

COMPLETION REPORT

Client : **Media Corporation**

Project Brief : **The Internal Lining of 1 No. Sectional GRP CWS Tank**

Site Address : **North of England**

System Spec : **3M Scotchkote™ 165PW**
(Formerly Known as COPON Hycote 165PW)

Film Thickness : **1000 Microns**

Completion Date : **25th September 2009**

Compiled By : **David Snell**

Covac Ref : **903**

SUMMARY OF WORKS

The Brief

1 No. externally bolted (with internally bolted floor) Sectional GRP cold-water storage tank (CWST#6) located within the roof space above the office's ceiling tiles of the Outside Broadcasting Building / Garage and is sized at approximately:

Total tank size (minus external insulation) - 1.5 x 1.0 x 1.0mtr high

There were several water leaks around the base of the outlet pipe as well as small signs of gel coat blistering and black spore fungi (see pictures), which is notorious for spreading on various grades of GRP, predominantly where there is a combination of water and air at room temperature. The problem faced by all engineers who are responsible for the maintenance of GRP tanks is that even with regular cleaning and chlorination, bacteria such as micro-aquatic organisms will continue to multiply as they are protected by air filled cavities and fine cracks that often cannot be seen with the naked eye.

Another common fault associated with GRP tanks, which was the main concern on this tank, is the deterioration of the mastic used between the sectional GRP panels and subsequent leaking of water. The mastic used in these joints often deteriorates rapidly following years (sometimes months) of use and this, combined with the excessive structural movement of the plastic will lead to eventual leaking of the tank. The consequential loss of water through these joints can be catastrophic as highlighted by the damaged ceiling tiles though could have been significantly more if not highlighted early enough.

If left untreated, the internal surfaces will continue to be at risk from bacterial growth including Legionella, Pseudomonas and Biofilm; this can lead to further deterioration in the tank's surface structure and contamination of the down services with the supply of unhygienic water to the outlets.

We are all now under an obligation to ensure that water retaining structures comply with the practical guidance of ACOP L8 and subsequently, utilize products that comply with WRAS / DWI Regulations and, therefore, maintain "the cleanliness of the system and the water in it" and avoid the "use of materials that harbour bacteria and other micro-organisms or provide nutrients for microbial growth".

COVAC would highly recommend a full internal lining to the tank, complying fully with current stringent water treatment regulations with a protective internal coating which we can confidently guarantee for a minimum of 10 years, with additional benefits of ease to regular monitoring, annual cleaning and most importantly, the client's peace of mind.

We therefore, recommended the following scope of works: -

GRP Manual Preparation

Brush & Roller Application



These photographs show the internal surfaces of the tank having been drained of water, but prior to any work commencing.



Black spore fungi can be clearly seen and there is also evidence of small blisters developing in the gel coat.





These pictures show the internal substrate of the tank after preparation by COVAC Operatives, in order to raise a suitable surface profile on the substrate and promote optimum adherence of the 3M Scotchkote™ 165PW lining system.



All joints were treated to prevent leaks and allowed to cure.





The following photographs show the final application of 3M Scotchkote™ 165PW (grey).



