

Avonmouth Bioresources Centre (BC) – IED Risk Mitigation Measures

As part of our risk mitigation at Avonmouth BC, our operational teams are focused on delivering and maintaining interim risk mitigation actions in line with Best Available Techniques (BAT). These measures include a combination of:

- established business-as-usual practices;
- ongoing initiatives; and
- minor projects.

Examples of these measures are outlined below. These are being implemented in parallel with the construction BATs at each site:

Operational techniques

Mitigation measure	Comments
Groundwater monitoring	Groundwater monitoring is being undertaken within the proposed IED permitted area to continue to build a data profile and monitor existing assets.
Pipeline walks within the operational task sheet	Frequent pipeline walks are being implemented within the proposed IED permitted area, following a review that is planned of the sites' service plans. This will act as mitigation whilst the secondary containment solutions are in development and prior to implementation.
Operational tasks review	An ongoing project is being undertaken to review all the operational task lists within the proposed IED permitted area, to ensure that the operators have sufficient guidance and direction to work in accordance with BAT.
Digestion process monitoring	<p>Operations monitor the digestion process in accordance with the Digestion Process Monitoring Description submitted during the permit application. By utilising telemetry and sample data, the operational teams optimise performance, minimise the risk of digester upset, and reduce diffuse emissions.</p> <p>As part of routine monitoring, residual biogas analysis is carried out, providing valuable insights into the overall efficiency and health of the digestion process.</p>
Leak Detection and Repair	<p>LDAR (Leak Detection and Repair) surveys are conducted every six months. Any leaks identified are incorporated into a structured repair programme, which has led to a reduction in diffuse emissions.</p> <p>Operations are using methane detection equipment to proactively identify leaks and verify the effectiveness of repairs between scheduled LDAR surveys.</p>

Management system reviews:

Mitigation measure	Comments
Site drainage plan reviews	There is an ongoing review being conducted of the site drainage plans. This is being completed by competent in-house expertise and will be continually updated and reviewed. GPR surveys are also being commissioned to gain a comprehensive overview of the underground assets where this is not already available and site infrastructure asset plans.
Traffic management reviews	Avonmouth BC has a traffic management plan and is continually reviewed in accordance with providing additional vehicular protection to primary containment structures where there are significant risks. Avonmouth has a specific Engineering schemes that has reviewed these risks and has implemented protection measures or they are currently in construction.
Primary containment plan review	A renewed primary containment plan is being generated with the assistance of asset management consultants in order to comply with the affiliated BATs. Whilst this is underway, the site teams are asset condition grading vessels and tanks. Additionally, we have undertaken primary containment cleans and inspections that are informing repairs and future investment needs. If the tank is not in a suitable condition, it will be repaired, replaced or removed from service. Two tanks have been recently replaced at Avonmouth BC.

Minor projects:

Mitigation measure	Comments
CCTV investigations of underground pipework	CCTV investigations to support the condition monitoring of the underground pipework are currently underway at Avonmouth. This is being done in a phased approach and will inform the site drainage plans and asset condition monitoring.
Targeted temporary secondary containment	Areas of the IED permitted site are undergoing risk assessment with reference to nearby sensitive receptors. Following this a trial will be conducted to implement an interim secondary containment measure to protect high risk areas.
Increased telemetry on vessels	Rate of change alarm implementation on tank levels are being investigated as an emergency detection measure for any rapid changes in levels within the tank.

