

Independent data was required prior to a proposed boiler redesign to deliver operational and performance improvement at a waste-fired plant.

### Solution

Our site test campaign measured temperature and oxygen content at separate points within the boiler flue gas path and also air flows into the furnace.

### Benefits

Reliable and independent data on furnace performance supported the design and evaluation of proposed plant improvements. Accurate data for modeling new designs and verifying that furnace temperature and residence times continue to meet regulatory requirements. It also enabled adjustment of plant operational measurements, offering potential efficiency improvement.

Accurate plant performance data is important for operators of energy recovery plants, not only to gain regulatory approval but to ensure plant efficiency. In this case, our independent support also gave our client reassurance in evaluating proposed capital investment in the plant.

### Site test program

Major investment was being considered in redesigning the furnace of our client's energy recovery plant. As a first step, data on the plant's baseline performance was needed for use in computational fluid design modeling by the engineering contractor.

Our Testing and Measurement team carried out a site test program to provide a range of independent data to meet the requirements of both our client and the contractor. We reacted quickly to meet our client's time schedule and gather the data prior to a planned outage.

### Live data for real-time adjustment

Specialist sampling equipment, including suction pyrometers and titanium water-cooled probes, were used to measure furnace temperature and oxygen content at grids of sampling points in four different locations. Primary and secondary air flows into the furnace were measured at three locations.

Measurements were taken over a two-day period during which we fed back live data for the plant to compare against operational measurement data. This allowed for real-time operational adjustments with potential efficiency improvements and cost savings.

### Advantages of our service

- Independent of equipment manufacturers
- Accurate and quality assured measurements
- In-house specialist monitoring equipment
- First-hand experience in developing energy recovery plant
- Quick response to client needs

## Discover Energy Services

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