


OSIL instruments and systems

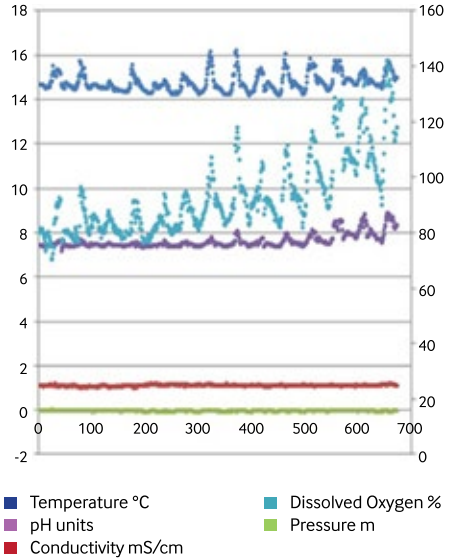
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fracking
monitoring





Requirements for monitoring fracking operations are specified by the permit issued by the Environment Agency under Environmental Permitting Regulations 2010 (EPR) and are site-specific, depending on the existing groundwater and surface water systems.

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The process of Hydraulic Fracturing (fracking), where gas is extracted from shale rock, poses a potential threat to the surface and ground level water network. The quantities of chemicals and minerals used in the extraction process, along with the huge volumes of water required, mean that implementing a reliable fracking monitoring process is crucial to allaying concerns and ensuring that the environmental impact of the process is fully understood.

OSIL offer various real time continuous monitoring systems for hydrocarbons, water quality, etc. for fracking operations. Instruments can be set up to continuously monitor and autonomously record changes to the surface and ground water system. Real time data is then transmitted via telemetry to on-site base stations and/or to a web-based data display.

Collecting baseline or background data prior to drilling is vital in order to understand the existing regional surface and groundwater system, and can be achieved through the use of multiparameter monitoring equipment.

During operations the environmental impact can be assessed by monitoring of the aquifer water network, including data on flow back water. OSIL is able to provide field instruments with a small enough diameter to allow them to easily fit down a 2-inch well. Process (sampling) monitors enable data to be collected on a variety of parameters relating to flow back water. Automated responses can be configured for specific alarms, e.g. allowing water supplies and pumps to be shut off or diverted for potential treatment.

The same system can be left in place for post fracking monitoring, providing a complete monitoring package.

Parameters covered include:

- **Conductivity**
- **Temperature**
- **Pressure**
- **pH**
- **Dissolved Oxygen**
- **Methane**
- **Radionuclides**



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