

Surface Water Investigation - Thornton Cleveleys - Summary

Background

Between September 2024 and January 2025, WSP Ltd - working for the Environment Agency - conducted 4 rounds of surface water sampling as part of an ongoing investigation into potential historical chemical releases from the AGCCE Ltd facility, part of the former ICI Ltd complex. The aim was to assess a wide range of typical chemicals, including per and polyfluoroalkyl substances (PFAS), at 13 locations on Royles Brook, Hillylaid Pools, and the Wyre Estuary - locations that have received treated effluent and/or site drainage.

A 5th monitoring round was conducted between 24–25 April 2025 to assess additional contaminants not previously tested, including petroleum hydrocarbons, BTEX, MTBE, heavy metals, dioxins, furans, phenols, plus other water quality parameters.

Samples were taken upstream and downstream of the facility. This forms part of a broader contaminated land inspection of the AGCCE Ltd site and adjacent land led by the Environment Agency for Wyre Council.

Key Results

- **PFOA** (perfluorooctanoic acid) was detected at all 13 sampling locations. The highest concentration (19.2 µg/l) was recorded at Hillylaid Pools, a stagnant water body near a known factory discharge point. Levels appear to decrease downstream.
- **VOCs** (volatile organic compounds) were primarily found in downstream Royles Brook samples, with peak concentrations of TCE (346 µg/l), cis-1,2-DCE (285 µg/l), and vinyl chloride (45.6 µg/l).
- **Hydrocarbons:** Elevated concentrations of hydrocarbons were detected at Hillylaid Pools downstream of a factory discharge point. These results were consistent with hydrocarbon odours emanating from the relatively stagnant waters. Trace detections were observed at other inland sampling points on Hillylaid Pools and Royles Brook.
- **BTEX** and **MTBE:** Whilst detectable concentrations of benzene and toluene were detected within inland surface waters, concentrations did not exceed relevant quality standards.
- **Heavy metals:** Concentrations of heavy metals were generally low. Marginal exceedances for mercury were observed at two locations on Hillylaid Pools and Royles Brook.
- **Dioxins** and **furans:** Dioxins were observed at detectable concentrations in the sample from Hillylaid Pools downstream of a discharge point.
- **Phenols:** Phenols were not detected above LOD in any of the surface water samples collected.

Conclusions

Current data is limited to surface water quality. Whilst contamination from a variety of industrial chemicals is evident, with concentrations in many cases above relevant screening levels, the source and mechanisms of transport are not yet fully understood. Groundwater data from the area is needed to improve our understanding and assess the extent of subsurface contamination and potential for migration.

Next Steps

We continue to engage with AGCCE Ltd, who are currently undertaking a voluntary inspection of the main site. While we now hold a robust dataset on the chemical status of surrounding watercourses, further clarity is needed regarding potential subsurface contamination beneath the facility that may be contributing to wider environmental impacts.

AGCCE Ltd plans to carry out a site investigation this autumn, with reporting expected in early 2026. This will provide the regulators with the necessary information to help assess environmental risks more comprehensively and, where appropriate, consider mitigation measures.

In parallel, the company remains subject to its Environment Agency permit obligations, which include monitoring active emissions and adjacent watercourses. Where required, suitable abatement measures must be implemented to ensure compliance and environmental protection.