

PROFESSIONAL DEVELOPMENT HOURS (PDHs) CERTIFICATE

Presented by
Society of American Military Engineers
Tulsa Post

This certifies that

attended the below described presentation at the November Monthly Luncheon, sponsored by the SAME Tulsa Post on **November 13, 2018** at the USACE Tulsa District offices located at 2488 E 81st St, Tulsa, OK 74137. This program covered technical issues relevant to the engineering profession as outlined below. Speakers may double the PDHs for their topic.

Broken Bow and Hugo Dams Bulkhead Design – Innovative Cost-Effective Closure System for the Future
Speaker Miro Kurka, Vice President, Water Resources Group Leader at Mead & Hunt. Both dams, under the USACE Tulsa District, required replacement of their temporary closure system. The bulkheads would block water from flowing through the tainter gate bays when the tainter gates are serviced or inspected. From the start, the District wanted the new systems to be durable, cost-effective and easy to operate. Results from a multiple gate closure system study with individual life-cycle cost analysis for each project was a single segmental bulkhead to be used at both lakes. Following the studies, the District issued a task order to the Mason & Hanger and Mead & Hunt Joint Venture for the preliminary design and cost estimate for the single segmental bulkhead system at both locations.

The bulkhead design were not without challenges, which included but not limited to: use of one crane for loading, unloading and assembly (75-ton lift); accommodate a six-foot variation for reservoir level operating; no divers utilized for assembly or placement of the bulkhead; challenging geometry, design heads, spans and support conditions; maintain marine stability of individual segments of the bulkhead during assembly, towing and movement between bays; and design bulkhead in accordance with USACE Engineer Technical Letters on hydraulic steel structures.

In the fall of 2018, the final 100 percent plans, specifications, design documentation report, cost estimate and operations manual were submitted to the District.

Total PDHs awarded: 1.0 hour

Important: Each member is responsible for applying for his or her own PDH credits with their respective licensing/certification board. The Society of American Military Engineers cannot guarantee that all boards will accept all PDH credit; please check with your licensing board for more information.



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2018 1st Vice President
SAME Tulsa Post