



MWCC Fact Sheet

Equipment Verification

MWCC has the most comprehensive portfolio of source control equipment to cover a broad range of well characteristics. The Ownership of this system comes with great responsibility to maintain each component in a deployment-ready state so that when deployed, the system functions as intended. System functionality is assured through a combination of equipment demonstrations, periodic functional tests, rigorous preventative maintenance, and inspection programs.

Demonstrations

MWCC conducted full field demonstrations of the most critical and complex components of our response system prior to adding them to our portfolio.

Capping Stack Deployments

Under the supervision of the Department of Interior through the Bureau of Safety and Environmental Enforcement (BSEE), MWCC has mobilized and deployed two Capping Stacks onto subsea demonstration wells. During these live demonstrations, MWCC stood up a full Incident Command System (ICS) Unified Command structure that operated 24/7, beginning at the time of activation through proof of concept. The capping stacks were deployed in two regions of the U.S. Gulf of America. The capping stacks were then guided into position and latched onto the demonstration wellheads. MWCC’s team successfully demonstrated operations for all necessary functions of the capping stacks. Most importantly, MWCC validated the capping stacks could undertake their maximum well shut-in pressures and control compromised wells.

Capping Stack	Single Ram	400°F
Year	2012	2023
Deployment Depth	6,900 Feet	6,200 Feet

Deployment Vessel	Laney Chouest	Harvey Blue Sea
Deployment Method	Heave Compensated Landing System	Active Heave Compensated Crane
Validated Pressure	10,500 PSIG	13,000 PSIG
Man Hours Worked	40,000+	7,000+

Modular Capture Vessel Deployments

BSEE witnessed the complete loading, connection and hook-up of the hydrocarbon processing systems on MWCC's two MCVs. Each of MWCC's two MCVs are outfitted with up to 10 plug-and-play modules that are loaded onto the vessels in the event of an extended flowback activation. The processing modules were connected to the vessels and hooked up to each other in a System Integration Test.

Once fully outfitted with processing equipment, MWCC's vessels embarked on sea trials to demonstrate deployment readiness, a process witnessed by the United States Coast Guard. In addition, MWCC validated Dynamic Positioning capability, or the ability to maintain a fixed position without anchor or mooring lines. MWCC engaged in further verification of MCV marine operations while supporting an extended well test by one of its members. This well test demonstrated successful station keeping through Dynamic Positioning of the vessel and vessel loading and offloading operations.

At alternating five-year intervals, the MCVs are dry-docked, fully removed from the water, to expose the hull and external equipment for detailed inspection. The dry dock also allows MWCC to verify that the mounts for the processing modules have not deflected, meaning the modules will fit seamlessly in place upon re-installation. Once all inspections are complete, the MCVs are returned to service and ready to be outfitted and deployed when needed.





Routine Maintenance

Investing in maintenance and response readiness remains a core piece of MWCC's operations. Our preventative maintenance and functional testing programs were designed to meet the American Petroleum Institute's (API) recommended practices and safety all applicable BSEE & USCG regulatory regiments. In total, MWCC manages 22,000 pieces of equipment. Annually, the organization utilizes 80,000 labor hours and performs 800 maintenance procedures on the Containment System, which helps preserve equipment in ready for deployment condition.

Capping Stacks

MWCC's capping stacks are essential to our Containment System and our top priority is assuring their functionality during a response. To that end, each capping stack undergoes monthly visual inspections where an inspector examines all of the external components to verify integrity. In accordance with the Well Control Rule, on a quarterly basis, MWCC function tests each capping stack to make sure all valves and rams function precisely as intended. Semi-annually, MWCC conducts pressure verification on each capping stack. During a pressure verification, the capping stack is hooked up to a Hydraulic Pressure Unit (HPU) that creates pressure using a series of pumps to exert a force equal to the maximum working pressure.

In addition to maintenance routines regularly performed by the MWCC team, the BSEE conducts annual inspections and verifications. Additionally, MWCC uses DNV GL, the world's largest classification society, to conduct regular independent third-party verifications on our capping stacks.

Supportive Equipment

MWCC maintains several pieces of supportive equipment at our SURF Shore Base, these include our dispersant stock, water column monitoring kit, wellhead straightening tool and interim collection equipment including top hats and riser insertion tube tools. All support equipment is maintained with the same rigor as our capping stacks and extended flowback equipment. Both visual inspection and function testing are used to verify response readiness. BSEE performs annual inspections in conjunction with audits of our members' oil spill response plan.

Modular Capture Vessels & Extended Flowback

MWCC complies with a robust maintenance program approved by the American Bureau of Shipping (ABS), the world's leader in setting safety standards for tankers and vessels used for offshore energy operations. All required certifications are maintained on both of our two MCVs. Furthermore, BSEE and the United States Coast Guard conduct annual inspections to confirm the vessels are maintained to meet all regulatory standards. The ships remain in active use transporting hydrocarbons in the U.S. Gulf of America from large international oil tankers parked offshore to and from processing and refining facilities onshore, a process called lightering.

The topsides processing modules, used to separate the oil from gas on the vessels, are stored at our MCV Shore Base in functioning, or warm stacked, condition. Warm stacking indicates that these systems remain fully functioning with the control system turned on; this maintains the integrity of the equipment and confirms that it is deployment ready. System testing and verification meet offshore standards for production facilities as defined in 30CFR250 Sub-part H and are inspected by BSEE at the same frequency as offshore facilities in operation.



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C O M P A N Y



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