

DISCUSSION GROUP 3

Real-World Applications

Chair

Anthony Taormina, *Dames & Moore Group*

Panelists

W. O. (Bill) Gray, *Gray Maritime Co.*

Paul G. Kirchner, *American Pilots' Association*

Rod Vulovic, *Sea-Land Service, Inc.*

David A. Walker, *ABS Group Inc. Risk and Reliability Division*

George F. Wright, *U.S. Coast Guard*

Discussion Paper

Roberts, Karlene H. *The Real World: Blooming Buzzing Confusion.* (See page 30.)

Description/Objectives

This session covers application of both the theory and the use of data combined with the experience of those on the waterfront in application of risk assessment to specific aspects of waterways management. Some phases of a project may require more exacting compliance to the theories and better data and others may be done within a risk assessment framework to accomplish a balanced and appropriate evaluation of the interrelated risk present in a crowded waterway.

SUMMARY OF DISCUSSION

Presented by Anthony Taormina

We are going to change our discussion a little when we talk about the real world. John Garrick talked some about the practical world and

Paul Fischbeck talked about data, and I heard normal operations. I was given the task of talking about real-world applications. I'm a port director, so I defined the real world as the waterfront types, and our panel represented what Nancy Foster was saying in yesterday's presentation with NOAA—this puzzle of many different and competing interests coming together, and they all appear to come together at my house, down on the port. So, when I started out in the port business, I came from the public policy side and not from the marine transportation side. In my earlier days in San Francisco, when I was at the Port of San Francisco, we were thinking in terms of urban waterfronts and urban planning but from the perspective that public policy is really formed at the neighborhood level, as we interpret real-life situations on a day-to-day basis and then try to convert that into public policy for the whole. That is what we tried to do in our panel.

Our panel tried to develop products related to areas we thought were key themes for the symposium. Those themes are basically techniques and tools, management approaches, and policy recommendations.

Policies

We classified the themes into three areas. Starting with policy (Exhibit 1), one of the things we talked about early and emphasized was that, in all our discussion of risk management, people are important. As we look at the waterfront and the changing aspects of the waterfronts—issues of the cruise lines and issues of the shared waterways—one aspect that any national policy relating to risk management has to take into account is that at the basic level that I deal with on a day-to-day basis, people are very important with respect to use of our waterways.

To that extent, we see a changing phenomenon. Come to Gulfport, Mississippi, where I am the director, and you will find that not only do we have the normal waterfront activities associated with the port, but we also have things

EXHIBIT 1 Policies

- The Marine Transportation System risk management policies should address all aspects of the system to include people and freight (cruise ships, cargo, shared waterway users), as well as a system of vessel, wharf, terminal, and intermodal connections and it should include all agencies within the Department of Transportation.

- Policies relating to marine transportation risk are needed at the local, regional, state, and federal levels as nonmandatory guidelines as opposed to regulations (e.g., take advantage of local users and knowledge such as the Harbor Safety Committee model with pilots, local regulators, port authorities, port users, and vendors).

- Risk management policies and implementation can be used to broaden the public's understanding of the Marine Transportation System (e.g., the public's perceptions are often built on adverse significant events reported on CNN).

- Risk management policies are most effective when they help define the acceptable level of risk.

such as gaming casinos. One of the things we talked about was having a banana boat and a gaming boat vessel meet in the harbor; suddenly, risk management is a very important aspect of my board and my state.

Another aspect is whether policy should come from a bottom-up approach, taking advantage of the local users' knowledge. This involves the harbor safety committee models that we heard about in California, including the pilots' local knowledge. In this approach, we can see these groups providing guidelines that can be developed at the regional, state, and federal levels, taking advantage of the uniqueness of the waterfronts. We talk in terms of ports and we talk in terms of marine transportation systems, and when you look at the gamut of ports, both inland and coastal, they are quite different; for example, look at New York/New Jersey and look at Gulfport. We need to broaden the public's understanding of what is happening on the waterfront. The public perceptions are often what people see in the news media, on television, whether at the Port of Gulfport or in New Orleans.

The theme of education arose in our discussion in the sense that we need to educate people about the waterfront. That is a theme I have heard previously at many Transportation Research Board activities—that we need to educate people about freight. Effectively, that is a lot of what we are involved in. We hear normally that much of the funding goes to public transit and the highways,

because people vote and freight does not. To the extent that we look at our merchandise and our markets, people aren't walking in and saying, "Did this come on C. H. Hunt's truck or which truck and what port of entry?" Basically, people expect merchandise to be there. When it is not there because of an accident or incident, then, in fact, it is the policy people who are trying to find out what happened.

Over the past few days I've heard a lot about our tankers, and I've heard a lot about vessel and risk management. But when I came here to talk about and hear about risk assessment, it was about a marine transportation system. That system involves vessels, it involves our wharves and our terminals, and it is very much conditioned upon our intermodal connections.

In Gulfport, probably the biggest question we will address, as in many ports, is the grade crossing just north of the port where we are bringing our rails and the containers in and out of the port. That is the site of more accidents than occur on the water side. So, whatever we do in the policy areas, all the agencies within the Department of Transportation need to be brought together because effectively we need to address this as a full intermodal/multimodal system.

Someone asked what to do about it once you determine the risk. We need to be able to have some basis of being able to determine what an acceptable level of risk is for the various port authorities. To some extent the harbor safety committees in the California model certainly addressed that issue—look at Port Hueneme and the Los Angeles–Long Beach areas. That kind of discussion needs to elevate above just the people on the committees. It needs to be brought to the policymakers so they will know what level of risk is acceptable.

Management Issues

We tried to define what we call management issues (Exhibit 2). Some of this is relatively repetitive in the sense that, when we look at risk, we need to look at it independently for the various segments of the pipeline. But we also need to look at it collectively.

Risk assessment must include a future state of our marine transportation system. We hear a lot about megaships, particularly at the port authority areas—everybody is looking at what is going to happen to the large containers. One person in our panel said, "Let's remember the megaship and the large container; we also had a period of time where we had the supertanker and what incidents occurred as a result of larger tankers?" Is there a relationship there? In some cases, real-life issues to me mean what we are going to do, how we are going to dredge our channels, and how we are going to dispose of the materials from our channels to be able to maintain that pipeline.

EXHIBIT 2 Management Issues

- Risk managers need to evaluate risk associated with waterways, vessels, terminals, and intermodal connections independently and collectively.
- Risk management assessment should include the future state of the marine system (e.g., mega-ships, increased cruise ship traffic, redeployment of vessels to new routes).
- Risk management needs to be included in early design phases and to focus on the interrelationships of people, design, organization, and systems.

To that extent, we need to be looking. Today I have to be thinking in terms of not necessarily what the Port of Gulfport should be reacting to today, but what is going to be our 5-, 10-, 15-year horizon. We see different dynamics as larger cruise ships come in. Now, all of a sudden, cruise lines are looking for different ports of call. All of a sudden, Gulfport could be a port of call for a cruise line. So, we may not necessarily even have a system that would be safe or prepared for that type of activity. But, I'll guarantee you this, if I bring the cruise line to the Port of Gulfport as a port director, I've secured myself a contractor for at least 10 years at that particular port because it has a very attractive aspect.

We all agreed in our discussion that management needs to be early in the design phase, whether in the instruction of our vessels or in the construction of our terminals. We need to be able to look at how to incorporate that in the early aspects in all phases and to focus on the relationship of people designing an organization system. Dr. Karlene Roberts had a great line when she presented her paper—I won't try to repeat it here, but the aspect that I took from it was an interrelationship. We have to be able to put human elements into the areas that we are looking at in our design, whether it is the bridge design of our vessels or the terminal design of our facilities.

Tools and Techniques

This is the third element I was asked to talk about (Exhibit 3). Some of the tools already exist, so we don't necessarily need to go out and reinvent them. We need to enhance, to educate, and to raise understanding of tools. The captain of the port at our session talked about the port's state control system. Bill Gray talked about the need to step up inspection of our marine terminal facilities to the extent that we may have the greatest ships in the world, but the connection between the vessel and the terminal is as much of a risk as the vessels themselves. To

EXHIBIT 3 Effective Tools and Techniques: Existing and Proposed

- Utilization of the U.S. Coast Guard Port State Control and inspection of marine terminals (existing).
- Improvements in vessel traffic systems in association with the local Port Safety Committee System. American Pilot Association course training and better communications at the port and harbor level (existing).
- Better hydrographic information on our channels and harbors and application of international positioning standards and redundant systems (existing).
- A national reporting system for vessel incidents that includes human systems within the databases (new).
- Implementation of risk analysis that fits the situation and organization (existing).

some extent, if we have many different types of vessels calling at our ports, we have many different types of terminals and levels of expertise in management at those terminals throughout the United States, both in the inland waterway system and in our coastal areas.

Vessel Traffic Systems

Basically, vessel traffic systems are very important and are part of our overall risk management at the port level. Again, the California model for oil spill response, harbor safety committees, is a prime example of that to the extent that the vessel traffic system does not necessarily have to be the same for all ports. What kind of communications exist? What kind of pilot training? How do you use the pilots? At a port authority, we see the pilots as an extension of our risk management and activities and tools and techniques. We rely on them to be able to tell us what is happening in the channels.

One of the comments we made at our discussion groups was whether at the same time the port authority acts as the licensing board for that pilot, are they reporting all the incidents to us? Or are there some issues that we must look at and address?

Hydrographic Information in Channels and Harbors

We need to have good information—good data for our channels and harbors. This appeared to be a theme that came very strongly from some of the vessel operators' aspect of looking at the ports—looking at some type of

international positioning standards and ensuring that we have a set of redundant systems.

One of the things we talked about was pilot incidences and near-collision incidents and we know the vessel traffic systems have some way of reporting this information, but again that is unique for some ports: Gulfport, Mississippi, or Mobile, Alabama, or in some cases the Mississippi Sound—there are a lot of shrimp boats out there. But we have a lot of other types of activities. There are cruise ships going into other markets. There are ferries. We need to have some type of national reporting system for these vessel incidents, and we must ensure that the human system is basically developed within the databases.

Finally, risk analysis needs to fit the situation and the organization. Too often I'm in a situation in which I have to make a decision. I have a commission meeting every 2 weeks. Someone says, "We want to know what the risk is in making a particular decision. Should we allow this to occur at the port?" Generally, they ask that question with political motivation. Too often, if we begin using risk assessment and management as a political tool to make decisions at the port level, then, in effect, we are going to be influencing people's views and attitudes toward risk management. To that extent, we need to have practical tools and applications that I, on a regular basis, can apply at my level and at all levels that meet the real-world situation that has some credibility, some truth that stands behind it, so that we can make credible public policy decisions about whether we want an ammonia nitrate vessel to call at the Port of Gulfport. Clearly, when the U.S. Coast Guard looks at regulations, they don't have the discretionary ability to say, "We won't allow that to occur." They can only say, "Here are our regulations." But I have to determine whether it is good public policy for that vessel and that activity to occur within my port.

QUESTIONS AND ANSWERS AND DISCUSSION

Comment: I want to respond to something you said about policy and implementation in risk management. I think it is important to acknowledge that, in the real world, broadening public understanding is neither swift nor inexpensive. We tend to talk about that in conferences like this, and then we go away and don't allocate resources in our organizations to accomplish that task. Using the risk assessment study in the Prince William Sound as a case study, part of the reason why it has exceeded its original budget by multiples is because it was a multistakeholder process. Multistakeholder processes are not cheap. The analogy I want to draw is to consider General Grant's campaigns in Northern Virginia in 1864

and 1865. They were incredibly wasteful in Fredericksburg, Spotsylvania, and Chancellorsville, yet he won the war. But it was an incredibly wasteful effort to get there. I'm not saying that waste is justified. I'm just saying that a certain component of it is inevitable.

The other thing I want to say is that the use of the term stakeholders, which we have talked about, has come to validate the participation and role of self-appointed spokespeople for the public who may not represent many and are accountable to few. I think as we talk about stakeholders, particularly in a local setting but also in a statewide setting, we have to ensure we are talking about the people who in fact represent somebody. There is no reason why environmentalists as a category should have standing in decisions over, say, single mothers.

Comment: Our port has already started a K-12 curriculum that we introduce in our school system about freight and about transportation. We are basically forming strategic partnerships with the University of South Mississippi to begin putting our issues on the table, . . . as an intermodal transportation. I think we have to start it from the bottom up, and it is going to be a long process.

One of the things I want to build on is your comment about fitting the risk analysis to the situation or the organization. In that context, the diversity of the marine transportation system has been well discussed, at least at one level. In a tactical sense, you might need to do some analysis to help you make your individual decision, but it is not a one-round game. A set of decisions will be made by a set of players and the risk analysis needs to be fit to the situation that crosses those organizations and those decision makers. Those decisions are mutually dependent. If you make a decision about a cruise ship, and then the cruise ship operators make a decision about how to maximize their efforts in that port, then there is another series of decisions and another series of mutually dependent decisions—it is not just a risk analysis for the one decision.

Question: In those decisions, who is leading the way?

Answer: Generally, at the port level, the market is leading the way. We are market-driven individuals. For example, Carnival Line comes to me and says, "It is less safe for me to go up the river; I've got to go up the river to New Orleans to make a port of call. If you can meet my commercial criteria, we'll bring our vessel in there." Generally, that is, it will reduce overall costs. They don't come and say, "Is it safer in Gulfport?" No. So, the market drives the machine.