Good morning, and thank you for your hospitality. I appreciate the opportunity to provide some opening remarks about the challenges that the industry faces in implementing both U.S. and international ballast water treatment requirements.

Before I get into what has changed – and what has not – since last year’s ballast water summit here in Long Beach, I would like to remind all of us of the magnitude of the implementation task ahead. Based on numbers that have been used at the IMO, more than 60 thousand vessels will need to install ballast water treatment systems under the IMO Convention. At an average cost of between 1 million and 2 million dollars per vessel, the industry will need to make a capital investment well in excess of 60 billion dollars.
Given the size of the investment ahead, it would be preferable if vessel owners could be certain that their investments will result in regulatory compliance. Unfortunately, that investment certainty does not currently exist.

**Overview of the Ballast Water Regulatory Dilemma**

When my predecessor, Chris Koch, opened the Second Annual Ballast Water Summit last February, he described a situation in which vessel owners could be required by the IMO Ballast Water Convention to install treatment systems without having certainty that those systems would comply with the discharge standards under the convention and without having certainty that those systems could be used to meet treatment requirements in the United States.

That situation – in which the industry may be forced to spend 60 billion dollars and still not know whether a system that it installs will allow a vessel to comply with its regulatory obligations everywhere in the world – persists today. That regulatory outcome was unacceptable last year, and it is just as unacceptable this year.

As background for the discussions over the next two days, I would like to take a minute to review why vessel owners find themselves in such a regulatory bind.

There are two regulatory regimes that apply to ballast water.

The first is the IMO Ballast Water Convention. That convention will enter into force one year after signatories representing 35% of the world’s tonnage deposit their instruments of ratification. We are just under a half percentage point short of that threshold. Once the convention enters into force, vessels will have to begin installing treatment systems on a phased schedule.

The second relevant regulatory regime is the U.S. regime, which is actually two separate regimes based on two different sets of laws. The EPA regulates ballast water under its Vessel General Permit issued under the Clean Water Act. The Coast Guard regulates ballast water under two related invasive species
statutes. Having two separate sets of statutes and two U.S. federal agencies regulating the same ballast water discharges is not the result of planning or policy; it is the result of litigation. The system does not make sense from any perspective, but Congress has not yet acted to fix it.

The good news with respect to the parallel U.S. regimes is that the EPA and the Coast Guard have done an excellent job so far of harmonizing the regulations under their two regimes. I will talk later about some developments that may make that harmonization more difficult in the future.

In terms of how the U.S. legal regime matches up with the IMO regime, the discharge standards are the same, so that does not present a problem, at least for now. What does present a problem for the regulated community is that the type approval standards for treatment systems under the U.S. regime and the IMO convention can, and so far have, produced different results.

The IMO requires that systems be type approved based on the “G8” guidelines. Based on concerns about the ability of the IMO type approval process to produce compliant equipment, the U.S. developed a stricter set of type approval procedures. The U.S. Coast Guard requires that systems used to treat ballast water discharged into U.S. waters must receive type approval from the Coast Guard. The Coast Guard does not accept type approvals issued by other countries under the IMO regime. What that means, once the IMO convention enters into force, is that vessels will be required to start installing treatment systems that have been type approved based on IMO requirements. But if they install a system not approved in the U.S., that system will not meet the U.S. requirements. As of today, there are no Coast Guard type approved ballast water treatment systems. That means that there is no single system that a vessel owner can use to comply everywhere in the world. For a global industry, that is a big problem.
Developments Since Last Year

We are fortunate today to have with us several experts on the ballast water regulatory programs administered by the U.S. Coast Guard, the EPA, and the IMO. These speakers will provide updates and address your questions about activities in those various agencies and organizations. What I would like to do before I turn you over to some folks who really know what they are talking about is to set the stage a bit in terms of recent developments at the IMO, at the Coast Guard, and at the EPA.

Even though the fundamental regulatory and investment uncertainty has not changed since last year, there have been a number of important developments over the past twelve months.

My intent here is not to steal anybody’s thunder, but just to tee up a few issues that you might want to think about as you listen to the speakers and think about what questions you might want to ask. My focus will be mainly on those issues that may have an effect on the dilemma that I described a minute ago – the situation in which the vessel owner may be required to install a treatment system when the IMO convention enters into force, but where there is no system that a vessel owner can use to comply everywhere in the world because there is no system that has been type-approved by the U.S.

Coast Guard

The Coast Guard’s regulatory regime is simultaneously well-defined and also uncertain. The Coast Guard’s regulations are well understood, and they are stable. The Coast Guard has recently issued helpful guidance that clarifies its policies in terms of which drydockings trigger a requirement to install ballast water treatment technology, and it has also provided guidance that creates a much more orderly system in terms of the duration of compliance extensions. I will let Captain Scott Kelly give you the details on those issues.

The big uncertainty under the Coast Guard’s program is when treatment systems will be type approved. There are currently no U.S. type approved systems, which is the situation that sets up the possibility that the IMO
convention could require vessel owners to install treatment systems that are not approved for use in the U.S. and that may not reliably meet the treatment standard. If that happens, then essentially under the U.S. Alternate Management System or AMS rules, the vessel owner would have five years during which its IMO type approved treatment system could be used to meet U.S. regulations and during which the system developer could seek and receive U.S. Coast Guard type approval. If that approval does not occur, then that owner will be faced with replacing the system on its vessel if it wants to call the U.S.

This means at the end of the day that the single most important variable in the whole compliance equation – at least for vessels calling the U.S. – is when systems will start getting Coast Guard type approval. And this isn’t a question only or even primarily for the Coast Guard. Equipment manufacturers and labs are at the heart of the type approval dilemma, and I encourage you to spread your questions around broadly on this issue of when systems might get U.S. approval.

**EPA**

The most interesting development this year with respect to the EPA’s Vessel General Permit did not come from the agency itself, but instead from the Second Circuit Court of Appeals. In October of 2015, the Second Circuit handed down a decision that instructed the agency to do a few things differently when it issues its next Vessel General Permit (or “VGP”), which will become effective in late 2018.

Among the issues that the court ordered the EPA to explain better when it issues its next VGP is how the EPA arrived at its technology-based effluent limits. The EPA in the current VGP set its discharge limit at the same standard that the Coast Guard and the IMO have adopted.

What is most interesting about the court’s decision is that it took the agency to task because a report issued by the EPA Science Advisory Board suggested that some treatment systems could meet a stricter standard. That of
course is an interesting finding given that, to date, there is no system that has demonstrated to the satisfaction of the U.S. Coast Guard that it can meet the existing standard, let alone a more stringent standard.

A couple of questions naturally present themselves as the EPA looks forward to addressing the court’s concerns when it issues the next VGP.

The first question is whether there will be U.S. type-approved treatment systems by the time the next VGP comes out, and what the test results from any such type-approvals say about the current capabilities of technology. The second question is, if there are no U.S. type approvals by the time the EPA issues its next permit, then what technology-based standard should the agency set? Would mid-ocean ballast water exchange be deemed to be the “best available technology,” to use the language of the Clean Water Act, and what effect would such a finding have on the Coast Guard’s regulatory program?

I mentioned earlier the good job that the Coast Guard and the EPA had done in harmonizing their regulatory regimes. It will be interesting to learn, both today and in the future, what effect the second circuit’s ruling might have on the agencies’ ability to maintain that harmonization.

IMO

The biggest question with the IMO Convention is when it will enter into force. For predictions on when that will happen I will refer you to the experts in a town a few hundred miles northeast of here across the Nevada border. I’m not going to make any predictions.

What we do know is that whenever the Convention enters into force, there are questions that will have to be answered about its implementation.

The IMO has already passed a resolution that clarifies some aspects of the installation schedule, and there have been discussions about uniform procedures for evaluating compliance. Those are important steps that have already been taken.
Among the issues that have been discussed, but not resolved, are questions surrounding the continuing work to revise the IMO’s G8 type approval guidelines. I will leave it to Chris Wiley to give you the details on that effort, but I would like to flag a couple of issues that you might want to dig into during the conference.

I mentioned that there is work under way to revise the G8 guidelines. There was always a recognition that those type approval guidelines would likely need to be updated as governments, labs, manufacturers, and ship owners gained experience with testing and operating systems. Reports recently from both the IMO secretariat about the implementation of the “D-2” standard and from the correspondence group reviewing and revising the guidelines have highlighted the variability in results among different labs that tested systems. That lack of certainty about what IMO-based type approvals really say about the efficacy of treatment systems is at the heart of the concern that systems that have received IMO approval might not obtain approval from the U.S. Coast Guard, and might not meet the IMO D-2 discharge standards.

I am confident that the IMO correspondence group will arrive at a set of revisions to the G8 guidelines that will make testing under those guidelines more rigorous and more consistent. But even when that work is completed, there are questions that have to be addressed.

Those questions involve how treatment systems that were approved under the old G8 guidelines will be treated once the new G8 guidelines are finalized. The IMO has stated a general intention that vessels that have already installed first generation systems should not be penalized, which is good policy, but the details of what that means have not been sorted out. There is a related question of what effect the new guidelines have on systems that were approved under the old guidelines, but that have not yet been installed in ships. Do the existing type approvals for those systems remain in effect, and for how long? Is the expectation that the market would drive system manufacturers to seek new type approvals under the new guidelines in order to get a market advantage? Or would the expense and uncertainty of that process discourage manufacturers from seeking type approvals under a revised set of IMO guidelines?
The answers to those questions will have both commercial implications and also implications for whether the good work that has been done on the G8 guidelines will translate into better treatment options on the water. I hope that you will take the opportunity to explore these issues with the government and manufacturer representatives that are with us today.

Before I turn the microphone over to our distinguished presenters, I would like to make one observation that is not focused on the details of the various regulatory systems at work with respect to ballast water. That observation is that — notwithstanding all of the hard work of some very smart and dedicated people — we find ourselves in a situation where the industry is facing a $60-plus billion technology implementation bill, but we do not know whether that investment will lead to regulatory certainty. That is not a good position to be in.

I hope that treatment technologies that can be type approved under the U.S. process and a revised IMO G8 process will ride over the hill and solve this dilemma. But the success of an environmental protection program of this magnitude should not rest on a hope about something that we cannot predict.

However the current dilemma gets resolved, there is a lesson here as the shipping industry addresses future environmental issues, whether that is carbon emissions, the global fuel sulphur limit that will come into effect in 2020 or 2025, or some other issue. That lesson is that the science and the capabilities of the technologies on which solutions will be based must be understood at the beginning of the process. That technological evaluation and scientific research cannot be deferred until after a political decision on an issue is taken.

There will always be a large political and diplomatic component to regulatory regimes that apply to a global industry like international shipping, and politics means compromise. Fair enough. At the same time, the purpose of the IMO’s environmental conventions is not to make people feel good about their diplomatic or public relations skills. The purpose of those regulatory systems is to prevent various forms of environmental harm. That means that the mechanisms that we choose to protect those resources have to function from a scientific, technical, and operational standpoint. It is impossible to anticipate every
technical problem when you design a regulatory system, and there will always be things to fix. For all of that, though, I am confident that it is possible to design and implement a regulatory system that doesn’t involve an international convention, two federal agencies, three federal statutes, a handful of U.S. coastal states, and no prior knowledge of the capabilities of the technology chosen to address the problem.

We just didn’t happen to build such a system for ballast water.

The shipping industry and the industries that support it are filled with resilient and resourceful people. We will find a way out of the mess that is ballast water regulation today. But the next time you find yourself engaged in a policy discussion about how to address an international environmental issue, and someone suggests that you look at ballast water as a model, I have one piece of advice: run.

I wish you a successful conference, and I appreciate your attention.

I would be happy to answer any questions.