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Submission Paper

Inquiry into Maritime Salvage in Australian Waters

The discussion paper has been prepared by the NAVPAQ secretariat.

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HOUSE OF REPRESENTATIVES

Standing Committee on Transport and Regional Services *Chair: Paul Neville MP*

Inquiry into maritime salvage in Australian waters

The House of Representatives Transport and Regional Services Committee is to conduct an inquiry into maritime salvage services in Australian waters.

Maritime salvage is the act of rendering rescue services to a vessel in danger. Salvage may involve a variety of resources including management and technical expertise, skilled labour, tugs and possibly other vessels and specialist equipment.

Recent examples of ships requiring salvage help in Australian waters are when the 3,500 tonne HMS Nottingham struck rocks two nautical miles east of Lord Howe Island in July 2002, and when the vessel Doric Chariot, carrying coal to India, ran aground in August 2002 on the southern end of Piper Reef, 600 km north of Cairns (near the top of Cape York Peninsula).

Salvage services are usually provided by tugs whose primary purpose is for harbour towage. Salvage capability can also be provided by a range of other vessels, such as off shore oil supply vessels or fishing boats, depending on the nature of the salvage task. Adsteam Marine Limited is the main provider of tugs for harbour towage and salvage in Australia.

The inquiry has been requested by the Federal Minister for Transport and Regional Services, the Hon John Anderson MP, following a report by the Productivity Commission (*Economic Regulation of Harbour Towage and Related Services*). That report made recommendations that could have a direct effect on the provision of maritime salvage services and salvage coverage in Australia.

The inquiry will examine:

- Government responsibility to provide salvage infrastructure;
- The inclusion of a defined level of salvage capability in harbour towage service agreements;
- The provision of relief tugs when salvage tugs are engaged in a salvage operation;
- Minimum standards of salvage tug safety, training and operational capability; and
- The need for public interest obligations to release tugs for marine emergencies.

The committee is seeking written submissions by Friday 8 April 2004.

Submissions can be e-mailed to trs.reps@aph.gov.au or sent to the following address:

Transport and Regional Services Committee
House of Representatives
Parliament House
Canberra ACT 2600

Further information, including the terms of reference, a discussion paper and advice on making submissions, can be found at www.aph.gov.au/house/committee/trs or obtained by phoning the Committee secretariat on (02) 6277 2352 or emailing at trs.reps@aph.gov.au

Telephone: 02 6277 2352
Facsimile: 02 6277 4424
E-mail: trs.reps@aph.gov.au

PARLIAMENT HOUSE
CANBERRA ACT 2600

Terms of Reference

Inquiry into Maritime Salvage in Australian Waters

The committee will inquire into and report on the impact of the Productivity Commission Report on the Economic Regulation of Harbour Towage and Related Services in respect to the nation's ongoing capacity to provide a defined level of salvage capabilities and cover for all Australian Waters.

The report will have regard to:

1. The three tiers of government's responsibility to provide salvage infrastructure;

2. The inclusion of a defined level of salvage capability in harbour towage service agreements;

3. The provision of relief tugs when salvage tugs are engaged in a salvage operation;

4. Minimum standards of salvage tug safety, training and operational capability;

5. The need for public interest obligations to release tugs for marine emergencies.

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The closing date for submissions is 8 April 2004 although the committee will accept late submissions.

The discussion paper is available at www.aph.gov.au/house_salvage

1.0 Executive Summary

The $120 Billion USD container industry with an average 8% growth in the 1990's is forecasted to increase by almost 100% by the year 2010. The world sea freight shipping container (boxes) inventory comprises some 12 million containers (boxes) in immediate circulation and 95 million loaded container ocean movements each year. Containers lost overboard that refuse to sink represent a growing, uncharted salvage danger to shipping.

Michael Lloyd, deputy director of the Alliance of Maritime Regional Interests in Europe (Amrie), termed *rogue containers* "an emerging, serious safety problem", particularly for smaller craft. Mr Lloyd suggested that as many as 10,000 containers a year slip off the deck and into the sea. Assuming an average floating time for a container to be three months, it has been claimed that up to 2,500 pieces of ISO-dimensioned marine litter may be afloat uncharted at any given time.

Sea freight containers are loaded into purpose built ships. Less massive containers are loaded above free board deck height to maximise the available stack capacity and buoyancy of the ship. The above deck containers can be empty, or filled with lighter materials so the stability of the vessel is not compromised in heavy seas, even when stacked five stories above deck height. It is only those above deck sea containers that can be pushed or fall off and over board (Container Freight Standards; 1980).

TT Club's George Fawcett, the club's container claims specialist said that any collision with a container that is lying dead in the water is likely to do serious damage to a merchant vessel and ultimately threaten lives.

The danger for shipping of a jettisoned sea freight container is much the same as the low-lying iceberg called a 'growler'. Containers can comprise a formidable mass and internal inertia of water mass (~244 tonnes). Containers also have sharp, reinforced steel corners and heavy gauge steel body claddings. Most significantly are their float characteristics only allowing the upper most surface of the container to maintain steady buoyancy within the top 1 meter of surface water. That is to say just at or below the surface. This renders containers invisible to bottom sonar, radar and human visibility in all sea conditions.

NAVPAQ Pty Ltd seeks to make these dangerous and invisible 'iceberg' like container hazards visible to all mariners everywhere. By way of informed R&D and new safety products, it could be possible to eventually access the total market by an assisted development for a device to be fitted onto every shipping container to defeat this problem right at the source. NAVPAQ has combined expertise in engineering, R&D and international business seek to make 'awash' (level with the surface of, and just covered by, water) containers visible to all seafarers with an available local proximity warning system to alert mariners to the imminent dangers. Currently there are no available products world wide mainly due to non-existent salvage regulations that cover such eventualities.

International maritime organisations, national government maritime and defence agencies are also seeking ways to protect merchant shipping against the uncharted and possible WMD (weapons of mass destruction) containing *rogue container* danger. Maritime insurers, shippers and merchant shippers after September 11th 2001 are now demand a new level of surety and indemnity.

The International Maritime Organisation (IMO) has identified that containers lost overboard and refuse to sink represent a growing danger to shipping.

2.0 Introduction

NAVPAQ, Pty Ltd (NAVPAQ), headquartered in Adelaide South Australia, is a company founded for the purpose of investigating an anti-collision solution for individual, lost overboard, sea freight shipping containers. The creation of verifiable position and exclusion zones around lost and floating sea freight-shipping containers in Australian coastal and international shipping lanes has not been addressed under the any current salvage acts.

The international and national sea freight market by way of the terrorist attacks on New York in 2001 has emerged as a weak link in a new security atmosphere that surrounds international trade. Currently there are a number of international security initiatives such as the Cargo Security Initiative (CGI) and the Smart and Secure Trade lanes (SST) project that are concentrating on being able to track all containers at all times within the transport system. However the massive cost of the infrastructure required for doing this threatens the future economic viability of the industry and yet still does not address issues of salvage, ownership and eventual liability.

Containers that are lost overboard and moved out of national transport tracking systems create a threat and who is to be held responsible for the potential collision damages needs to be looked at under the current salvage review. The threats to other sea going vessels and the possible WMD potential that rogue containers pose are serious issues for United States and Australia law makers in respect to the new AUS/US free trade agreement.

UK's P&I Club have growing concerns in this area, announcing from 2001 that 11% of its container claims were due to boxes lost overboard, the average value of individual event claims being around $400,000 USD. TT Club (liability insurer for about 70% of the world's container fleet) claims, extrapolated to allow for the 30% of global inventory TT Club do not currently insure, the actual number of containers falling from ships varies each year. Their yearly average figure is around 3,500 boxes lost overboard.

The future deployment need of new navigation devices is guaranteed by the fact that current naval architecture has chosen a hull profile that maximises profit over safety. The new post Panamax container ship hull designs are more like a U than a V shape. The U shape is creating unexpected roll problems called parametric rolling of which many underwriters are now becoming aware. The U-shaped hulls originally had bilge keels to help stop the ship rocking and rolling, but they have largely been removed or made smaller because they cost money or slow the ship down. This can create severe and sustained rolls of up to 50º from horizontal in even swell, effectively unloading all top deck containers to prevent capsize. Also because of the enormous size of many new ship designs, port operators are resisting the further dredging of docks and hence stopping stabiliser keel re-introduction due to the lack of port depth.

Such a localised navigation/avoidance service is not yet available anywhere in the global transportation industry.

3.0 Background

International standardisation is the rock on which global sea freight container market is built. Without an international agreement, the basic container system could never have developed to anything approaching its present global scale. Currently there is no agreed international standard for the detection and mapping of the thousands of semi-submerged containers unknowingly jettisoned into national and international waters. The principal problem is that these containers remain a floating hazard for months, and due to tidal action invariably drift undetected into busy shipping lanes, posing an immediate and uncharted threat.

Within international trade transportation practices, technologies such as radar, sonar, night vision, and global positioning satellite (GPS) and radio (GMDSS) are the standard tools for safe commercial shipping. However, these equipments are usually calibrated to search specifically for an object type. If the hazard does not display a typical or recognisable form characteristic for that calibrated equipment, then the hazard can still remain an undetectable threat. NAVPAQ is seeking to provide semi-submerged containers with a

recognisable and standard form characteristic for existing detection devices.

Submerged navigation hazards of man made cargo sea freight containers do create life-threatening situations for all sea craft. Differing international safety standards, language barriers, economies of wealth, fears of drowning and unseen navigational hazards make it difficult enough for merchant organisations to achieve any sort of immediate or global maritime safety protocols. Current identification and indicator technologies have yet to become simple, innate and internationally recognisable for this particular type of danger. NAVPAQ is investigating unambiguous warning systems and a new standard for future agreed navigational safety protocols.

A typical 1A series container is of dimensions 8'x8'x40' (Feet) proportions, hence 2,560 ft3 (72.49 m3) of steel surface. This has a massive potential momentum that can transmit a lethal penetrating force to a ship's hull at any speed. NAVPAQ is seeking a requirement for safety devices that can be fitted at construction or at delivery of new and old sea containers, and to any place worldwide. Our goal is a device design will effectively render sea containers detectable to all SOLAS sailors, in all types of weather, including fog. It is important to realise that there is no cost effective form of commercial recovery or salvage for sea containers lost at sea due to their precipitous weight and size. It is usually not within shippers economical constraints to interrupt a voyage to specifically search for lost containers. In all cases of 'loss overboard' they are abandoned at sea presumed sunk and the loss may only be actually reported when unloading at port.

The traditional procedure for reporting lost sea containers resides initially with the ship's captain knowledge of the loss overboard. A radio report is sent to the local coast guard giving the approximate time and position of a loss. A radio warning is then broadcast to all local shipping for 48 hours duration, only repeating the initial reported location details. After that time has expired, it will be assumed that tidal action has moved the container hazard out of the reported location and into an unknown area. It is then officially deemed lost at sea and is no longer the responsibility of the maritime services; unless new and more accurate position is reported in by another observer (IMO, MERSAR 5th Ed).

NAVPAQ is investigating technology that independently, automatically and effectively gives all those within the general proximity of the submerged object a clear and unambiguous reference point and accurate exclusion zone for safe navigation and for reporting. In a further consideration, the location will be able to be monitored and displayed onto the local NAVTEX weather map facsimile transmissions to those vessels in the same region. In the longer term, container drift datum collections will allow maritime organisations to accurately forecast potential trouble areas and container drift giving detailed forecast warnings to navigators before their voyages are commenced.

4.0 The World Container Market

We have identified the container shipping market for several reasons. As a $120 billion USD yearly industry, it features significant potential growth. The annual unit growth of the number of containers shipped averaged 8% in the 1990's and is forecast to increase by almost 100% by the year 2010. It will be the case that as China increasingly dominates the world freight market; prices for freight will drop in response to the increase in of competition. The result will be fewer funds available for maintaining current safety measures in a climate of increased discount competition.

In the next decade, container terminals around the world are set to experience rapid growth, with global container handling throughput expected to reach in excess of 300 million TEUs[1] in 2005 and over 400 million TEUs in 2010.

Despite the growth in the container shipping industry, it still remains a very fragmented market. There are over 500 companies operating in excess of 2,500 vessels today and within the U.S. alone there are over 50,000 importing and exporting companies on record. On a worldwide basis, the number of companies engaged in international container shipments is in the hundreds of thousands.

[1] TEU: (Twenty foot equivalent unit) an industry measurement of volume for container shipments. Containers typically are offered in twenty and forty foot dimensions. One twenty-foot container is equal to 1 TEU and one forty-foot container is equal to 2 TEUs.

5.0 Existing Customers

NAVPAQ has identified those shippers seeking to reduce the loss of containers within their ocean supply chain, maritime insurance and government agencies striving to enhance the navigational security of their merchant shipping in transit.

Currently, there is no container specific warning information by any service provider. To achieve 100% port-to-port container visibility, a shipper must undertake a massive data integration project with a non-dedicated service provider, or outsource the entire effort to a specialty salvage company. Even then the information is historical and reliant on third party data entry that is subject to human error. Current tagging technologies will track a container within the control of the supply chain but not when moved outside a controlled environment.

Of the total projected market of over 300 million TEUs in 2005, our efforts are focused on those shippers with high value, time sensitive, or hazardous cargo containers. We estimate that approximately 30% of the total world market would fall within this initial criterion, equating to over 90 million TEUs.

Our navigation/location focus is being directed to those government agencies and Australian/U.S. ports involved in weekly processing the 600,000 containers and the merchant fleet insurers that indemnify the sea lanes around them.

With only 2% of container imports being inspected today, the concern of dangerous cargoes compromising the port operations has created new opportunities for a container proximity alert system.

6.0 The Container Shipping Industry

In 1950, shipping goods via a container was introduced as an alternative to general loose cargo handling (referred to as break-bulk shipping). Since then, container shipping has become the preferred way to ship merchandise internationally, displacing break-bulk shipping in all but the largest of loose cargo2.

1. It allows the cargo to move from in-land point of origin in one continent to in-land point of destination in another continent, without the need to handle the cargo itself—the sealed container seamlessly moves between multiple modes of transportation (“intermodal” shipment), from the back of a truck's chassis, onto a specially built container ship, and back again on top of a truck, rail, or barge, as the case may be.

2. Container shipping utilizes standard size containers. This standardization of capacity carrying units has introduced efficiencies into the management of shipping, warehousing and general distribution.

3. Container shipping provided greater security from theft of cargoes and improved protection from breakage by avoiding the manual handling that took place during break-bulk shipments.

Today, almost all finished and semi-finished goods are shipped internationally within containers, including: chemicals, food products, wood/paper products, metals, minerals, plastics, machinery and various manufactured products, textile, vehicles, medical equipment, etc.

NAVPAQ estimates the size of the container shipping market at $120 billion ($80 billion in port-to-port revenues alone3).

The annual unit growth of the number of containers shipped averaged 8% in the 1990's and is forecast to increase by 100% by 2010. In the next decade, container terminals around the world are set to experience rapid growth, with global container handling throughput expected to reach between 300 million and 342 million TEUs in 2005 and between 407 million and 525 million TEUs in 2010.

Ocean carriers are currently taking delivery of new vessel orders that were placed during the strong growth

years prior to 2001, increasing the container vessel fleet by 12.3% in 2001 and 14.5% in 2002. This additional capacity is creating pressure on rate levels and a significant reduction in revenues is expected to continue through 2003. On the positive side, this increase in capacity is positioning the ocean carriers to be prepared for the increase in volumes that have been forecast.

The dramatic growth in the container shipping industry is attributed to the improved efficiencies and lower cost of transport opening borders and allowing manufacturers around the world to be competitive in foreign markets.

The container shipping industry grew from a single company in the 1950's to a very fragmented industry of over 500 companies operating in excess of 2,500 vessels today. As the number of carriers increased, the frequency of sailings and speed of the vessels improved, providing manufacturers with the ability to offer their products around the world with shorter delivery times and lower transportation cost. This changed the nature of the market from dealing with a competitor around the corner to having to compete with a manufacturer on another continent.

In the U.S. alone, there are over 25,000 individual companies exporting container loads of cargo and over 32,000 importers based on the 2000 Journal of Commerce Piers report. This information is compiled from the export declaration forms submitted by exporters and from the import duty data collected by U.S. Customs and only takes into account cargo importing/exporting from U.S. ports.

The substantial volume of U.S. cargo transiting through Canadian ports is not included in these figures. There are no reports available to identify the total numbers of global shippers today but the number of individual companies around the world engaged in international container shipping has grown to the hundreds of thousands. The market is forecast to increase approximately 100% over the next 10 years due to increased global demand. The projected number of shippers will increase proportionally.

[2] Source: Mercer Management Consulting study submitted on behalf of the carriers to the House Judiciary Committee 3/22/00.
[3] Sources: L H. Clarkson & Company Ltd., Drewry Shipping Consultants Ltd.

7.0 Freight Container Visibility

As shippers strive to improve their customer service and maintain correct inventory levels, they demand greater “visibility” into the status and location of their shipments. Unfortunately, the benefits gained by container shipping unearthed a different problem lack of information standardisation.

Informational “clubs” do exist and each party does know how to talk and exchange information with a few of the club members, but not to all service providers have access to these clubs. Additionally, shippers typically selected different service providers depending on terms of the shipment, further fragmenting communications.

To get to this information, the shipper must undertake a massive data integration project with each service provider, or outsource the entire effort to a supply chain visibility company. Each party's messaging standard must be converted to a common format before the shipper can utilise this data.

Once completed, the next problem arises. All the data generated from each of the service providers is, by it nature, historical. Where a container is located 'right now' is not part of the data. The information provided today is based on the last event deemed worthy of notation by the service provider.

The quality of this information can vary widely based on the sophistication and integration of the systems utilised by the service providers as well as the quality and dedication of the individuals entering the data. All but a few service providers rely on some sort of manual data entry/validation by experienced field personnel, and are susceptible to human error. The market is seeking a single source solution to provide accurate and timely information regarding the location of their lost over board sea freight shipping containers.

8.0 Freight Container Security

While container location information is improving, 'lost at sea' container security data is practically non-existent. The shipper can place a plastic or soft metal seal on a container and then records the number on their documentation. Upon receipt, the receiver confirms that the seal is still intact and the container has not been opened.

Typically, the first notice of container loss is upon delivery at port, at which point it may be too late to take necessary actions to attempt a recovery or even establish where the loss occurred. Containerisation has significantly increased incidents of individual loss over break-bulk shipping with the increase in volume of international trade. As competition increases and ships become larger, the lowering of affordable safety regimes will only increase above free board stacking and its inevitable storm damage and loss.

The U.S. Government is also seeking improvements in the visibility of containers imported through U.S. ports. With only 2% of the 600,000 containers entering the U.S. weekly being inspected, there is a substantial threat that dangerous materials or weapons of mass destruction could be imported via a container. Should jettisoned dangerous cargo containers drift undetected into shipping lanes; it could potentially bringing surrounding maritime commerce to a standstill.

There are numerous U.S. Government agencies are becoming involved in the security initiatives and funds have been allocated to invest in new technologies.

9.0 Maritime Needs

The market has expressed the need to have more location reporting data control in the transportation of cargo shipping containers. This has manifested itself in the desire for a less historical event-reporting schedule so that the time between positional data reports is massively decreased. Also there has been a desire for the implementations of an automated event triggered reporting system instead of standard manual in port stock take reporting system.

The areas that have been identified as lacking are:

1. The need for accurate and timely visibility information instead of the existing event-based historical data.

2. The requirement for improvement in the quality of data received through the current manual entry system.

3. Confidence in the source and accuracy of the information.

4. The ability to apply a single visibility solution across all service providers involved in the end-to-end transport without expensive integration or outsourcing.

5. The ability to receive visibility data in a consistent format across multiple service providers.

6. Timely notification of a container loss to allow immediate mapping and the necessary corrective action.

10.0 Shippers

With container volume projections exceeding 300 million TEUs by 2005 and over 400 million TEUs by 2010, the market potential for this segment is significant. Any shipper with high value, time sensitive, or hazardous cargo is a targeted customer. The container cargo that falls within this criterion would be approximately 30% of the total market equating to over 90 million TEUs per annum in 2005.

These shippers are demanding that a container proximity system will provide them with event based, reliable data regarding the location of their shipments lost and outside their ocean supply chain control. That information will allow them to manage cargo loss reporting requirements, avoid additional insurance costs, anticipate customer stock shortages, and reroute cargo when necessary. They require confidence in the quality of the data and the timeliness of the event based report to ensure correct actions are being taken immediately.

Today's systems do not instil that confidence because the shipper is reliant on third party, historical data. Providing historical information about where a lost container has been, based on events designated by the service provider, does not meet their requirements. The shipper is not empowered with control of the information, which limits the value of the content.

11.0 Government Agencies

The world has been forever changed since the attack on the World Trade Centre and Pentagon on 9/11/01, and the sense of security that Allied countries enjoyed has been reduced. Security at airports, commercial facilities and government buildings has been enhanced dramatically, utilizing a variety of equipment designed to identify and restrict dangerous contraband.

U.S. merchant shipping have been specifically identified as vulnerable and potential terrorist targets and are in need of greater security measures.

U.S. government agencies and offices have allocated funds for improvement in container security, container-tracking technology, and passive seals that induce internal flooding if lost over board. D.O.D. is pursuing technology that will provide accurate and event based location information as well as recovery for the containers carrying munitions or supplies to military installations.

The Maritime Administration (MARAD) is allocating funds for technology that will assist in their effort to avoid the importation of weapons of mass destruction in containers through a U.S. port.

All of these agencies and offices have been targeted as potential markets for an automated container proximity alert device. Preliminary conversations with these organizations, as well as I.M.O. and the U.S. Coast Guard, have been encouraging and have resulted in a desire for prototypes for field-testing.

12.0 Market Opportunities

NAVPAQ has identified three distinct opportunities within this market as having a proven need and an expressed desire to improve the visibility of cargo shipments.

- **Shippers -** this group has identified a need for a container proximity alert device tool that will allow their shipments to be monitored from origin port-to-destination port providing accurate and event based location information.

- **Government Agencies -** since 9/11/01, heightened awareness throughout the U.S. has led to security concerns regarding cargo entering U.S. ports. Government agencies/offices such as D.O.T., Transcom, Customs, Department of Defence (DOD), and Homelands Security have expressed interest in technology services capable of being introduced anywhere within the ocean supply chain that provide protection against a terrorist threat from dangerous container cargoes.

- **Carriers -** the equipment owners are seeking an automated process of container loss and proximity alert device for 'Reefer' refrigerated temperature-controlled containers, providing them with positional data and immediate notification of container losses allowing them to take the necessary action to avoid expensive container replacement.

13.0 Other Opportunities

Ocean carriers are typically the owner/lessee of the containers and chassis that are loaded by shippers for their international shipments.

Many carriers include temperature-controlled equipment in their container fleet for perishable goods such as meats, produce, chemicals and other products that require stable temperature environments. The equipment owner is responsible to ensure the unit is maintaining the required temperature and will be held responsible by the shipper for any failures that lead to cargo damage.

The carriers perform inspections of the equipment at predetermined intervals throughout the transport route; physically monitoring the operation of the refrigeration unit to confirm the required temperature has been maintained.

The physical inspections are labour intensive, expensive, subject to human error, and may experience extensive time lapses between intervals. Should there be an equipment failure between inspections, the temperature may fluctuate enough to spoil the cargo and generate a claim.

The equipment owners are seeking an effective method to automate this inspection process and provide immediate notification of equipment failure, allowing them to take the appropriate action to avoid cargo spoilage.

Our research has found the carrier market already has several companies offering solutions to meet this need, and we have decided not to focus our efforts in this area at this time.

14.0 NAVPAQ Investigation Team

Mr. Robert Hasenohr **B. (IndDes); M. (IndDes)**

Mr. Hasenohr is a seasoned design professional with over 15 years of experience in prototype development and technology research. As CEO/CTO and founding member of NAVPAQ, Mr. Hasenohr brought the ConBuoy™ from concept to reality in six months.

As he is a practicing industrial designer with a 4-year bachelor degree (Uni of SA) and a master degree in industrial design (UNSW) with minor studies in medical technology, ergonomics, psychology, marketing, fine arts and consumer law. Broadly educated (true generalist) with a UNSW postgraduate thesis on new I.T. human/computer interfaces for the global Maritime Distress & Safety System of which a number of device patents have been sort.

Currently Mr. Hasenohr has achieved the Carnegie-Mellon University Premier's scholarship for the advanced diploma in IT to further integrate the burgeoning industrial design and associated software development industries here in Australia.

Mr. Hasenohr brings unparalleled knowledge and expertise to this company as the developer and researcher of the patented ConBuoy system. While attaining his master's degree in 2001, these parallel design interests allowed him to garner international support, co-operation and expertise for his quest to make the sea a safer place to sail, for everyone. The further integration of IT specialisation allows for the specific development of softwares to meet this new global threat.

Mr. Christopher Cleveland **B.S.B.A**

Mr. Cleveland graduated from Georgetown University School of Business in Washington, D.C. with a Bachelors Degree (B.S.B.A) in International Business. Mr. Cleveland also studied International Commerce at the University of New South Wales in Sydney, Australia to further expand his knowledge and experience in

the intricacies of international business aspects including special focus on financial and organizational aspects of international commerce.

From 1985 to 1993 Cleveland served as a US Navy computer systems analyst where he managed and maintained multi-mullion dollar shipboard missile control systems. He is well versed in technology requirements to US military specification and his enlisted experience in tactical navigation standards within international environs supports the dedication and experience within NAVPAQ.

Mr. Cleveland has established and cultivated years of practical supervisory/managerial experience and multi-cultural relations via involvement with the US Navy, Georgetown School of Foreign Service Washington DC, and NASDAC technology corporations providing services to foreign entities/individuals.

Fluency in two languages and in current business management systems and with extensive personal experience in international business affairs.

15.0 Contact Information

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23 Mar 2004

US Unveils New High Tech Seaport Equipment to Combat Terrorism

Leah Krakinowski
New York
22 Mar 2004, 23:36 UTC

The top U.S. Customs official on Monday unveiled new high-tech equipment that will be used at the nation's seaports in the fight against terrorism.

Highly sophisticated radiation monitors will be installed at every seaport in the United States. The sensitive detection equipment is designed to prevent terrorists from smuggling radioactive material, in the form of dirty bombs or nuclear weapons, into the country.

The Port of New York and New Jersey, one of the nation's busiest seaports, will be equipped with the monitors by the end of August, making it one of the first to have them.

U.S. Customs Commissioner Robert Bonner said it will cost $1 million to install and operate each monitor. He said it's a major step in securing America. "There's no more important task for the Department of Homeland Security and of Customs and Border Protection than keeping terrorists and terrorist weapons out of our country. And there is no more important weapons that we want to keep out of our country than nuclear and radiological weapons," he said.

The new monitors screen every container that arrives by ship for radiation emissions. Customs inspectors also utilize large-scale x-ray type machines that are able to scan an

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entire sea container in two-to-three minutes. Special radiation identifiers can pinpoint the source and nature of radiation, and are accurate enough to detect radioactive material masked in heavy lead.

Customs Commissioner Bonner said the installation of the monitors is the latest in a series of steps around the country to protect U.S. ports of entry. "Because of the catastrophic consequences of the al-Qaida and al-Qaida-associated groups getting that kind of weapon into our country, we don't want to take any chances. We want to have the maximum kind of protection that we can to protect against that kind of terrorist weapon entering into our country," he said.

There are already more than 300 hand-held radiation monitors being used at U.S. seaports and land border crossings. In February, New York's Kennedy airport began using a radiation scanner for incoming cargo.

Customs Inspector Michael Hegler said the most worrisome radioactive materials are Plutonium and Uranium 235, used for making of nuclear weapons. "Most radiation is naturally occurring. Bananas have radiation, ceramic tiles, toilet bowls, porcelain-ware. All have natural radiation. We are looking for Uranium 235 or Plutonium, which we feel can make a dirty bomb and would be a component of that bomb that is being brought into the country," he said.

Inspector Hegler said customs officials have a tremendous amount of sophisticated technology at their disposal. "The old fashioned days of us going out to containers and opening doors and just looking are not done any more," he said.

Officials say 1.2 million containers enter the United States every year through the Port of New York and New Jersey.