

COMMERCIAL CONNECTION

CODE BROWN

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For those companies helping operate commercial pools, there are added complexities not found in many residential pools. Among the most critical are dealing with required protocols for Fecal Accidents, also known as AFR (Accidental Fecal Releases) or "Code Browns" for short. While some facilities will take direct responsibility for these, and not involve the pool servicing pros, others may delegate this to their service company, and thus you need a great working knowledge of the requirements.

Many of these protocols have not substantially changed in the past 8-10 years. However, it's always good to review these guidelines to help evaluate the facilities' compliance. There are also new opportunities that can

provide facilities some options for treatment.

The most popular and trusted AFR protocol comes from the CDC (Centers for Disease Control) who had their guidelines promoted in industry magazine articles and newsletters as early as 2002 (<https://ceswaterquality.com/wp-content/uploads/2025/01/athletic-business-CDC-2002-hunsaker.pdf>) and published their "Fecal Accident Response Recommendations for Pools" handout in 2008 (<https://ceswaterquality.com/wp-content/uploads/2020/03/CDC-2008-fecal-accident-response-guidelines.pdf>). Prior to this exhaustive guideline, which utilizes hyperchlorination (lots of chlorine), there was a lot of confusion as to the best way to handle fecal releases among health

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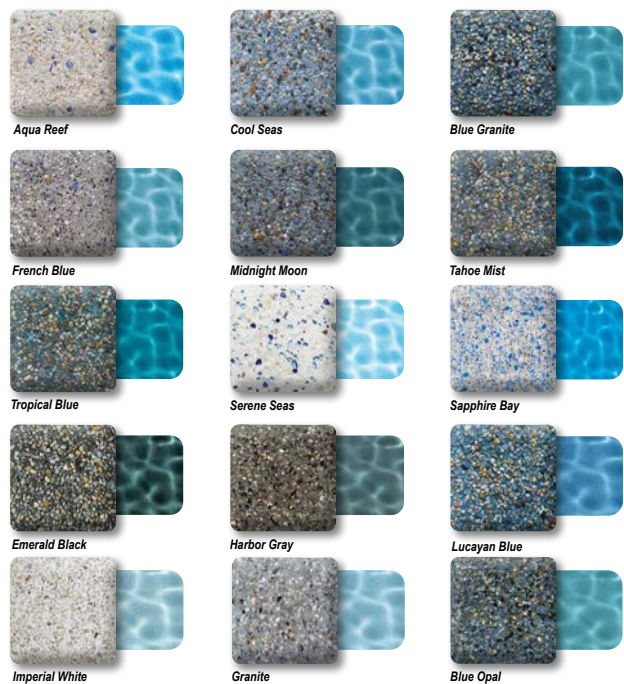
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departments and operators alike. Previously, some health departments had gone as far as having customers drain and pressure wash pools, and empty and replace filter media, etc. Having a (consistent and reasonable) published protocol was a very welcomed change.

The CDC guidelines were updated and re-published in 2016, integrating valuable new research about the oxidation-limiting properties of cyanuric water (stabilizer) in pool water (<https://ceswaterquality.com/wp-content/uploads/2020/03/CDC-2016-Guidelines-for-AFR.pdf>). They mirrored what leading treatment experts already knew... that the presence of stabilizer in the water reduced the kill power of chlorine and correspondingly lowered the ORP (oxidation reduction potential) in pool water. Simply put, stabilizer is a chemical, found in powdered or tablet form, that protects the chlorine molecule from destruction by ultraviolet rays, but the protection of the molecule goes both ways, limiting chlorine "kill power." Fortunately, indoor pools don't need to deal with the added complexity of using stabilizer as there is little sunlight on an indoor pool, but all outdoor pools do.

How about post fecal accident treatment? The CDC guidelines separate solid (formed) accidents from liquid ones, and prescribe two different treatment paths. (Sorry to talk about poop here.) Formed fecal accidents are easier to deal with, as one must: Close the pool, remove fecal matter, raise the chlorine level to 2.0 PPM for 30 minutes, and reopen the pool to bathers. This is a relatively quick and painless process.

Treatment of non-formed (liquid) AFRs is much more complex and demanding. If there is NO stabilizer in the water, one must: Close the pool, remove fecal matter, and raise the pool to a CT (chlorine concentration X minutes) of 15,300 CT. This is achieved by maintaining 20 PPM of chlorine for 12.75 hours, 10 PPM of chlorine for 25.5 hours, or

any combination that give you 15,300 CT. Wow, that's different, isn't it.

Non-formed treatment in the presence of stabilizer is even more complex and demanding. If the stabilizer level is <15 PPM, one must: close the pool, remove the fecal matter, raise the chlorine to 20 PPM for 28 hours, or 30 PPM for 18 hours, or any combination that would result in a CT of 33,600. That is a LOT longer, isn't it? Think that is bad? If the stabilizer level is above 15 PPM, the operator must drain the pool until it reaches a level <15 PPM, and then follow the protocol above. This could potentially take one or more days depending on the facility.

There is however a new option for operators that was recently approved by the EPA – Environmental Protection Agency –



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the governing body for approving new treatment technologies. This treatment, named Cryptolyte® (<https://truoxaquatics.com>) is a unique multi-oxidizer process that has approval to "control, confirm, and document" treatment of Cryptosporidium in as little as 30 minutes, depending on the facility turnover rates and feeder sizing. This process complies with CDC and Model Aquatic Health Code language, and is in process of getting a thumbs up from various state health codes, although approval is immanent as the EPA is the ruling body on these types of systems.

The Cryptolyte® process is precise and somewhat involved, but not too expensive, not overly complicated, and is proven to work. This offers promise for those facilities where fecal accidents are causing a major interruption in their operations.

Compared to some of the others such as

water parks and municipal pools, some condo and club pools appear to have a more tightly controlled environment with internal protocols, and swim diapers, which would limit AFRs. So, the need for AFR treatment should be much lower than others...but accidents happen. However, those helping operate hotel or resort pools may have to deal with AFRs on a lot more consistent basis, so getting in the know is probably a great idea.

Once AFRs occur, the operator must make sure to carefully follow the 2016 CDC hyperchlorination process described above or investigate other options, as the consequences of Cryptosporidium are very severe, and ultimately could result in someone losing their life. Any time or money saving protocols surely could point to a great payback for any added expense of limiting AFRs in your subcontracted pools.

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