



Operator Implements Innovative Biocide Treatment to Eradicate Acid Producing Bacteria in Frac Water

COMBINATION MULTI-CHEM BIOCIDES SYSTEM USED TO COST-EFFECTIVELY SAVE 650,000 GALLONS OF WATER FOR RE-USE

LOCATION: WHEELER, TX, UNITED STATES

CHALLENGE

- » Mitigate growth of APB bacteria in 31 tanks of frac water
- » Work within strict scheduling constraints to ensure on-time fracturing treatment

SOLUTION

- » Applied Multi-Chem B-8510 and B-8625 biocides to water tanks

RESULT

- » Removed bacteria with a single treatment, requiring just two people and three hours
- » Saved 650,000 gallons of water for re-use

OVERVIEW

An operator located in Wheeler, Texas encountered a sudden, emergency bridge plug leak, forcing them to postpone an imminent fracturing treatment for one month during repairs. This unforeseen delay meant that the ready-to-go frac water would be left standing for approximately 30 days in 31 frac tanks on location. The main concern in such circumstances is bacterial growth, and that's exactly what happened in this case.

Once the leak was fixed, the frac water was tested as part of Halliburton's routine pre-frac testing requirement, and found to have a serious acid producing bacteria (APB) issue. The options were to dispose of the 31 frac tanks and truck in new water (~130 truckloads), or treat it on-the-fly with a conventional biocide, which was not readily available in the region. Timeliness was a key factor, as only six days remained until the re-scheduled frac job needed to be set up, meaning the bacteria problem had to be resolved immediately.

Halliburton's local team came to the customer's aid by providing an innovative, cost-effective biocide to treat the 650,000 gallons of water onsite in a timely manner. Making use of products that were already on hand was the most efficient way to go, i.e., a combination of Multi-Chem's B-8510 and B-8625 biocides. Although this was not the traditional way to treat tanks, once the possibility was explored, it turned out to be a fairly simple treatment solution.

PROJECT DETAILS

Multi-Chem executed a planned operation which included bacterial testing to determine effectiveness immediately after treatment. First, water trucks were used to roll each tank to ensure proper distribution of the biocide mixture. B-8510 was then slurried into fresh water to keep the material properly distributed in the pre-frac blender water tanks before pumping. Finally, monitoring after the single treatment indicated that all signs of bacteria were removed from the water tanks. Overall, the entire operation took only three hours and involved only two people, reducing both the time to treat relative to alternatives, and reducing the overall cost.



KEYS TO SUCCESS

The tight schedule and technical challenges could not have been overcome without great communication between all parties involved in the operation—from the project planners to the water testers. It was absolutely critical that the tanks were treated before the fracturing engineers arrived to set up for the next fracturing treatment job.

The deadline was met and the bacteria successfully removed under unusual constraints, thanks to Halliburton's local team of people, who went above and beyond to ensure the customers' needs were fulfilled. All part of the normal culture at Multi-Chem and Halliburton: we go beyond to make sure our customer's needs are satisfied.



With a cost-effective biocide, Multi-Chem successfully treated 31 frac tanks that were contaminated with acid producing bacteria, saving the operator 650,000 gallons of water.

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