USE CASE BPS 408

Completion Flowback: Successfully executing a completion flowback in Deepwater GoM

BACKGROUND

A deepwater operator in the Gulf of Mexico had a newly completed well that was to be unloaded to the host facility.

During unloading operations of new wells, it is common to encounter emulsions when fluids are returned to surface, and standard equipment is not designed to treat these fine emulsions. The fluid characteristics are hard to predict and contain tight emulsions that are challenging to separate and often do not meet overboard NPDES discharge requirements.

Typically, these fluids are isolated from standard oil and water separation processes and require temporary equipment that allows for compliant water treating.

SITUATION

The Baleen Process Solutions team worked closely with the operator to engineer a custom-tailored solution to achieve the project goals. The operator tasked the team with performing incident free operations, meeting NPDES discharge compliance, getting wells back to stable production quickly, and maintaining an overall project budget.

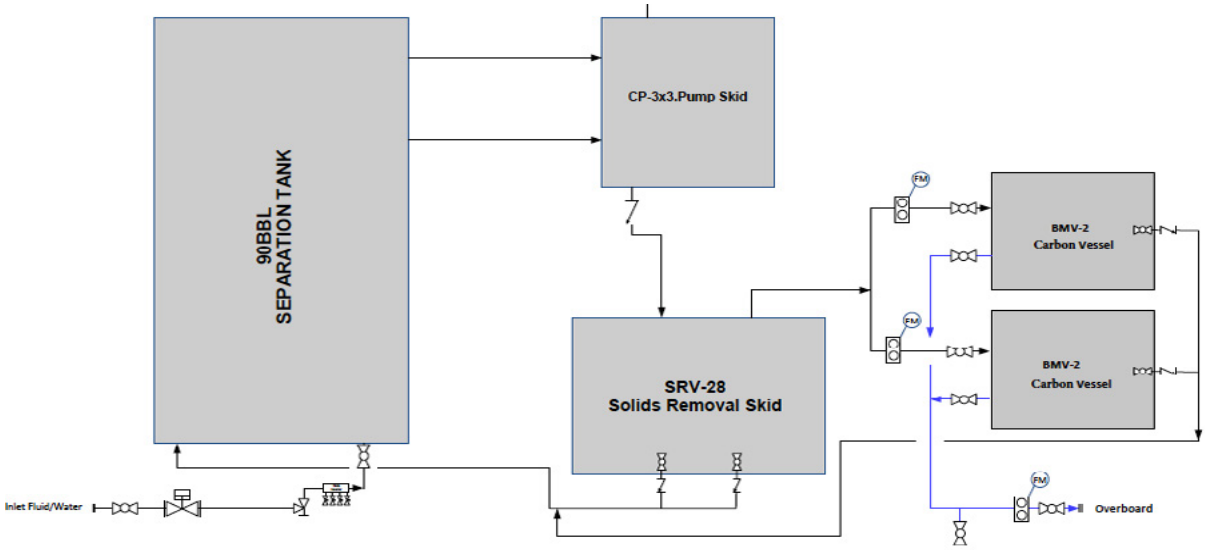
SOLUTION

The custom-tailored design allowed fluids to be discharged while meeting the stringent NPDES overboard compliance standards. The Baleen Process Solutions engineering team provided all documentation (P&ID's, safety analysis flow diagram, safe charts, and procedures) making the regulatory submittal process hassle-free for the operator.

Oil content entering the system that had been designed by the Baleen Process Solutions team often exceeded 400 ppm and process effluent averaging 8 ppm. Effluent always remained significantly below the required NPDES limit of 29 ppm with no sheen. The process allowed for 540 barrels of complex fluids to be treated overboard. Operations were successfully executed with 500 man-hours of incident free activity while maintaining an overall project budget.

RESULTS

The customer tailored solution provided by Baleen Process Solution ensured that 100% of the fluids being discharged overboard met NPDES discharge compliance and that the wells was back to stable production level. The incident free operation was performed while maintaining a low project budget.



The process flow diagram showing bulk oil water separation, fluid pumping, solids removal for pre-treatment and granular activated carbon for water polishing.

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