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PORT STATE CONTROL, WHERE TO NOW?

PRESENTATION TO PORT STATE CONTROL 2000

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Good morning, it is a great privilege to be your keynote speaker at this distinguished gathering. I'm not quite sure why I've been assigned this role, as I'm certainly not a port state control expert, unless one adheres to the old adage that an expert is a guy from out of town. By that measure, having flown 20 odd hours from Connecticut in America to cover perhaps 10,000 miles, I guess I qualify. I would prefer to see my role here as doing two things:

- First, as your keynoter I will try to put Port State Control into perspective in the marine industry as a whole
- Second, as day two Chairman I will try to pull together the main themes or lessons from two days of debate between the true experts our hosts have assembled in an exciting program.

If I can do these two things it will have been worth the long journey, aside of course from the pleasure of being in this beautiful city and fantastic country again.

PSC IN PERSPECTIVE

My professional life in ships started as a naval architect, and I thought mainly of ship design and shipbuilding. Forty-one years later I now look at marine as a diverse collection of individual pockets of skills which often have trouble thinking beyond the boundaries of their own knowledge, experience and problems. But the time is long overdue for us to think not only of ourselves but also of all the others who make up the overall marine or maritime industry. It is an industry which was indispensable to world discovery in the past millenium, and it is now indispensable to world trade and growth in the new millenium. Yet the marine industry is virtually unknown, at least in my country (the world's largest trading nation) and I suspect in many other countries as well. It is truly hidden from public view, and this works, at least in the United States to its great detriment.

I'll say more of this later, but to complete this perspective let me list what I feel are the biggest problems facing the industry as a whole

- It is a "hidden" industry known to the public mainly for "**TITANIC**", tanker accidents, "**ERIKA**", "**KIRKI**" here in Australia, ferry accidents and old bulkers. No longer are we the stuff of legends – Vasco da Gama, Columbus, Magellan, Captain Cook and other heroes.
- "Substandard" ships, owners, crews, classification societies, flags, insurers, inspectors—you name it
- A growing shortage of properly trained and qualified people as **BIMCO**, **ISF** and **Lloyd's List** frequently, and correctly remind us.
- Marine is an unprofitable and largely untaxed industry which has suffered from both these ills, especially in the last 27 years—i.e. since oil shock of October 1973
- "Substandard" or inadequate ports. As we pointed out in **INTERTANKO's US Port & Terminal Safety Study**, when a ship approaches a port or terminal prevention of accidents and protection of the marine environment must become a shared responsibility. It is shared by the crew (and owner) with the port's service providers, many of whom are on our program today and tomorrow.

I'll return to some of these problems later to describe why I believe Port State Control officers should try to help, at least generally, in finding solutions to each of these problems.

WHY PSC? WHAT CAN IT DO? AND HOW?

While I'm hardly a Port State Control expert I do have some background in PSC and I know a little about what to inspect and what you can and can't determine from PSC.

December of 1976-'77 saw the grounding of the tanker **ARGO MERCHANT** off Nantucket Island in New England. She eventually broke up, spilled her 30,000 ton cargo of fuel which was blown offshore and totally absorbed in cold Atlantic waters by westerly gales. Why is she significant? This truly substandard ship (no proper navigation gear, hopeless crew etc):

- was the first of 11 front page marine accidents in US waters in five weeks
- was the first ship boarded in international waters
- under IMO's intervention convention which came from "**TORREY CANYON**" in 1967
- caused new US President Jimmy Carter to talk about solving the "tanker menace" In his first address to the American public
- caused US Coast Guard to take a major initiative to IMCO which then completed, with great dispatch, the February 1978 TSPP (tanker safety and pollution prevention) protocols to SOLAS and MARPOL with major changes.

The single biggest proposal coast guard took to IMO was for "teeth" for reg 19 of SOLAS governing rights of Port State boarding officers. At that time it only allowed inspection of certificates, not the ship, or its people and equipment. Coast Guard was particularly concerned with what Admiral Mike Benkert called "Banana Republic" classification societies, some 45 to 50 of which they had identified as being empowered by one or more flag states to issue convention certificates. IMO delegations quickly understood this problem but were reluctant to challenge traditional "flag state" authority. Fortunately they eventually agreed to increase Port State boarding rights where "**there were clear grounds**" to suspect certificate legitimacy, and to inspect and detain ships not in compliance with international conventions.

This provided the first actual international sanction for PSC. Simultaneously PSC was in fact being thoroughly and passionately debated in negotiations for the third International Law of the Sea (LOS) Convention. I recall events clearly, both as an EXXON Manager, and also as spokesman for oil company group OCIMF at the 1973 MARPOL Conference. There were very heated arguments in the early '70's between advocates for flag state, port state, and even coastal state regimes. Most in industry at the time, and also many traditional flag state governments, were adamantly opposed to

diluting the legal primacy of flag states which had existed since maritime law was first encoded, probably by the Phoenicians thousands of years ago.

In 1972 EXXON took a strong, and public, stand for PSC because it was already abundantly clear that many flag states, and class societies delegated to act on their behalf, had neither the will or too often the ability to police what were beginning to be called “substandard” ships. Fortunately the case for PSC finally prevailed at TSPP in February 1978.

Only one month later, in March 1978 when “**AMOCO CADIZ**” grounded in Brittany and spilled her entire 220,000-ton crude oil cargo, Europeans began drafting what became the first true PSC agreement, the **PARIS MOU**. Ironically though, it did not come out until five years later from a Judge in Chicago, that the 4 ½ year old “**AMOCO CADIZ**” actually was indeed “substandard”. Judge Frank J. McGarr documented that her steering gear was seriously deficient right from delivery, her management knew it and deliberately decided not to repair it—twice!!—because they didn’t want her off hire from a high charter rate. Quite tellingly they had repaired the steering gears in her three sisters immediately because under the very low charter rates then common, which these ship earned, the economic penalty was minor compared to “**AMOCO CADIZ**”. This was a clear case of management fault and privity.

A relevant question now is—“Could the best PSC system and inspectors we have now have detected this lack of seaworthiness if PSC was then in effect?” My guess is that very likely it could not have done so. Here was a nearly new ship operated by a us oil major, with a clearly well trained Italian crew of probably 28 or 30 on time charter to a European oil major. Hardly the type one would target, or become suspicious about even with a fairly thorough “walk around” in port.

So what’s the relevance of this example? Perhaps not too much because in 22 years since “**AMOCO CADIZ**” the marine world has;

- developed the IMO **ISM** code for ship/shore management of safety—but, we know sometimes it’s a paper exercise
- produced other IMO requirements, notably the latest **STCW** and the training “**WHITE LIST**”, but do they work ?
- some owner associations, notably INTERTANKO, have developed membership criteria to exclude “substandard” owners, but that doesn’t put them out of business
- insurers are taking a much greater interest in what they agree to cover, but most ships still manage to get cover somehow, and
- some truly frightening laws for pollution by ships have appeared, especially in the US where there is multiple, criminal, unlimited liability for owners and crews, in some cases for incidents in which the ship may not even have been at fault !! I abhor this draconian approach in the name of environmental protection, but must admit it has scared the hell out of a lot of people, and produced excellent results, so far. In the longer run, however, I believe it may be short sighted as it certainly motivates a lot of good people and companies to simply stay away—get out of the business, or to refuse to trade to American waters. Quite a few good companies chose these options.

In short there has been a lot of progress, as statistics clearly show especially for tankers. But there’s still lots of room for things (say “substandard” ships) to fall through the crack. Our next speaker Karl

Timmerman pointed out some years ago the world is still a pretty big place for ships to hide. Karl tracked particularly capesize bulkers (his specialty) that had changed name more than three times in one year and decided this was a pretty clear indication of suspicious behaviour. I agree. These are some of the “real world” problems with which PSC must deal daily.

So what can PSC do? Here are a few approaches, some of which I've only read about and others which are within my own experience. In either case they seem to me to make sense:

- I like to hear **pilots** say they are the **first line of defense** in a PSC system. They indeed are the first aboard each arriving ship and pilots far more than any one else see the officers and crew in action. That's invaluable especially as regards judging officer and crew performance. But, what do pilots do with this information? It appears that some keep it more or less with their brethren while others use it as a clear PSC “**early warning**” system with authorities. I believe the latter approach is clearly best. I know some Coast Guard Captains of the port who have told pilots in effect “Captain, you do whatever you think best with a suspect ship, and we Coast Guard who have the authority for detaining or delaying a ship, will take the heat”. With this philosophy, several U.S. ports in the last five years have reported a ten-fold increase in reports of ships losing power or steering from about one per thousand port entries to one per 100. Blackouts haven't gotten worse—reporting has gotten better!! This is nonetheless a disturbingly high number.
- **targeting** clearly has been helpful to owners and PSC authorities in directing efforts where they should give the greatest benefit at minimum cost of delay to the vessels which hard data have shown to be least likely to be a problem. In EXXON we started vetting ships for charter in 1966 when an oil man, not a mariner, asked “why do I have 130 people in shore staff looking after 30 % of my fleet (owned ships) and only five guys with big expense accounts (chartering department) looking after the other 70 % (chartered ships)? That's where I may have my greatest oil spill vulnerability”. When he didn't get good answers he said, “start inspecting any ship that might carry our oil”. We quickly found it's not too hard to identify the potentially riskier ships. There are many telltale signs, like name, class and flag changes. And hard to find owners. The real issue is what one does with this information. Do you leave a cargo unlifted if you can't find a quality ship, or pay a few points more to get quality? Different companies and different people had, and still have different ideas.
- **Incentives** to keep a ship in tiptop condition are a positive way to try to differentiate between good and less good ships and owners. Rotterdam's “**GREEN SHIP**” program and the classification societies' “**CAP**” program are good examples.
- **PSC sharing of data** must be one of the most important tools for driving substandard ships out of business. The large increase in PSC regimes in recent years has been a very positive step in this vital campaign. But it won't reach its full potential until all PSC regimes make virtually all relevant data fully transparent, and available to all with a valid interest in ship safety.

How does PSC implement these measures? Certainly it requires a strong and consistent commitment of funds and people to carrying out the inspections and data analysis. But to me the key ingredient is sufficient experienced and specifically trained mariners to make the inspections. I believe mariners (PSC inspectors) talking to other mariners (the officers of the ship being inspected) is the only effective way.

STRUCTURAL FAILURE, CLASS SOCIETIES AND PSC

Let's talk a moment about structural failure, classification societies, and what port state control measures can and cannot do. **ERIKA** has put these issues on the front burner and turned the heat way up. Here are the main issues as I see them based on my own experience as a naval architect and as a council or committee member of three major class societies:

- First, in-port inspection of ships during cargo operations by PSC officers, or any one else, tells you nothing about structural condition. If you can spot a structural fault then, there must be something really bad you can't see!!
- Ship structural inspection requires a lot of work by a lot of people. (attached to my talk is "Table I, VLCC Statistics" from a 1982 EXXON position paper giving some data on inspection demands for typical single hull pre- MARPOL VLCCS.) How about 35,000 ft to climb (vs. 29,000 feet for Mount Everest) or 74 acres of steel to inspect? For a new double hull VLCC, these figures would about triple.
- In EXXON we found in the late '70s that typical class special surveys every 5 years were being done so badly that we could not rely upon the result and thus did our own. Through a chain of similar events many concerned tanker owners created the **Tanker Structural Cooperative Forum** (a SHELL idea). Eventually in 1992 concerned owners persuaded IMO to adopt **Enhanced Structural Surveys, ESP** and **full disclosure of results** as the only reliable way to determine structural integrity of tankers and bulkers. Class jumped on ESP, and started to claim it as their own idea. But they neglected to follow through on full disclosure of results, and this may have been the Achilles heal in the transfer of class procedure for **ERIKA**. Failure of class to disclose **ESP** results will slam the door on any chance that PSC authorities, or for that matter potential charterers or insurers might have to determine whether a ship is structurally seaworthy.
- My final point about tanker and bulker structure is that there is now much less of it (steel) than there used to be, and it is usually operating at much higher stress levels than with similar ships built in the 70s. This makes new ships, especially double hull tankers, more prone to fatigue and corrosion damage. So let's be on guard as these shiny new vessels age. They are not as robust as most of the ships they replace.

More specifically on classification societies I feel:

- They should standardize all their scantling rules for tankers and bulkers, and then put more steel back into new ships. Shipyards have been playing class off against each other to get the cheapest ship, but class should take back final decisions on structure, do it right and stop yards from building, as one class Chairman calls them "short-life" ships. I have recommended this for years. Finally this spring two of the big three in class have agreed to support this proposal. Maybe it will now happen. (Refer my letter to Lloyd's List of Jan 25, 2000).
- Class itself should move to close down most of the many little and incompetent classification societies. They harm our industry a great deal having neither competence, nor the will to make safety their top priority.
- The best societies should leave IACS if it doesn't adopt the more progressive reform proposals which IACS didn't accept in February. If this means the end of IACS, which has always worked on

a basis of unanimity of opinion on any issue (a recipe for mediocrity), so be it. Maybe if IACS dies it would hasten the demise of incompetent societies.

- Finally, the better societies should agree to make all ESP results available to valid PSC authorities promptly and in terms they can understand.

I believe these structural and class measures to be at the heart of solving the “substandard” ship and owner problem. The “substandard” crew problem is tougher to deal with but getting rid of unsafe ships and their owners certainly will help. So would sustained profitable operations.

MARINE INDUSTRY PROBLEMS. WHAT CAN BE DONE ?

Early in my talk I listed what I consider the industry’s biggest problems and promised to return to them with suggestions on what might be done. I’ll try to address that now. As a “hidden” industry, at least in the United States and a lot of the rest of the world, shipping seldom receives favorable public attention, and without public support, the parliaments and legislatures of this world pay little attention or money to it. Yet shipping, in the case of the USA, accounts for 99 % by weight and 95 % by value of our foreign trade, the worlds largest. And as someone put it recently, if airplanes stopped flying only the business travelers would be seriously affected, but if marine commerce stopped we would have serious shortages in days or a few weeks at most—shortages of food, of energy (oil, gas and chemicals) and consumer goods.

Even without stoppages, what impact does lack of public and governmental support and funds have on the industry? To name a few I would cite:

- The whole infrastructure to support shipping suffers. This includes hydrography, charts, navigation aids, dredging, port improvements, PSC systems and no doubt a lot more. In short, it directly endangers safety. In U.S.A., aviation, railroads, highways, trucks and cars get orders of magnitude, more financial support and attention to safety than does marine. It discourages bright young people from entering our industry. This is perhaps the biggest danger. Because despite computers, the Internet, the new economy and other signs of progress, ships don’t run themselves, and computers and the Internet can’t think and make rational decisions. Only people can. And with all the fancy equipment in new ships it takes much better trained people to run them. What a sad irony that as we load up bridge and engine room with electronics we take off the radio officer—the only guy who maybe understands these machines.

There are other reasons for making our industry more visible, but I believe these two examples make the point. The reality is that we all need to work together to let the public understand why they and their governments should support shipping and not only attack it for its faults.

I’ve already talked about dealing with “substandard” ships, owners and class so let me clarify what I meant about the dangers from being unprofitable and untaxed. Shipping as a whole has lost money since 1973 because of the huge surplus, initially of tankers and then ships of virtually all types. This was brought about by reckless over-ordering, aggravated by oil shock I in October 1973. The Mideast nations took control of “their oil”, as they put it, quadrupled the price and produced a major decline in oil consumption. That act was actually a benefit for the world in starting energy conservation. But with far too many tankers and then all other ships, the industry went in to a slump, which in broadest terms is now in its 27th year. We all know that when one isn’t making money, the pressure to cut costs, and cut

corners becomes ferocious. In short that's probably the biggest reason for most of the awful substandard ships we've got today.

In my view lack of taxation of shipping, which started way before oil shock I, is probably the other big reason. Early in the 20th century and particularly after WW II many countries allowed shipowners to defer taxes (literally forever) if they invested profits in new ships. So in the '50s, '60s and early '70s, just as the world economy was booming, owners ordered new ships to avoid paying tax rather than because they were needed. Those boom days managed to employ the rapidly expanding fleet. But when oil consumption, and the whole world economy slumped we were simply swamped with new, unneeded tonnage. I think you all know there is no shortage of places where ships and their owners can legally go to avoid any taxation.

So what can be done? I surely don't have a crystal ball, but I hope that a combination of three things might do it:

- 1) ridding the world of "substandard" ships and owners
- 2) more discipline by shipyards not to "dump" ships at below cost, and
- 3) more discipline by owners not to order speculatively. They in fact have the biggest incentive to return shipping to profitability.

We are much closer to a real supply / demand balance now than we have been in years, and the IMO "drop-dead" dates for single hull tankers will help. I know that this PSC audience cannot do much about these commercial issues, but I believe just being aware of them and publicizing industry issues generally are obligations we all share. Incidentally, we are not the only industry with such a sad commercial tale to tell. I have read that the world's commercial airlines are in aggregate in a loss – making position throughout their entire history.

PORT SAFETY ISSUES AND PSC

The final industry problem I wish to mention again is **Port and Terminal Safety**. **INTERTANKO's 1996 PTS** report which I coordinated, highlighted not only the principle of shared responsibility between ship and port service providers, but also the fact that at least in the United States we had some ports and services which were a long way behind world class standards. Lack of adequate and up to date hydrographic data is a critical safety problem in much of the world, as was (or is) lack of effective port safety management, at least in many US ports. Our **PTS** report 31/2 years ago caused then Coast Guard Commandant Admiral Bob Kramek to persuade his boss, the Secretary of Transportation, to hold a series of "listening" sessions around the country which in turn led to a national **Marine Transportation System (MTS)** assessment which went to our Congress in September 1999. It has given the country a master plan for improving the safety and efficiency of our entire waterway system including terminals (Lloyd's List editorial of Feb 23, 1999 and Journal of Commerce "Opinion" of Sept 15, 1999 give relevant background).

I am pleased to be able to cite some positive examples of greater interest in port safety we've seen recently:

- Great Britain has adopted a comprehensive "**Marine Code for Ports**" with teeth.
- a senior British marine executive, Juan Kelly, recommended last month to an International Harbor Masters Conference that they adopt a **world wide ports safety code**, just as IMO did for ship owners and crews with its **ISM code**.
- a number of national pilotage groups including Netherlands and I believe Australia have sought and received **ISO 9000 certification**, and IMO is showing increased interest in pilotage.

These are positive safety steps which all shipowners who have gone through ISM will applaud.

A few points about ports with which owners are less pleased include:

- oil terminals which are poorly manned (too few and / or untrained people & being unresponsive to ships' needs) and lack of attention to cargo handling and poor fire fighting readiness are very dangerous to ship and terminal.
- I know from what class societies tell me that many large ore loading terminals pay little or no attention to overstressing hull structure of bulkers, just as receiving terminals do a lot of damage to ship structure with grabs, bulldozers and jack hammers.

In short, ship crews seldom regard the shore as their friend. They know it can be the riskiest part of their voyage navigationally and also in cargo handling. In that regard with the very rapid turn round common in ports today, and pictures of container stacks coming adrift on big container ships at sea, one wonders if cargo stowage is given adequate priority.

CLOSING REMARKS

I hope some of what I've said may be useful or thought provoking in the next two days. Before I turn over the podium to the real experts in the hall, let me make these final points

- Recent incidents seem to suggest that smaller, and sometimes the much faster craft are accounting for most fatalities
- **ERIKA** is a reminder of the same tendency in that small coasters are often carrying some of the most polluting products, most fleets are quite old and they are usually close to shore.
- Marine has not done nearly as well as **aviation** in adopting some obvious safety systems. Why can't we agree to have **near miss reporting & "black boxes"**? Karl Timmerman's company has been a leader in the latter with their voyage event recorders.
- It is these types of behaviour, and self serving reports like class society **RINAS** blaming the Captain rather than the class system itself for the sinking of **ERIKA** that make politicians and the public believe the marine industry is incapable of managing itself.

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A Position Paper by EXXON Corporation

Attachment 2

WILLIAM GRAY
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BIOGRAPHY

Mr. Gray holds a Mechanical Engineering degree from Yale and a Naval Architecture degree from the University of Michigan with Honors.

He served three and a half years in the US Navy, mostly at sea on a destroyer escort, where he became qualified for command.

He spent four years with Bethlehem Steel, when it was the world's largest shipbuilder, mainly in preliminary design of merchant ships, especially tankers.

During twenty-two and a half years with Exxon, Mr. Gray first held managerial roles in early LNG, LPG and V/ULCC development.

During the 70's Mr. Gray was the main oil industry spokesman at IMO.

Mr. Gray joined the Skaarup Group in 1987 and initially operated the Skaarup Fleet. From 1990 onwards, he specialised in tanker and safety projects for several groups.

In December 1994, Mr. Gray formed and became President of Gray Maritime Company, a marine consultancy. Principle clients include INTERTANKO, shipowners and shipyards. He is also a Director of US shipping company Attransco. He has been a frequent speaker on marine safety for API, BIMCO, ICS, INTERTANKO, Marine Log, Seatrade and others.