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TESTIMONY FILED IN OPPOSITION OF 5307

Members of the Environment Committee;

I would like to thank you for the opportunity to speak here before you today. My name is Christopher S. Begley, I am a fourth generation Merchant Marine Officer. I have spent more than 28.5 years at sea with the last 20 years as an Unlimited Tonnage Ship's Master (Captain) in the domestic and international trade. I am a United States Coast Guard Licensed Harbor Pilot in New York, New Jersey, Virginia and Alaska. I am retired Naval Reserve Captain with over 30 years of service. I have been serving my community as a Volunteer Firefighter for more than 34 years. I have responded to and been involved with accidental discharges of petroleum products in the water. I am not representing or speaking in any official capacity to the aforementioned organizations.

I want to address the preemptive booming process that is currently in place in New Haven and all other Connecticut ports. The Connecticut State Statute 22a-457a provides for and requires all vessels to be preemptively boomed while loading or discharging petroleum cargos. This has provided an added layer of protection to the environment, commerce, property and the citizens of the State.

The American Petroleum Institute Environment, Health and Safety Publication: Spills and Accidental Releases states that the objective of booming is to prevent oil from

contacting resources at risk, and to facilitate oil removal. (1) Generally, the strategy for cleaning up a spill begins with localizing the spill, using a variety of booms. Booms can be used in several ways: containment booms keep the oil from spreading; collection booms hold the oil near the ship, pier or terminal; deflection booms steer the oil towards collection areas and away from sensitive areas; and protection booms create barriers that keep oil from affecting sensitive areas.

The State of Washington has recognized that Pre-booming is the first line of defense. While the State's Ecology Department's first priority is preventing spills from occurring, pre-booming oil transfers is the state's first line of defense should a spill happen. Pre-booming helps prevent damage to state natural resources which are especially important in an already threatened Puget Sound where the bulk of oil transfers are occurring.

Pre-booming can:

- Prevent or reduce environmental damage.
- Speed clean up and reduce cleanup costs.
- Reduce economic impacts on the community where a spill occurs. (3)

It is my opinion that is supported by numerous articles and printed texts, the pre-emptive booming of vessels transferring gasoline at any New Haven Terminal is a viable, safe and environmentally sound process that serves the best interest of the public and environment.

The Oil Pollution Act of 1990 §4202 Strengthens planning and prevention activities by:

(1) providing for the establishment of spill contingency plans for all areas of the U.S. (2)

mandating the development of response plans for individual tank vessels and certain facilities for responding to a worst case discharge or a substantial threat of such a discharge; and (3) providing requirements for spill removal equipment and periodic inspections. The pre-emptive booming has been included in these plans and in the various terminal response plans since the original bill was passed.

The pre-emptive booming of vessels discharging gasoline has the boom in place to prevent the uncontrolled run off and dispersal of the highly flammable material. The Material Safety Data Sheet from Gulf Oil states that the Physical Hazards and Precautionary Measures for Unleaded Gasoline are: Extremely flammable liquid and vapors. Vapors can cause flash fires. Keep away from heat, sparks, flames, static electricity and other sources of ignition. The document also calls for Accidental release Measures of: "Prevent spilled materials from entering sewers, storm drains or other unauthorized drainage systems and natural waterways. Under the Ecological Information: "Spilling of Gasoline can result in environmental damage. ...spilled gasoline may penetrate soil and could contaminate groundwater. Gasoline is biodegradable but in situations of low oxygen, such as in soil below grade or groundwater, may persist for many years. Gasoline does not readily dissolve in water but will be absorbed in soils. Gasoline in the environment can be toxic to plants and animals.

Oxygenates are man-made chemicals that are added to gasoline to make it burn more efficiently. Adding oxygenates to gasoline increases the gasoline's octane level, and reduces pollutants (particularly carbon monoxide) emitted from motor vehicles. Oxygenates are liquids at room temperature, evaporate easily into air, and generally have distinctive odors that may be disagreeable, depending on the specific oxygenate. Most

oxygenates are either alcohols or ethers, which are readily soluble in water. Two commonly used oxygenates are ethanol and MTBE (methyl *tert*-butyl ether.) Oxygenates usually get into drinking water as a result of gasoline spills, improper gasoline disposal or gasoline leakage from underground storage tanks. The oxygenates in the soil can be dissolved in rainwater and carried through the soil into groundwater that is used as a drinking water source.

There are numerous references to the damage and fatalities caused by gasoline vapors to support my opinion that the uncontrolled release of gasoline from an unboomed vessel is dangerous to the public and the environment. The sole means to control this dispersal is the collection of the spilled gasoline within the pre-emptive oil boom and then the application of a blanket of firefighting foam. The collection of the spill in the boom gives the firefighting foam a fixed area to blanket. Foam sets up a vapor barrier that prevents flammable vapors from rising. The continued application of the foam blanket will continually stabilize the spill so that proper and effective cleanup methods may be completed. The personnel on the vessels are trained to handle spills on board the unit. The vessels resources to mitigate the initial spills vary with the size and type of vessel. Some large tank vessels have firefighting foam systems that could be called on to blanket a gasoline spill within a pre-emptive boom. This initial action would give the shore based emergency response time to arrive and execute their duties.

The potential for gasoline to contaminate soil and water sources for the long term does exist. We have seen some clean up evolutions take multiple years to complete.

The transportation of gasoline is an inherently dangerous process. The State of Connecticut realized this and took action with Public Act 90-274. This allowed for an

additional safety precaution to be placed in the process. The removal of this safety measure is a risk that makes the assumption that a spill of this material is not as dangerous as any other marine pollutant. Gasoline spills have infiltrated drinking water supplies, contaminated soils and groundwater, become ignited from some remote ignition source and has taken the lives of the local populous at a great distance from the source of the spill.

To date there has been no negative impacts to the shipping industry, local economy and the population by the use of pre-emptive booming. This a sound mitigation technique that will protect the city, population and industry in the event of an incident and its historical perspective should show that it is a viable and needed operation during the transfer of gasoline.

I thank you for the opportunity to speak on this matter.

A handwritten signature in blue ink that reads "Christopher S. Begley". The signature is written in a cursive style with a large initial 'C'.

Christopher S. Begley

References

1. Marine Fire Prevention, Firefighting and Safety (1977) Maritime Administration, U.S. Department of Commerce, Maritime Training Advisory Board
2. Basic Fire Fighting (2006) Military Sealift Command APMC Training Center East
3. Advance Fire Fighting (2007) Military sealift Command APMC Training Center East
4. Marine Fire Fighting (2000), Fire Protection Publications for International Fire Service Training Association
5. Tanker Operations: A Handbook for the Person-In-Charge (PIC), Fifth Edition, Mark E. Huber
6. Committee Hearing Transcript for March 21, 1994 for Raised House Bill 5122
7. Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments, (2001) American Petroleum Institute, NOAA, U.S. Coast Guard, U.S. EPA
8. Spills and Incidental Releases (2013), American Petroleum Institute
9. Pre-Booming At-A-Glance (2007), Washington State Department of Ecology
10. Material Safety Data Sheet Unleaded Gasoline (2009), Gulf Oil Limited Partnership
11. Fact Sheet for Gasoline Oxygenates in Drinking Water (2006), *Bureau of Toxic Substance Assessment, New York State Department of Health Agency*

12. Characteristic of Response Strategies: A Guide for Spill Response Planning in Marine Environments, (2001) American Petroleum Institute, NOAA, U.S. Coast Guard, U.S. EPA
13. Toxicological Profile for Automotive Gasoline, (1995), Agency for Toxic Substances and Disease Registry
14. *Inside Halston.com/Oakville Beaver*, August 28, 2013, “Bronte Creek gas spill cleanup may take years to complete”, David Lea
15. *The Baltimore Sun, April 5, 2011*, “Five years later, Jacksonville still grapples with gas spill”, Arthur Hirsh
16. *MLive.com*, March 24, 2012, “Fire investigator say gas fumes ignited in auto body shop, causing Thursday blaze”, Danielle Salisbury
17. *Chapelboro.com*, August 7, 2013, “Dead fish reports surface following Fri. gas leak”, Rachael Nash
18. Case: Whatcom Creek, WA, (2013), Northwest Region – DARRP, NOAA