FRESHWATER MOLLUSK CONSERVATION SOCIETY
1417 HOFF INDUSTRIAL DR.
O'FALLON, MO 63366

December 2, 2013

J.W. Mauger, Capt COMDT (CG-ENG)
2703 Martin Luther King, Jr. Ave. SE
Stop 7509
Washington, DC 20593-7509

RE: PROPOSED POLICY LETTER: CARRIAGE OF CONDITIONALLY PERMITTED SHALE GAS EXTRACTIONWASTEWATER IN BULK

Dear Captain Mauger;

The Freshwater Mollusk Conservation Society (FMCS) is dedicated to the conservation of, and advocacy for, freshwater mollusks, North America's most imperiled animals. FMCS is an international professional scientific society made up of state, federal, academic, and private scientists and conservationists, many of whom work directly with the nearly 150 endangered and threatened mollusks. Our members are considered experts in the conservation and recovery of freshwater mollusks.

The Ohio and Mississippi rivers are renowned for their freshwater mollusk communities, including many rare species. The Ohio River Basin, once home to 127 species, is today home to 46 mussel species classified as endangered or species of concern. The mainstem Ohio River currently supports populations of at least 50 species of mussels, six of which are federally endangered, including the Pink Mucket (*Lampsilis abrupta*), Orangefoot Pimpleback (*Plethobasus cooperianus*), Fat Pocketbook (*Potamilus capax*), Sheepnose (*Plethobasus cyphyus*), Clubshell (*Pleurobema clava*), and Fanshell (*Cyprogenia stegaria*). Approximately 63 species of freshwater mussels are known from the lower Mississippi River. Many federal and state agencies are working together to actively re-introduce species and restore historic populations back to the Ohio River. As the preeminent society focused on the conservation of these rare species, the FMCS is concerned with the recent proposed policy allowing the bulk carriage of conditionally permitted shale gas extraction waste water (SGEWW) on these important inland waterways.

SGEWW is a by-product of drilling for natural gas using unconventional hydraulic fracturing technology, which involves the injection of water, sand, and chemical additives. The sand remains in the well but a substantial portion of the injected fluid re-surfaces after the drilling and

must be handled as SGEWW. At present, this SGEWW is either stored at the drilling site or transported by rail or truck to remote storage or reprocessing centers. There is commercial interest in transporting SGEWW from northern Appalachia via inland waterways to storage or reprocessing centers and final disposal sites in Ohio, Texas, and Louisiana.

Under certain circumstances a bulk liquid hazardous material may be transported by a tank vessel if it is a "listed cargo". Unfortunately, SGEWW cannot be considered a "listed cargo" because the specific chemical composition of SGEWW varies from one shipment to another and may contain one or more hazardous materials. Variables affecting the chemical composition of SGEWW include the chemicals present in the initial drilling fluid, the geological properties of the specific site being drilled, and the age of the well. In addition, each load can be a mixture of SGEWW from different wells.

Because of the nature of the undefined fracking brine water and fluids that are to be transported, we feel that the decision to allow the shipment of these materials could subject freshwater mollusks in the Ohio and Mississippi rivers to a new threat and transfers the environmental risks of such transportations to the states, many of which may not be able to respond in an appropriate manner to accidents, spills, and the like, thereby possibly endangering mussel and snail communities for many river miles before the SGEWW becomes diluted enough for these animals to survive.

Waste water from fracked wells have allegedly been implicated in devastating fish and mussel kills in Dunkard Creek in PA and WV. New protective measures should be put in place prior to permitting any transport throughout our fragile waterways.

Our membership stands ready to assist with the conservation of our freshwater mollusk resources.

Sincerely,

Stephen E. McMurray, Co-Chair, Environmental Quality and Affairs Committee
Freshwater Mollusk Conservation Society