

Hot tap buried sample probe

Value Case Study



Reliability and operability

Project: NIA_NGGT0033 Hot Tap Buried Sample Probe

PEA cost: £610k

Duration: 2 years 6 months

Supplier: Orbital, Macaw, JAS, Mott McDonald

PEA benefits: £310k and safety

Benefits realised: £1.3m

Key outcomes:

Implemented across all

37 sites

£1.3m

cost savings

Background

New gas analysers are being installed across the NTS to replace obsolete analysers and improve the accuracy of calorific value calculations. To meet the stringent gas sampling requirements, new sampling probes are needed. Three new probe designs and construction techniques were developed and field tested in order to create a holistic solution for probe/sample installations across the NTS.

What's new?

In the construction phase, the new sample probe designs (above) reduce the amount of civil excavation work and construction materials required in comparison to conventional sample pit and platform construction methods.

Traditional sample probe solutions used at the 37 calorific value sample points across the NTS required employees to work at height and within confined spaces in sample pits. It was a two-man operation and required specific training. The new sample probe solutions ensure the maintainable plant is at ground level, providing improved access and reducing human factor risk.

The benefits

- Reduced design/appraisal costs due to standardisation of design
- Reduced project delivery time
- Quicker and easier installation
- Reduced health and safety risks
- Improved working conditions
- Lower installation costs
- Reduced operational costs
- Minimal concrete requirement
- Reduced carbon footprint
- Application for gas distribution networks.

Financial Savings

The hot tap buried sample probe delivered significant savings in comparison to traditional sample pit and platform construction methods. Cost savings are achieved through reduced excavation work and sample pit/platform materials, as well as shorter project delivery time with consequently lower project service costs. The new technique delivered a total saving of £1.3m across 37 installations.

