



NEWS RELEASE

Severn Trent Water's Monkmoor Sewage Treatment Works - Shrewsbury

Testimonial

"The OCS Safecovers and Peacemaker filter-scrubber units have exceeded all our expectations and we have not received one single smell complaint at Monkmoor from the day they were commissioned," says Alan Boyd. "Indeed they have been so successful that we have recently awarded a further £300K contract to OCS for a similar turnkey installation at our West Midlands site at Minworth."

Contact

For further information, please contact:
Mr Naylor - 01244 536700

Severn Trent Water's Monkmoor Sewage Treatment Works, on the outskirts of Shrewsbury, opened in 1900 and as the population of the area increased, it gradually expanded as demand and water treatment technology was embraced. Today, it handles the sewage treatment and disposal requirements of a population of 90,000 and trade effluent, which includes an abattoir and cattle market, equivalent to another 20,000. Management at Monkmoor has always prided itself that the Works has always complied with tight discharge consent.

In the 100 years since the works was built, the surrounding area has gradually been developed, culminating in the building, almost up to the boundary fence, of the Telford Housing Estate. Inevitably, staff at Monkmoor soon started to receive complaints of objectionable smells from local residents and over time these became more regular and vocal. To make matters worse, the main source of the smells, the imported sludge tanks, was located in an area of the works closest to the new houses.



Severn Trent Water, recognising its environmental responsibility to its customers, therefore put the problem of solving the smells issue in the hands of Regional Sewage Treatment Manager, Alan Boyd.

Alan was happy to take on this task as, in addition to being responsible for the day-to-day running of Monkmoor, he was also a member of the National Odour Group – a body set up by the UK water industry to prepare a code of practice for odour control at waste water treatment facilities. He knew that the experience gained at Monkmoor would be invaluable to the Group.

Alan's first task was to identify the key sources of odour generation.

These were:

1. The imported sludge/septic tank waste sump
2. Two sludge storage/consolidation tanks
3. Four primary sedimentation tanks' desludging wells

Having identified the main sources of the objectionable smells, he then investigated the odour abatement methods currently employed in other wastewater treatment plants. Of these, the type generally favoured appeared to be a biological filter system; but Alan recognised that this was not ideal for his situation.

Said Alan "Due to biological systems' requirement for long odour retention time, the preferred design would be for one large centralised filter, treating our multiple odour sources via extensive runs of above ground ducting. This would have been unsightly and could have caused on site difficulty with vehicle movements. The need for extensive civils to provide a base for the filter, large capacity extract fans and complex ductwork runs also make this a costly solution, he said. "Additionally we would have been 'putting all our eggs in one basket'. If for some reason we had to take one section off line, the whole system would be out of action, releasing odours into the atmosphere and triggering further complaints."

He then looked at the alternatives, calling in specialists Odour Control Systems Ltd. (OCS). He knew the company was an approved supplier to all UK Water Companies and that their cover, collect and odour treatment systems were being used successfully at other treatment plants. He also knew that OCS had the resources and expertise to provide a full turnkey service including system design, manufacture, civils, commissioning and maintenance.

Following a site survey, OCS recommended tackling each smell source individually by fitting each with a 'Safecover' GRP cover linked to an adjacent 'Peacemaker' Filter-Scrubber Unit(s) by a short run of uPVC ductwork. The OCS proposal was finally accepted after Alan visited a Welsh Water site using this type of system and was able to see for himself the effectiveness of the covers and Peacemaker units.

The order was placed with OCS and since commissioning in spring 1998 not one smell complaint has been received at the works.

Good odour control starts with well sealed, close fitting covers to each smell source. OCS Safecover structural GRP covers, combine the strength and toughness of a steel cover with outstanding corrosion and chemical resistance. Individually designed and manufactured to fit the required shape, Safecovers are strong enough to support personnel loading and can therefore also be used as a walkway or working platform. Due to the above design the covers are flush with the top of the tank or sump and thus do not increase the volume of air required to be extracted, keeping fan and duct sizing to a minimum.

Interconnecting ductwork and air extraction fans create a partial vacuum to the covered odour source, drawing foul air to the Peacemaker filter-scrubber. Available in four standard sizes, each Peacemaker is of a modular design and comprises: a foul inlet chamber; lower air diffusion plate and odour oxidation media chamber, middle air diffusion plate and an upper polishing media chamber.

Foul air is drawn into the Peacemaker's inlet chamber and diffused via the lower plenum chamber which maximises its distribution across and through the dry impregnated media granules held in the odour oxidising chamber.

The impregnate is chlorine dioxide, which is stabilised within the media. This powerful oxidising agent rapidly oxidises most of the odorous compounds found in off-gases from wastewater treatment processes (e.g. sulphides to sulphates, mercaptans to sulphonates and sulphonic acids and amines to carboxylic acids).

Products of reaction with the chlorine dioxide are odourless and environmentally sound.

From the lower oxidising chamber, air is drawn into the upper polishing chamber, which contains adsorptive media, which further removes any remaining odorous compounds. Independent tests have proved that the Peacemaker will effectively remove 100% hydrogen sulphide and mercaptan compounds even at very high peak loadings.

At Monkmoor, Peacemaker 3000 modules handle odours from the sludge storage tanks and the imported sludge/septic tank waste sump whilst smaller 400 modules cater for the odours emitted during desludging of primary sedimentation tanks.

Peacemakers and Safecover collect and treat systems are entirely manufactured in-house at Odour Control Systems Hawarden and Doncaster factories and with over 250 units currently successfully operating at waste water treatment plants throughout the UK, they are now recognised as the industry's preferred method of odour control. Media life and system performance are both guaranteed for a contract period resulting in a genuine 'fit and forget' system.

In conclusion, Alan Boyd is delighted. "The OCS Safecovers and Peacemaker filter-scrubber units have exceeded all our expectations and we have not received one single smell complaint at Monkmoor from the day they were commissioned". Indeed they have been so successful that we have recently awarded a further £300K contract to OCS for a similar turnkey installation at our West Midlands site at Minworth.

preserving the environment

Odour Control Systems Ltd
33a Castle Close, Manor Lane
Hawarden Industrial Park
Hawarden, Flintshire CH5 3QX

Phone: +44 (0)1244 536700
Fax: +44 (0)1244 535184
E-mail: mail@odourcontrolsystems.ltd.uk
Web: www.odourcontrolsystems.ltd.uk



Certificate No. 7174

