

## TOWING SAFETY ADVISORY COMMITTEE

October 20, 2011

### MEMORANDUM

TO: Towing Safety Advisory Committee

FROM: Cathy Hammond, Co-Chair, Towing Vessel Inspection Working Group  
Tom McWhorter, Co-Chair, Towing Vessel Inspection Working Group

RE: TSAC Towing Vessel Inspection Working Group Review of Notice of Proposed Rulemaking (NPRM)

On September 20-21, the TSAC Towing Vessel Inspection Working Group met at Coast Guard headquarters in Washington, D.C., to review the towing vessel inspection NPRM pursuant to TSAC Task #04-03. More than 50 representatives from the tugboat, towboat, and barge industry; maritime labor unions; offshore supply vessel operators; auditors, surveyors, consultants, and naval architects attended the meeting. The working group respectfully submits this report for TSAC review and approval at the committee's October 20 meeting in Newport News, VA.

The working group focused its attention on a finite list of high-priority issues on which it believes TSAC comment is important. This list includes issues that received significant attention from TSAC in its prior reports to the Coast Guard during development of the NPRM;<sup>1</sup> provisions included in the NPRM but not previously raised by the Coast Guard for TSAC consideration; and other issues identified by working group members. As in the past, given the size of its membership, the working group operated on a principle of "substantial consensus." Recommendations made by the working group represent the consensus of an overwhelming majority of working group members, with many recommendations enjoying unanimous support. Members who disagree with any the working group's specific recommendations remain free to submit comments to the docket to that effect.

### Overarching Comments

The working group very much appreciates the Coast Guard's consistent efforts to consult with TSAC throughout the development of the NPRM and the agency's commitment to continuing this consultation now that the NPRM has been published. The NPRM incorporates many of the recommendations previously made by TSAC and demonstrates the Coast Guard's willingness to listen to and take seriously stakeholder input. We are convinced that this collaborative approach will ultimately result in a more effective and practical final rule, and we commend the Coast Guard for its commitment to stakeholder engagement and consultation.

---

<sup>1</sup> TSAC submitted reports on the development of the towing vessel inspection NPRM on September 29, 2005; September 7, 2006; April 13, 2007; and March 21, 2008.

In this regard, we wish to re-emphasize two key recommendations made by TSAC during the development of the proposed rule that have significantly informed our recommendations on the NPRM:

1. The value of safety management systems in improving towing vessel safety and addressing the leading cause of towing vessel casualties: human error, whether occurring on the vessel or on shore; and,
2. The need for a risk-based approach that is informed by towing vessel casualty data and targets regulatory requirements to address demonstrated risks.

Our most significant concerns with the NPRM involve what we perceive as areas of divergence from these two guiding principles.

#### Towing Safety Management System and “Coast Guard Option”

Consistent with these principles and with the prior recommendations of TSAC, the working group urges the Coast Guard to require that all towing vessels covered by Subchapter M be operated pursuant to a Coast Guard-accepted Towing Safety Management System, or TSMS. Safety management systems focus on the largest single cause of towing vessel casualties and the National Transportation Safety Board has recommended, as one of its “Ten Most Wanted” transportation safety improvements, that safety management systems be required by regulation for all vessels. Adherence to a safety management system should be the foundation of the towing vessel inspection regime, not an option.<sup>2</sup>

The working group understands – and shares – the Coast Guard’s legitimate concern about the cost of the proposed regulations, especially for small companies. (Indeed, many members of the working group are small companies or depend on small companies to perform essential services for them.) We make two major comments on this point. First, a safety management system is inherently scalable and can be simple or complex depending on the size and scope of a company’s operations. The Coast Guard should not expect the TSMS used by a one-boat operator with a limited geographic footprint to be as extensive as the TSMS used by a company with dozens of towing vessels operating throughout the inland river system or on all three coasts. Rather than provide a “Coast Guard option” that allows some companies to choose not to have a TSMS, the Coast Guard should make clear that there are multiple options within the framework of a vessel owner’s TSMS to demonstrate compliance with the regulations. The proposed approach to drydocking requirements and topside vessel surveys demonstrates how this could work: a small company might simply specify in its TSMS that it will call a Coast Guard-approved third-party surveyor to conduct these exams at the required frequency. A larger company with more in-house resources might lay out in its TSMS a detailed program for conducting the components of required drydocking and topside exams over time.

Second, we do not believe the TSMS requirement is the primary driver of costs in the NPRM. Many of the proposed equipment requirements that would require extensive retrofitting of existing vessels are extremely costly (and, in our view, unjustified by risk, as we will discuss in more detail below). If the Coast Guard is serious about reducing unnecessary costs associated with the NPRM, it should eliminate unnecessary equipment requirements for existing vessels

---

<sup>2</sup> One working group member did not support this recommendation.

that have operated safely for many years, not make a safety management system – which the experience of many companies has shown to be cost-effective – an option rather than a requirement.

### Risk-Based Regulation

The working group used the principle of risk-based decision making (discussed briefly above and at length in the 2005 and 2006 TSAC reports) as a lens through which to evaluate many of the specific proposals in the NPRM. Simply stated, where the Coast Guard has proposed regulatory requirements that are not justified by towing vessel casualty history and risk, we believe those requirements should be eliminated. We urge the Coast Guard to review the proposed parts 141, 142, 143, and 144 and eliminate requirements included primarily for the purpose of consistency with regulations for other types of inspected vessels. The Coast Guard has already demonstrated its commendable willingness to bring fresh thinking to the development of the inspection regulations for towing vessels, incorporating requirements – like TSMS – that are not required for other types of inspected vessels. The goal should be to ensure that regulatory requirements for towing vessels are tailored to the characteristics, nature of service, operating environment and operational risks of towing vessels.

In this regard, the working group is particularly concerned that the following requirements fail the test of risk-based decision making:

#### *Electrical System Requirements for Existing Towing Vessels (Part 143)*

The NPRM proposes extensive and detailed requirements for electrical systems on existing towing vessels, requirements not previously discussed with or reviewed by TSAC. We find the preamble discussion that attempts to justify these requirements unpersuasive and recommend a return to the philosophy embodied in prior TSAC recommendations: that is, with respect to existing vessels, the regulations should be focused on eliminating manifestly unsafe situations, not requiring wholesale change to vessels that have operated safely for many years. The 2006 TSAC report recommended that new towing vessels have electrical equipment and wiring that meets the standards of the applicable ABS Rules or other recognized, published standards, and that:

For existing towing vessels, all electrical equipment and wiring must be maintained in good operating condition such that no fire hazards or other hazards to personnel are present. All wiring terminations must be made in junction boxes or other electrical fixtures suitable for the purpose intended. All machinery switches, energizers, and circuit breakers must be labeled and maintained in good operating condition. When electrical equipment or wiring on an existing towing vessel is retrofitted or replaced, the new equipment or wiring must meet UL Marine standards or an appropriate equivalent standard.

TSAC elaborated on these recommendations with the clarification that:

This two-tiered approach is intended to ensure that when electrical equipment or wiring on an existing towing vessel is replaced, the new equipment meets minimum standards of safety and appropriateness for the marine environment, without requiring that the entire electrical system be replaced. The working group did not perceive a safety justification –

and did foresee significant costs – to requiring that, say, the replacement of a single junction box trigger a requirement to upgrade the vessel’s entire electrical system to meet standards that did not apply at the time the vessel was built.

The working group urges the Coast Guard to revise the electrical system requirements for existing towing vessels consistent with the philosophy and the substance of the 2006 TSAC recommendations.

*Requirements for Towing Vessels that Tow Oil or Hazardous Materials in Bulk (Part 143, Subpart D)*

The working group strongly opposes the proposed requirements at 46 CFR Part 143, Subpart D for towing vessels moving tank barges, which provisions were not previously discussed with TSAC. The proposed requirements for fully independent, redundant means of propulsion, steering and related control far exceed current industry best practices and the requirements of ABS Rules. It should be noted that current industry best practices have produced a dramatic reduction in oil spills from tank barges over the last decade and a half, with a record low 919 gallons spilled (out of nearly 65 billion gallons transported) in 2010, the last year for which complete Coast Guard statistics are available.

The working group recommends that Subpart D be deleted as unnecessary and unjustified by risk. In this regard, we find unpersuasive the Coast Guard’s discussion in the preamble to the NPRM of a statutory provision in a bill that never became law as justification for this provision. S. 1892, which was not enacted into law, would have directed the Coast Guard to “consider the possible application of standards that . . . apply to self-propelled tank vessels” to towing vessels (emphasis supplied). Since the language in question never became law, it is erroneous to say that the proposed rule “meets this requirement”; moreover, even if the provision had been enacted, it would only have required the Coast Guard to consider the application of such standards to towing vessels. The working group believes that towing vessel casualty history makes clear that such a provision is unnecessary and unjustified. Indeed, the most recent tank barge spill of significant size, the 2008 *Mel Oliver/Tintomara* collision, was caused by human error of the sort that might well have been prevented by robust adherence to a safety management system, not by equipment requirements such as those proposed in Subpart D.

*Construction and Arrangements (Part 144)*

The working group urges the Coast Guard to review Part 144 from the perspective of risk-based decision making and the TSAC-recommended philosophy discussed in our comments on Part 143 above: that is, with respect to existing vessels, the regulations should be focused on eliminating manifestly unsafe situations, not requiring wholesale change to vessels that have operated safely for many years. In this regard, it is particularly important that the Coast Guard clarify its intent regarding the definition of “major conversion” so as to avoid subjecting existing towing vessels that undergo routine events such as engine repowers, in-kind replacement of hull plating, etc., to the requirements for new vessels (including the stability requirements at §144.415). Such routine events do not so change a towing vessel that “it is essentially a new vessel,” as stated in the definition of major conversion, and should not trigger a requirement for extensive and costly modifications to an existing towing vessel that is operating safely.

### Pilothouse Alerter System and AED Requirements

The working group evaluated the proposed requirements for pilothouse alerter systems and automatic external defibrillators through the prism of risk-based decision making. With respect to pilothouse alerter systems, the working group believes that such a requirement, with appropriate alternatives, is justified by risk and casualty history for towing vessels with overnight accommodations and alternating watches when moving barges. Consistent with the approach taken elsewhere in the NPRM, however, we recommend that the Coast Guard establish a functional requirement – say, to have a method to detect possible incapacitation of the master or operator and notify another crewmember -- and allow a vessel owner to specify in the TSMS how it will meet this functional requirement. This could be done by installing a pilothouse alerter system, having a second person in the wheelhouse, or through another method appropriate to the vessel's crew complement, characteristics and operating environment.

With respect to AEDs, the working group believes that such a requirement is justified by the risk of a crewmember suffering a heart attack and the recognized benefits of AEDs in providing early intervention. While the working group supports the AED requirement as drafted, in the spirit of risk-based decision making, we urge the Coast Guard to explicitly make the risk-based case for AEDs in the preamble to the final rule.<sup>3</sup> We also recommend that the Coast Guard clarify that the training required for crewmembers in the use of the AED need not be Coast Guard-approved.

### Applicability

The working group supports the Coast Guard's decision not to address in this rulemaking towing vessels under 26 feet in length, vessels used for assistance towing, and work boats operating exclusively within a work site and performing intermittent towing within the work site, and to defer consideration of appropriate requirements for such vessels to a subsequent rulemaking. This is consistent with prior TSAC recommendations and, we believe, supported by the risk-based decision making approach. When the Coast Guard does take up the question of the appropriate requirements for these classes of vessels, we urge the agency to use Appendix D of the 2006 TSAC recommendations as a starting point.

Informed by the same risk-based decision-making perspective, the working group also appreciates the Coast Guard's use of the term "excepted vessels" to refer to vessels engaged in inland or coastal harbor services that should not, by virtue of their limited geographic scope, be subject to all of the same equipment requirements as other vessels covered by Subchapter M. We support this concept and urge the Coast Guard to ensure that the definition of "excepted vessels" appropriately captures the full range of activities in which vessels in harbor services are engaged.

### Manning

The working group appreciates and supports the Coast Guard's statement in the preamble to the NPRM that "we are not proposing to change any of the current manning levels required for towing vessels." This is consistent with prior Coast Guard-TSAC discussions. However, in

---

<sup>3</sup> Three working group members opposed the requirement for an AED on towing vessels.

order to provide a baseline requirement for a safe watch complement and avoid confusion about the minimum manning that will be required on towing vessel Certificates of Inspection and the role of the TSMS in crewing decisions, we urge the Coast Guard to amend §15.535 to incorporate the 2006 TSAC recommendations on manning,<sup>4</sup> which stated that:

Each towing vessel engaged in towing operations shall have a licensed master. If operations exceed 12 hours, an additional licensed officer (master, mate, or pilot) must be added or an alternate relief crew provided. One licensed officer and one additional crewmember must be on duty at all times while the vessel is underway. These requirements shall be posted on the vessel's Certificate of Inspection.

Additional manning shall be provided as specified in the vessel's safety management system, taking into account the following factors: applicable law and regulation; number, size, and type of barges to be towed; towing route; safety of personnel, equipment, and environment; service in which the tow is engaged; functional duties required of crew in addition to standard navigation; configuration of vessel superstructure, deck, and engine room; extent of automation; size and power of equipment used; prevailing environmental/climatic conditions; and, experience of crew.

#### Crew Endurance Management

The working group recognizes the importance of preventing fatigue and promoting crew alertness in the 24/7 environment in which towing vessels operate. We are disappointed that the preamble discussion of this issue includes no mention of the TSAC recommendations on this subject and instead seeks comment on a different approach not previously discussed with TSAC. We are similarly disappointed and confused by the differences in the preamble's characterization of the focus of the Crew Endurance Management System (CEMS) and previous Coast Guard discussions with TSAC. Prior TSAC recommendations with respect to CEMS were predicated on the understanding that CEMS is a holistic system for managing crew endurance risks that includes the use of tools such as training, light management, environmental changes, operating policies and schedule changes to address endurance risks identified by vessel and company personnel. It was not TSAC's understanding that, as stated in the preamble, "The central objective of CEMS was and is to ensure that crewmembers have sufficient time off to obtain a daily minimum of 7-8 hours of uninterrupted, high quality sleep."

We note, as well, that the issues raised in the preamble have implications that extend far beyond towing vessels or other vessels that employ a two-watch system. In fact, no watchstanding schedule used in the maritime industry today by vessels operating round-the-clock provides an opportunity for 7-8 hours of uninterrupted sleep. The towing vessel inspection rulemaking is not an appropriate vehicle to address issues with implications for the entire maritime industry.

#### Other Issues

---

<sup>4</sup> One working group member did not support this recommendation.

While the issues discussed above consumed the majority of the working group's time at the September 20-21 meeting, the group also identified the following issues as warranting brief comment from TSAC:

#### *Sequence of Audits/COI*

The working group recommends that Parts 136 and 137 be revised to reflect the following sequence of events, consistent with prior TSAC recommendations: 1) Company obtains TSMS certificate for management system; 2) Company obtains TSMS certificates for individual towing vessels; and, 3) Vessels obtain COI from Coast Guard based on reports of Coast Guard-approved third party on company and vessel audit.<sup>5</sup> In this regard, we reiterate the 2006 TSAC recommendation concerning the Coast Guard oversight role. TSAC recommended that 100% of vessels experience at least one Coast Guard oversight visit during the five-year COI cycle and that the scope and frequency of Coast Guard oversight visits be determined using a risk matrix focusing on major deficiencies that affect the safety of personnel, vessels, and/or the environment, and/or evidence of lack of commitment from management in support of the vessel or lack of commitment from crew to implementing the safety management system. We are unsure if the Coast Guard intended the proposed §136.145 to apply only to towing vessels using the "Coast Guard option," but note that this provision seems to contemplate a traditional Coast Guard inspection that is not consistent with the TSAC-recommended risk-based approach to targeting Coast Guard resources.

#### *Other Audit/Auditor Issues*

The working group appreciates the degree to which the proposed Parts 138 and 139 reflect the prior recommendations of TSAC. Well-qualified, well-trained third-party auditors will be essential to ensuring a smooth transition to, and the effective functioning of, the new inspection regime. In this regard, we reiterate the 2007 TSAC recommendation underscoring the importance of having a sufficiently sized pool of Coast Guard-approved third-party auditors in place **before** companies and vessels are required to comply with the inspection regulations. The Coast Guard should work with TSAC to identify the "critical path" necessary to achieve this goal. Such a critical path might include, for example, publishing a Navigation and Vessel Inspection Circular (NVIC) laying out the qualification process for third parties several years in advance of the likely effective date of the regulations.

In addition, the working group makes the following specific recommendations regarding issues related to third-party audits and auditors:

- Clarify §136.210(b)(3)(i) to make clear that the "objective evidence" required in this section may include an audit report from a Coast Guard-approved third party.
- Revise §138.505 to specify that, consistent with §138.315(c), audit reports must be made available to the Coast Guard upon request, rather than requiring that each audit report be submitted to the Coast Guard.

---

<sup>5</sup> In order to avoid confusion, we recommend that the Coast Guard use two distinct terms for referring to the certificate to be given to the company and the certificate to be given to individual vessels.

- Incorporate language in Part 138 to reflect the 2006 TSAC recommendations with respect to the process that should be followed when a non-conformity is discovered during a third-party audit. TSAC recommended that:

Any non-conformities will be identified at the completion of the audit. Non-conformities affecting the safety of the crew or the vessel must be resolved promptly. The company must prepare a Corrective Action Plan to be submitted with the auditor's report. The company must submit the Corrective Action Plan for review and acceptance to the auditor within 30 days of completion of the audit. Once the Corrective Action Plan has been accepted by the auditor, the auditor will submit the full audit report to the company and the Coast Guard. The company must notify the auditor when the process outlined in the Corrective Action Plan is complete.

Auditor to notify the Coast Guard and the company immediately of a serious, unsafe situation that threatens the vessel, its personnel, or the environment.

- Revise §138.310(d)(2) to delete the requirement for an internal auditor to have completed an ISO 9001-2000 internal auditor/assessor course. Revise §138.310(d)(3) to be consistent with the language of ISM Code 12.4, which permits the designated person to be an internal auditor if the size of the company makes it impractical not to allow this.

#### *Miscellaneous Issues*

- The Coast Guard should include a definition of excursion party in the definitions section of Part 136.
- The Coast Guard should modernize the requirement to post the Certificate of Inspection on board the vessel. §136.220 should be revised to allow a correct copy of the COI to be maintained in a safe location from which it is readily available to the master, crew, approved third party or Coast Guard. It is unnecessary and anachronistic to require that the original COI be displayed under glass.
- The Coast Guard should eliminate all references to the still-pending potable water requirements (§143.225 reserved). When the potable requirements for inspected vessels are promulgated, the Coast Guard can amend Subchapter M (as the agency will have to do for other subchapters) to add these requirements where appropriate.
- The Coast Guard should clarify the meaning of "replacements in kind," as used in §143.220(d), to ensure that it is not construed too narrowly. Where, for example, a piece of equipment such as a generator is replaced with another that has the same function and similar characteristics but is not the exact same model, such replacement should be considered a "replacement in kind."
- Part 144 should be revised and reorganized in two subparts, one applicable to existing vessels and one applicable to new vessels. Including a third subpart applicable to all vessels invites unnecessary confusion about which requirements apply to which vessels.
- While not an issue to be addressed through regulatory text in the final rule, the working group notes that it will be important to develop amplifying guidance on issues such as what constitutes an acceptable repair on an inspected towing vessel. Such guidance should be tailored to fit the vessel characteristics and operational environment of



towing vessels, rather than simply mirroring existing guidance for other classes of inspected vessels, such as tank barges or passenger vessels. In this regard, we note that the 2006 TSAC report recommended that “Hull fractures in any plating except an oil tank may be covered with an appropriately sized doubler plate, installed using good marine practice, if the hull thickness and condition is suitable.”

Final Report 20OCT2011

| TSAC SUB M WORKING GROUP |          |                                   |  |
|--------------------------|----------|-----------------------------------|--|
| LAST NAME                | FIRST    | COMPANY/AFFILIATION               | EMAIL  |
| Adams                    | Jason    |                                   | <a href="mailto:jason.adams@ingrambarge.com">jason.adams@ingrambarge.com</a>               |
| Allegretti               | Tom      | AWO                               | <a href="mailto:tallegretti@vesselalliance.com">tallegretti@vesselalliance.com</a>         |
| Anselmi                  | Tim      | Central Maritime, LLC             | <a href="mailto:central_maritime@bellsouth.net">central_maritime@bellsouth.net</a>         |
| Arabie                   | Garrett  | Crosby Tugs, LLC                  | <a href="mailto:garrett@crosbytugs.com">garrett@crosbytugs.com</a>                         |
| Autin                    | Bobby    | Louisiana International Marine    | <a href="mailto:bcautin@louisianainternational.com">bcautin@louisianainternational.com</a> |
| Barr                     | Bill     |                                   | <a href="mailto:bbarr@portamherst.com">bbarr@portamherst.com</a>                           |
| Beacom                   | Bill     | Mariner                           | <a href="mailto:bbeacom@pionet.net">bbeacom@pionet.net</a>                                 |
| Becker                   | Bob      | MITAGS                            | <a href="mailto:rbecker@mitags.org">rbecker@mitags.org</a>                                 |
| Bennigton                | Robert   |                                   |  |
| Binion                   | John     | United Maritime Group, LLC        | <a href="mailto:john.binion@united-mar.com">john.binion@united-mar.com</a>                 |
| Block                    | Richard  | Gulf Coast Mariners Association   | <a href="mailto:namenet@triparish.net">namenet@triparish.net</a>                           |
| Bond                     | Brice    | Shell Trading US                  | <a href="mailto:brice.bond@shell.com">brice.bond@shell.com</a>                             |
| Bowling                  | Randy    | Crouse Corporation                | <a href="mailto:rbowl62@yahoo.com">rbowl62@yahoo.com</a>                                   |
| Branch                   | Sarah    | OMSA                              | <a href="mailto:sarah@offshoremarine.org">sarah@offshoremarine.org</a>                     |
| Cable                    | Grady    | Otto Candies                      | <a href="mailto:dalep@ottocandies.com">dalep@ottocandies.com</a>                           |
| Caliendo                 | Mike     | Andrie Inc.                       | <a href="mailto:mikecaliendo@andrie.com">mikecaliendo@andrie.com</a>                       |
| Callow                   | Elmer    | Rushing Marine Service, L.L.C.    | <a href="mailto:elmer@rushingmarine.com">elmer@rushingmarine.com</a>                       |
| Carlson                  | Doug     | Seabulk Towing                    | <a href="mailto:doug.carlson@sbulk.com">doug.carlson@sbulk.com</a>                         |
| Carpenter                | Jennifer | AWO                               | <a href="mailto:jcarpenter@vesselalliance.com">jcarpenter@vesselalliance.com</a>           |
| Casada                   | Myron    | ABS Consulting                    | <a href="mailto:mcasada@absconsulting.com">mcasada@absconsulting.com</a>                   |
| Cheramie                 | Rene     | Cheramie Marine Management        | <a href="mailto:rene@renejcheramie.com">rene@renejcheramie.com</a>                         |
| Cheramie                 | Wade     | Doucet & Adams, Inc.              | <a href="mailto:wade@doucet-adams.com">wade@doucet-adams.com</a>                           |
| Cissna                   | Kevin    | Crouse Corporation                | <a href="mailto:kcissna@crouse.com">kcissna@crouse.com</a>                                 |
| Clark                    | George   | Penn Maritime, Inc.               | <a href="mailto:gclark@pennmaritime.com">gclark@pennmaritime.com</a>                       |
| Clendenin                | Marion   | Marathon Petroleum Company LP     | <a href="mailto:moclendenin@marathonpetroleum.com">moclendenin@marathonpetroleum.com</a>   |
| Clinton                  | Bob      | AWO                               | <a href="mailto:bclinton@vesselalliance.com">bclinton@vesselalliance.com</a>               |
| Coradini                 | Lena     | Ingram Barge Company              | <a href="mailto:lena.coradini@ingrambarge.com">lena.coradini@ingrambarge.com</a>           |
| Corigliano               | Ron      | Campbell Transportation Co., Inc. | <a href="mailto:RCorigliano@barges.us">RCorigliano@barges.us</a>                           |
| Cox                      | John     | Florida Marine Transporter        | <a href="mailto:jcox@flmarine.com">jcox@flmarine.com</a>                                   |
| Dady                     | Joe      | United Mariner                    | <a href="mailto:unitedmariner@yahoo.com">unitedmariner@yahoo.com</a>                       |
| Danos                    | Todd     | Galiano Tugs Inc.                 | <a href="mailto:todd@gulf-log.com">todd@gulf-log.com</a>                                   |
| DeLoach                  | Z. David | DeLoach Marine Services           | <a href="mailto:ZDave@deloachmarine.com">ZDave@deloachmarine.com</a>                       |
| Dennis                   | Jessica  | Chevron                           | <a href="mailto:Jessica.Dennis@chevron.com">Jessica.Dennis@chevron.com</a>                 |
| Dewey                    | Dave     | River Marine Enterprises LLC      | <a href="mailto:davedewey.rme@gmail.com">davedewey.rme@gmail.com</a>                       |
| Duchaine                 | Taylor   | Canal Barge Company, Inc.         | <a href="mailto:tduchaine@canalbarge.com">tduchaine@canalbarge.com</a>                     |
| Duet                     | Clint    | United Tugs                       | <a href="mailto:cduet@unitedtugs.com">cduet@unitedtugs.com</a>                             |
| Duley                    | Mark     | Ingram Barge Company              | <a href="mailto:mark.duley@ingrambarge.com">mark.duley@ingrambarge.com</a>                 |

|            |          |  |  |
|------------|----------|--|--|
| Dunbar     | Don      | C-PORT                                   | <a href="mailto:rcdbd30@verizon.net">rcdbd30@verizon.net</a>   |
| Duval      | David    | Enterprise Marine Services LLC           | <a href="mailto:dhduval@eprod.com">dhduval@eprod.com</a>   |
| Fallwell   | Pat      | Global Marine Associates                 | <a href="mailto:gma@embarqmail.com">gma@embarqmail.com</a>   |
| Felder     | Cherrie  | Channel Shipyard Company                 | <a href="mailto:cdfelder@channelship.com">cdfelder@channelship.com</a>   |
| Folan      | Pat      | DMC Marine                               | <a href="mailto:pat@pelicanpassage.com">pat@pelicanpassage.com</a>   |
| Fontenont  | Keith    | SeaRiver Maritime                        | <a href="mailto:charles.k.fontenot@exxonmobil.com">charles.k.fontenot@exxonmobil.com</a>   |
| Foret      | Tava     | the ACTION Group Companies               | <a href="mailto:tavaf@ag-companies.com">tavaf@ag-companies.com</a>   |
| Foster     | George   | JB Marine Services, Inc.                 | <a href="mailto:georgefoster@jbmarineco.com">georgefoster@jbmarineco.com</a>   |
| Francic    | John     | ABS Consulting                           | <a href="mailto:jfrancic@absconsulting.com">jfrancic@absconsulting.com</a>   |
| Fry        | Bob      | Kinder Morgan Ship Channel Services, LLC | <a href="mailto:robert_fry@kindermorgan.com">robert_fry@kindermorgan.com</a>   |
| Furlough   | Steve    | Furlough Marine Management LLC           | <a href="mailto:sfurlough@verizon.net">sfurlough@verizon.net</a>   |
| Gallion    | Jerry    | Kirby Corporation                        | <a href="mailto:jerry.gallion@kirbycorp.com">jerry.gallion@kirbycorp.com</a>   |
| Gedney     | Beth     | PVA                                      | <a href="mailto:bgedney@passengervessel.com">bgedney@passengervessel.com</a>   |
| Gillen     | Jim      | Crowley Maritime Corporation             | <a href="mailto:jim.gillen@crowley.com">jim.gillen@crowley.com</a>   |
| Goncalves  | Diane    | Transportation Institute                 | <a href="mailto:dgoncalves@trans-inst.org">dgoncalves@trans-inst.org</a> ;<br><a href="mailto:dgon22@verizon.net">dgon22@verizon.net</a> |
| Gould      | Lorne    | National Association of Marine Surveyors | <a href="mailto:lgould@sanfranciscomarinesurveyors.com">lgould@sanfranciscomarinesurveyors.com</a>                                       |
| Grosshans  | Mark     |  | <a href="mailto:grosshans11@roadrunner.com">grosshans11@roadrunner.com</a>   |
| Gruber     | George   |  | <a href="mailto:ggruber@bellsouth.net">ggruber@bellsouth.net</a>   |
| Grzybowski | Ed       | Buchanan Marine, LP                      | <a href="mailto:egrzybowski@buchananmarinelp.com">egrzybowski@buchananmarinelp.com</a>   |
| Hammond    | Cathy    | Inland Marine Service                    | <a href="mailto:chammond@inlandmarineservice.com">chammond@inlandmarineservice.com</a>   |
| Hansell    | Dennis   | Suderman & Young Towing Co., L.P.        | <a href="mailto:ops@sandy-tugs.com">ops@sandy-tugs.com</a>   |
| Harrigan   | Bill     | NY Harbor Union Unit 33                  | <a href="mailto:bharrigan@333umd.org">bharrigan@333umd.org</a>   |
| Hassler    | Paul     | JB Marine Services, Inc.                 | <a href="mailto:paulhassler@jbmarineco.com">paulhassler@jbmarineco.com</a>   |
| Hayman     | Susan    | Foss Maritime Company                    | <a href="mailto:shayman@foss.com">shayman@foss.com</a>   |
| Hildago    | Kimberly | Florida Marine Transporter               | <a href="mailto:kimberly.hildago@flmarine.com">kimberly.hildago@flmarine.com</a>   |
| Hill       | Terry    | C-PORT                                   | <a href="mailto:potomactowing@comcast.net">potomactowing@comcast.net</a>   |
| Hinson     | Donnie   | Penn Maritime, Inc.                      | <a href="mailto:dhinson@penmaritime.com">dhinson@penmaritime.com</a>   |
| Huttman    | Steve    | G&H Towing                               | <a href="mailto:shuttman@gandhtowing.com">shuttman@gandhtowing.com</a>   |
| Isnardi    | Molly    | Upper River Services                     | <a href="mailto:molly@ursi.net">molly@ursi.net</a>   |
| Ivins      | Don      | Express Marine, Inc.                     | <a href="mailto:divins@expressmarine.com">divins@expressmarine.com</a>   |
| Johansson  | Eric     | Tug Barge Comm                           | <a href="mailto:safemariner@mac.com">safemariner@mac.com</a>   |
| Johnson    | Gail     | Great Lakes Dredge & Dock Company        | <a href="mailto:gjohnson@gldd.com">gjohnson@gldd.com</a>   |
| Jones      | Sean     | Amherst Madison, Inc.                    | <a href="mailto:skjonesmcs@suddenlinkmail.com">skjonesmcs@suddenlinkmail.com</a>   |
| Juneja     | Hemant   | American Bureau of Shipping              | <a href="mailto:hjuneja@eagle.org">hjuneja@eagle.org</a>   |
| Kelleher   | Maurice  | American Bureau of Shipping              | <a href="mailto:mkelleher@eagle.org">mkelleher@eagle.org</a>   |
| Keyes      | Peter    | Moran Towing Corporation                 | <a href="mailto:pkeyes@morantug.com">pkeyes@morantug.com</a>   |
| Kief       | Cory     | Offshore Towing, Inc.                    | <a href="mailto:cory@offshoretowing.com">cory@offshoretowing.com</a>   |

|             |           |   |  |
|-------------|-----------|---|--|
| King        | Chuck     | Buffalo Marine Service, Inc.              | <a href="mailto:chuck@buffalomarine.com">chuck@buffalomarine.com</a>                 |
| Knappes     | Amy       | Genesisenergy                             | <a href="mailto:amy.kappes@genlp.com">amy.kappes@genlp.com</a>                       |
| Lagarde     | Matt      | AEP River Operations                      | <a href="mailto:mllagarde@aepriversops.com">mllagarde@aepriversops.com</a>           |
| Lamm        | Tom       | Vane Brothers                             | <a href="mailto:tlamm@vanebrothers.com">tlamm@vanebrothers.com</a>                   |
| Lapensc     | Christian | Dann Marine                               | <a href="mailto:clapense@dannmarine.com">clapense@dannmarine.com</a>                 |
| Leavell     | George    | Wepfer Marine, Inc                        | <a href="mailto:gleavell@wepfermarine.com">gleavell@wepfermarine.com</a>             |
| Lind        | Bill      | American Bureau of Shipping               | <a href="mailto:wlind@eagle.org">wlind@eagle.org</a>                                 |
| Luhta       | Klaus     | Masters Mates & Pilots                    | <a href="mailto:kluhta@bridgedeck.org">kluhta@bridgedeck.org</a>                     |
| Magdeburger | Steve     | Vulcan Materials                          | <a href="mailto:magdeburgerst@vmcmail.com">magdeburgerst@vmcmail.com</a>             |
| Malia       | Gerald    | American Bureau of Shipping               | <a href="mailto:gamalia@aol.com">gamalia@aol.com</a>                                 |
| Marshall    | Mike      | Turn Services, LLC                        | <a href="mailto:mike@turnservices.com">mike@turnservices.com</a>                     |
| Matherne    | Barry     | Delta Towing                              | <a href="mailto:barry.matherne@delta-towing.com">barry.matherne@delta-towing.com</a> |
| Mayfield    | Mark      | James Marine, Inc.                        | <a href="mailto:mmayfield@jamesmarine.com">mmayfield@jamesmarine.com</a>             |
| McAllister  | Buckley   | McAllister Towing                         | <a href="mailto:buck@mcallistertowing.com">buck@mcallistertowing.com</a>             |
| McWhorter   | Tom       | Maritime Services Group of Louisiana, LLC | <a href="mailto:msgola@eatel.net">msgola@eatel.net</a>                               |
| Menke       | Greg      | SCI/CNE                                   | <a href="mailto:gmenke@seamenschurch.org">gmenke@seamenschurch.org</a>               |
| Mew         | Lionel    | Data Process Technologies                 | <a href="mailto:lionel@gwu.edu">lionel@gwu.edu</a>                                   |
| Minton      | Charles   | Campbell Transportation Co., Inc.         | <a href="mailto:ckm@ctctowing.com">ckm@ctctowing.com</a>                             |
| Morris      | Mike      | AEP River Operations                      | <a href="mailto:mlmorris@aepriverops.com">mlmorris@aepriverops.com</a>               |
| Munoz       | Mario     | American Commercial Barge Line LLC        | <a href="mailto:mario.munoz@aclines.com">mario.munoz@aclines.com</a>                 |
| Neal        | Emmett    | Crouse Corporation                        | <a href="mailto:eneal@crouse.com">eneal@crouse.com</a>                               |
| Nelson      | Lee       | Upper River Services                      | <a href="mailto:lee@ursi.net">lee@ursi.net</a>                                       |
| North       | Bob       | North Star Maritime, Inc.                 | <a href="mailto:northstar@dmv.com">northstar@dmv.com</a>                             |
| Nyhuis      | Fred      | Marathon Petroleum Company                | <a href="mailto:fanyhuis@marathonpetroleum.com">fanyhuis@marathonpetroleum.com</a>   |
| O'Daniel    | Brian     | Florida Marine Transporter                | <a href="mailto:brian@flmarine.com">brian@flmarine.com</a>                           |
| O'Donnell   | Kevin     | Norfolk Dredging Co.                      | <a href="mailto:kodonnell@norfolkdredging.com">kodonnell@norfolkdredging.com</a>     |
| Pannell     | Generad   | Star Center                               | <a href="mailto:jpannell@star-center.com">jpannell@star-center.com</a>               |
| Parker      | Jeff      | Allied Transportation Company             | <a href="mailto:jeffp@almarine.com">jeffp@almarine.com</a>                           |
| Patterson   | Jim       | Osage Marine                              | <a href="mailto:pattersj@cgb.com">pattersj@cgb.com</a>                               |
| Patterson   | John      | Ingram Barge Company                      | <a href="mailto:john.patterson@ingrambarge.com">john.patterson@ingrambarge.com</a>   |
| Peterson    | Linn      | Kirby Inland Marine                       | <a href="mailto:linn.peterson@kirbycorp.com">linn.peterson@kirbycorp.com</a>         |
| Phillips    | Dave      | Rushing Marine Service, L.L.C.            | <a href="mailto:davep@rushingmarine.com">davep@rushingmarine.com</a>                 |
| Piatt       | Neil      | ARTCO                                     | <a href="mailto:n_piatt@admworld.com">n_piatt@admworld.com</a>                       |
| Pickard     | Bruce     | NAMS/MSS                                  | <a href="mailto:BPickardL@aol.com">BPickardL@aol.com</a>                             |
| Pigott      | John      | Tidewater Barge Lines, Inc.               | <a href="mailto:jpigott@tidewater.com">jpigott@tidewater.com</a>                     |
| Primm       | Chris     | Primm maritime                            | <a href="mailto:cdprimm@insightbb.com">cdprimm@insightbb.com</a>                     |
| Queen       | Eddie     |   | <a href="mailto:tugbaby@aol.com">tugbaby@aol.com</a>                                 |
| Raymond     | Laura     | Reinauer Transportation                   | <a href="mailto:LauraR@reinauer.com">LauraR@reinauer.com</a>                         |
| Reed        | David     | Crouse Corporation                        | <a href="mailto:dreed@crouse.com">dreed@crouse.com</a>                               |
| Richards    | Steve     | BP Shipping USA                           | <a href="mailto:Stephen.Richards@bp.com">Stephen.Richards@bp.com</a>                 |

|           |         |  |  |
|-----------|---------|--|--|
| Register  | Croft   | Express Marine, Inc.                                   | <a href="mailto:cregister@expressmarine.com">cregister@expressmarine.com</a>           |
| Rider     | Ed      | Vulcan Materials Co.                                   | <a href="mailto:ridere@vmcmail.com">ridere@vmcmail.com</a>                             |
| Robinson  | Kenny   | Crouse Corporation                                     | <a href="mailto:krobinson@crouse.com">krobinson@crouse.com</a>                         |
| Rushing   | Mike    | Rushing Marine Service, L.L.C.                         | <a href="mailto:miker@rushingmarine.com">miker@rushingmarine.com</a>                   |
| Sadler    | Rob     | Golding Barge Line, Inc.                               | <a href="mailto:robsadler@goldingbarge.com">robsadler@goldingbarge.com</a>             |
| Sansing   | John    | Kirby Inland Marine                                    | <a href="mailto:john.sansing@kirbycorp.com">john.sansing@kirbycorp.com</a>             |
| Scott     | Bill    | Tidewater  | <a href="mailto:bscott@tdw.com">bscott@tdw.com</a>                                     |
| Sehrt     | David   | Ingram Barge Company                                   | <a href="mailto:david.sehrt@ingrambarge.com">david.sehrt@ingrambarge.com</a>           |
| Shearer   | Ed      | The Shearer Group, Inc.                                | <a href="mailto:eshearer1@aol.com">eshearer1@aol.com</a>                               |
| Sheehan   | Dan     | North Star Maritime, Inc.                              | <a href="mailto:dfsheehan@gmail.com">dfsheehan@gmail.com</a>                           |
| Sick      | Ray     | Enterprise Marine Services LLC                         |  |
| Sickles   | Mark    | Weeks Marine   | <a href="mailto:mksickles@weeksmarine.com">mksickles@weeksmarine.com</a>               |
| Singley   | Richard | Singley Marine Consulting                              | <a href="mailto:singleymaritime@bellsouth.net">singleymaritime@bellsouth.net</a>       |
| Sizemore  | Tim     | AEP River Operations                                   | <a href="mailto:twsizemore@aepriverops.com">twsizemore@aepriverops.com</a>             |
| Slesinger | Jeff    | Western Towboat  | <a href="mailto:jslesinger@westerntowboat.com">jslesinger@westerntowboat.com</a>       |
| Smith     | Tom     | Canal Barge Company, Inc.                              | <a href="mailto:tsmith@canalbarge.com">tsmith@canalbarge.com</a>                       |
| Smythe    | Jason   | Chevron  | <a href="mailto:jason.smythe@chevrontexaco.com">jason.smythe@chevrontexaco.com</a>     |
| Stegbauer | Bill    | Southern Towing Co.                                    | <a href="mailto:stowing2@comcast.net">stowing2@comcast.net</a>                         |
| Theriot   | Dallas  | Enterprise Marine Services LLC                         | DETheriot@eprod.com  |
| Thomas    | George  | Higman Marine Services, Inc.                           | <a href="mailto:georget@higman.net">georget@higman.net</a>                             |
| Vahey     | Brian   | AWO<br>Cooper Marine & Timberlands Corp                | <a href="mailto:bvahey@vesselalliance.com">bvahey@vesselalliance.com</a>               |
| Vick      | Randy   | Enbisson & Sons, Inc                                   | <a href="mailto:randy.vick@coopertsmith.com">randy.vick@coopertsmith.com</a>           |
| Vitt      | Michael |  | <a href="mailto:mvitt@enbisso.com">mvitt@enbisso.com</a>                               |
| Volkle    | Skip    | MRG  | <a href="mailto:svolkle@marineresourcesgroup.com">svolkle@marineresourcesgroup.com</a> |
| Walling   | Herb    | ASTI SHLSS<br>National Association of Marine Surveyors | <a href="mailto:hmwalling@hotmail.com">hmwalling@hotmail.com</a>                       |
| Weeter    | Greg    |  | <a href="mailto:gregweeter@insightbb.com">gregweeter@insightbb.com</a>                 |
| Weisend   | Mike    | AEP River Operations                                   | <a href="mailto:maweisend@aep.com">maweisend@aep.com</a>                               |
| Wiltz     | Jerry   | Florida Marine Transporter                             | <a href="mailto:jerryw@flmarine.com">jerryw@flmarine.com</a>                           |
| Wisneski  | Jason   | Dann Marine  | <a href="mailto:jwisneski@danmarine.com">jwisneski@danmarine.com</a>                   |
| Wohl      | Rudy    | Weeks Marine   | <a href="mailto:oswohl@weeksmarine.com">oswohl@weeksmarine.com</a>                     |