



## U.S. Coast Guard

Commandant (CG-544)  
Office of Port & Facility Activities  
2100 Second Street STOP 7581  
Washington, DC 20593-7581



Report of the

# Cargo Security Symposium

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Results of the Plenary and Breakout  
Session Discussions

24-25 September 2009



**ASSISTANT COMMANDANT FOR  
MARINE SAFETY, SECURITY AND STEWARDSHIP  
UNITED STATES COAST GUARD  
WASHINGTON, DC 20593-0001**

**FEB 18 2010**

Dear Port Security Stakeholder,

In September 2009, the Coast Guard and the National Maritime Security Advisory Committee (NMSAC) sponsored a Cargo Security Symposium to open dialogue with stakeholders involved in the nation's cargo security process. The Symposium brought together over 100 subject matter experts from diverse backgrounds to capture key information for the development of a national strategy to reduce risk and improve the security of the U.S. Maritime Transportation System.

While there have been significant improvements made in the post 9/11 environment to reduce risks posed by the myriad of Certain Dangerous Cargoes (CDC) that move through our nation's ports, resource constraints, inconsistent practices, and varying levels of capability continue to create challenges. This report captures the results of the Symposium which was a critical first step in identifying these challenges to develop a holistic and collaborative resolution.

Understanding that risk management of CDC transport is a shared responsibility, and capitalizing on the momentum generated by the Symposium, a workgroup of government and industry representatives was chartered to begin development of a national risk based strategy. As the strategy progresses, it will be shared with Symposium participants and at federal advisory committees meetings and other public venues to ensure the national dialogue continues. We anticipate significant progress in 2010 and our goal will be to finalize the strategy this year.

In closing, I thank NMSAC for their leadership role in maritime security and each participant of the Cargo Security Symposium for a job well done!

Sincerely,

A handwritten signature in blue ink, appearing to read "Brian M. Salerno".

**BRIAN M. SALERNO**  
Rear Admiral, U. S. Coast Guard



## Acknowledgements

**T**he Cargo Security Symposium (CSS) could not have occurred without the efforts and collaboration of many people. In particular, the support of the National Maritime Security Advisory Committee (NMSAC) made the symposium and its success possible. Special thanks are due to Captain Ron Branch, USCG (ret.) for his role as the NMSAC Cargo Security Working Group Chairman and as a conduit to members of the maritime industry who improved this report with their comments and suggestions. Special thanks are also extended to the facilitators and support staff from ABS Consulting who ensured the symposium stayed on track and maintained a focused approach by soliciting and capturing input from the broad range of stakeholders in attendance.

Panel members, who eagerly volunteered to provide their expert insight through in-depth and engaging presentations, were key to the highly informative plenary session and legal issues panel that set the stage for the breakout sessions. Stakeholders in attendance, including experts from state and local law enforcement and port authorities, representatives from the maritime industry and U.S. Coast Guard Captains of the Port contributed immensely to the richness to the discussions and conclusions.

Credit is due to the members of Coast Guard Headquarters, Areas and District staffs that participated in pre-symposium meetings to explore the topics to be covered and developed the agenda. Special thanks are due to Lieutenant Commander Kevin Reed and his administrative and logistics staff led by Lieutenant Junior Grade Eric Golder and Mr. Robert Reimann of the U.S. Coast Guard. They worked tirelessly to guide and facilitate the entire enterprise, including selecting an exceptionally accommodating meeting venue, identifying and inviting meeting participants, and working actively and effectively in each phase of planning and implementation.



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## EXECUTIVE SUMMARY

On 24 and 25 September 2009, the U.S. Coast Guard, under the sponsorship of the National Maritime Security Advisory Committee (NMSAC), convened a CSS in Reston, Virginia. The purpose of the symposium was to inform and guide the development of a national strategy for reducing the maritime security risks present in the bulk transportation and transfer of Certain Dangerous Cargo (CDC) within ports and waterways of the United States. Attendees represented a diverse mix of industry (shippers, facility operators, and carriers), state and local government representatives (law enforcement, emergency response, and homeland security), other government agencies, congressional staff, legal and insurance industries, and U.S. Coast Guard (field and headquarters) representatives.



The CSS was held to engage private and government stakeholders in discussions on a range of issues involving the security risks posed by movement of CDCs throughout the U.S. Maritime Transportation System (MTS). The CSS brought together approximately 120 invited stakeholders to discuss the issues and share one another's concerns about CDC security.

The symposium agenda was designed to:

- Provide an overview of national CDC maritime transshipment security concerns from the Coast Guard's perspective;
- Promote discussion and understanding among attendees regarding:
  - The current risk profile of CDC maritime transshipment;
  - Risk mitigation efforts currently underway; and
  - Specific legal/liability/legislative concerns surrounding CDC maritime transshipment security.

The CSS was designed to fully engage the various stakeholder communities in order to leverage their experience and record their ideas and concerns on maritime safety and security issues. Distinguished

speakers and national experts first informed the attendees on maritime homeland security threats, initiatives, and concerns. The symposium program then turned to breakout sessions in which stakeholders participated in facilitated discussions of issues related to the risks posed by the movement of CDCs through the U.S. MTS and mitigation measures that could be taken to



lessen these risks. Throughout the symposium, stakeholders were encouraged to take full advantage of the forum to engage speakers, panel members, fellow stakeholders and facilitators in meaningful dialogue.



In his opening remarks, Admiral Thad Allen, U.S. Coast Guard Commandant, identified the need for an open discussion about security in maritime transportation and the proper roles of the federal, state and local governments, and the private industry. He also stressed the point that, for some time, focus on certain commodities has been based on historical events and perceptions that limit a holistic approach which would better apply limited available resources to reduce risk to an acceptable level. He urged those in attendance to share their thoughts to assist in developing a framework that reduces risk and is in the best interest of the country.

The symposium used a forum of plenary panel presentations that framed the current state of cargo security in the maritime transportation system. These panels focused on threat and current risk mitigation activities that laid the groundwork for facilitated breakout sessions. Those sessions engaged attendees as to acceptable risk, ways to achieve it and the challenges in implementing mitigation measures. The symposium concluded with a final panel on the legal issues associated with cargo security.

The in-depth presentations and collaborative dialogue in the breakout sessions proved to be extremely valuable. They enabled stakeholders to voice individual concerns and the groups to speak collectively on matters of common interest. While the symposium was a valuable initial step to help gauge opinions and craft a way forward, there will be much more work ahead on all fronts in order to deliver a lucid construct to form a national maritime policy for reducing the risks associated with the transport of CDCs.



## INTRODUCTION

**H**azardous materials are generally chemicals that have been determined to pose a risk to health, safety, and property when transported in commerce. One subset of hazardous materials shipped via waterways is “Certain Dangerous Cargoes (CDCs).”

CDCs are hazardous materials so designated because they have been determined to pose the greatest risk to maritime safety and security due to their threat to human health, property, and the environment, along with their potential use as weapons capable of producing mass casualties or as components of such weapons. The regulation of CDCs as a class includes the requirement for Advance Notice of Arrival for vessels carrying CDCs arriving at or departing from a U.S. port to allow their movement to be tracked. Each chemical listed as a CDC is also subject to other regulations generally designed to ensure the safe transport of the chemical.

CDCs include explosives and blasting agents; poisonous gases and liquids; oxidizing materials; radioactive or fissile materials; bulk liquefied chlorine and other liquefied gases that are flammable and/or toxic; and certain hazardous bulk liquids and bulk solids.<sup>1</sup>

Among CDCs, the one singled out for special regulatory consideration to date has been Liquefied Natural Gas (LNG). The handling of liquefied gases generally at waterfront facilities, including LNG, liquefied hazardous gas (LHG), and liquefied petroleum gas (LPG), is regulated for safety under Coast Guard regulations (33 CFR Part 127). LNG, however, has been subjected to special scrutiny and regulations governing, among other things, the siting of LNG facilities onshore by the Federal Energy Regulatory Commission (FERC) and offshore by the Coast Guard. Operations

and security considerations at LNG facilities are subject to review under these siting requirements unlike other CDC handling facilities.



LNG’s prominence in the CDC realm has been caused largely by highly publicized concerns over the potential impact of a large-scale LNG release. There are conflicting opinions between various stakeholders concerning the potential public safety and environmental impact from an average or worst case discharge scenario from a vessel transporting the

cargo in bulk. Overlaying this publicity has been the proposed increased importation of LNG to the U.S. and the increase in LNG tanker traffic within certain port areas. Regardless, specific and perhaps disproportionate focus on LNG, may preclude addressing risk more comprehensively throughout a port area.

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<sup>1</sup> A definition of CDCs may be found at 33 CFR 160.204



What has largely escaped attention is the potential effects of an incident involving other CDCs. Other gases carried in bulk, LPG and LHG particularly, are carried and stored under pressure (unlike LNG which is transported and stored at ambient pressure). Some of these gases could be susceptible to Boiling Liquid Expanding Vapor Explosions (BLEVE) under certain conditions, potentially more devastating than the effects of an LNG release. Exposure to the release of chlorine gas can result in immediate death and has been used by insurgents in Iraq in conjunction with other Improvised Explosive Devices (IEDs). Other CDCs may result in large-scale casualties if released into the air, may pollute drinking water supplies if released into a fresh water system, or may cause other public safety and environmental concerns.

Perhaps the greatest threat from CDCs is their potential use as Weapons of Mass Destruction (WMD) or a vessel transporting CDCs being used as a WMD. A small vessel attack on a CDC carrying vessel, for example, may result in the hijacking of the vessel and the loss of control of the vessel and its cargo to the hijackers.

Every CDC, including LNG, is subject to regulations intended to ensure its safe transport. For example, vessels carrying CDCs arriving at or departing from a U.S. port are required to submit an Advance Notice of Arrival, which allows their movement to be tracked by the Coast Guard. Additionally, existing regulations designed to safeguard maritime security generally act as another deterrent against the possibility of a security incident involving CDCs. The Maritime Transportation Security Act of 2002 mandates that every credentialed mariner have a Transportation Worker Identification Credential (TWIC) to gain unescorted access to secure areas of a vessel or facility. The Coast Guard also requires vessels carrying CDCs to have a Coast Guard-approved vessel security plan or approved Alternative Security Program to help ensure the secure movement of dangerous cargoes.

It must be recognized that the movement of CDC cargoes is important, even vital, to our standard of living in America. For example, chlorine, although it poses hazards, is the substance that allows the American public to enjoy safe drinking water, as it is the primary agent used to kill harmful pathogens in our water supply. If we accept that the movement of CDC cargoes is essential, we must also recognize that the risks of water transportation must be weighed against those of other modes. While we should seek to reduce risk in all modes of transportation, we should be cautious to ensure our actions with respect to security policy for one mode do not shift CDC cargoes to another mode that presents greater risk.

There are individual regulatory requirements and vigilant security initiatives being undertaken by vessels carrying CDCs and the facilities receiving them to deter the associated level of risk. However, there is still a need for a holistic approach to risk mitigation that apportions responsibility more broadly among all stakeholders and thereby establishes a more effective regime at a lower cost. Using the safety or environmental protection regulatory regimes as a model, there are shared responsibilities among federal, state, and local entities and between government and industry. A potentially confusing web of regulations, policies, and enforcement could ensue without agreement among the various stakeholders. Compounding this is the lack of resources to promote security in the absence of a specific regulatory regime. The CSS was convened as a starting point to gather stakeholder input to address these issues.



The symposium agenda was therefore designed to:

- Provide an overview of national CDC maritime transshipment security concern from the Coast Guard's perspective;
- Share with the attendees the current risk profile of CDC maritime transshipment;
- Share with the attendees CDC maritime risk mitigation efforts currently underway;
- Capture information from stakeholders during the breakout sessions; and
- Share with the attendees specific legal/liability/legislative concerns surrounding CDC maritime transshipment security.



During the symposium's opening remarks, Admiral Thad Allen, U.S. Coast Guard Commandant, identified specific gaps pertaining to CDC transshipment in the United States. The major points were:

- Tendency in the current environment to place excessive focus on one CDC to the exclusion of others. While there are several external factors that may impact public perception with regard to a particular commodity, the actual risks that are inherently linked to the commodity by its chemical makeup may pose less consequence than other cargoes receiving less attention and scrutiny.
- There is a finite set of Coast Guard resources available to assure adequate security and reduce the risk of CDC maritime attacks. While every entity has to deal with resource restrictions on some level, the Coast Guard must balance its resources across other traditional mission sets even as industry increases the movement of CDCs through U.S. ports and waterways. Compounding the problem is potential legislation that could further exacerbate Coast Guard resource constraints, significantly cutting into other mission areas.
- The lack of an overall cargo security strategy leaves the door open to legislatively mandated solutions that may inhibit a risk based approach.
- In some cases, there is an unwillingness to accept the costs associated with shared responsibility and the benefits derived from shared responsibility. Federal, state, local and private security efforts and the agencies carrying out those duties lose force multiplier opportunities due to operating without a policy that clearly delineates specific roles.



- Incorporating the cost of security on a national basis will have to spawn the economic discussion pitting commodity pricing vs. direct security costs.
- There is a lack of clarity on the concept of acceptable risk as it pertains to CDC maritime transshipments given threats, vulnerabilities, consequences, and resource constraints.



In addition to plenary presentations and discussions following Admiral Allen's remarks, there were also facilitated breakout sessions with smaller group discussions. The breakout groups' makeup represented the various government and private sector attendees.

Breakout groups were asked to discuss two broad categories:

- Define acceptable security risk surrounding the maritime carriage, transfer, and storage of CDCs within the United States (tasks 1 and 2); and
- Identify mitigation measures that could be taken to lessen the security risk of CDC transshipment (tasks 3 and 4).

Within the latter category, the groups also discussed challenges to implementing mitigation measures, and completed an exercise to identify and prioritize the measures with the greatest potential to mitigate CDC maritime transshipment security risk.



## PLENARY SESSION

In designing the symposium, the central goal was to gather perspectives on improving CDC security from a wide range of stakeholders. The design team sought to do this through a mix of both plenary and breakout sessions. The first two plenary sessions would be used as the primary tool to set the table for discussions occurring within the breakout groups.



## SESSION 1: WHY IS THE CDC RISK CURRENTLY UNACCEPTABLE?

The initial plenary session was titled *Why is the CDC Risk Currently Unacceptable*. It provided attendees with a tangible socialization of the risk equation as it pertains to the movement of CDCs throughout the ports and waterways of the U.S. Subject matter experts and national authorities collaborated and generated a risk profile that related the elements of vulnerability, consequence and threat from the governmental perspective and showed their linkages to current activity as well as probability models.



## Presentations:

- LT David Dixon (Coast Guard Headquarters Office of International & Domestic Port Assessments) demonstrated vulnerability giving an overview on the Coast Guard's Maritime Security Risk Assessment Model (MSRAM). MSRAM is a terrorism risk analysis tool used by every Coast Guard unit which enables Federal Maritime Security Coordinators (FMSC) and Area Maritime Security Committees to perform detailed scenario risk assessments on all of their Critical Infrastructure and Key Resources (CI/KR).
- Mr. Arthur Miller (Coast Guard Intelligence Coordination Center) provided a large piece of the threat portion of the equation in a briefing that highlighted international incidents over the last 30 years.
- Mr. Timothy Meyers (ABS Consulting, Inc.) gave an overview of a consequence study conducted by ABS, Inc. on behalf of the Coast Guard. The study yielded a ranked list of CDCs transported in bulk based upon the projected impact to the environment.
- Dr. Ron Meris (Defense Threat Reduction Agency (DTRA)) provided visual depictions with the Consequence Assessment Tool Set simulation model. The briefing presented the possible impact vectors stemming from a gaseous release of Anhydrous Ammonia and an explosion from a load of Ammonium Nitrate in high density population areas.

The following is a summary of the first plenary session.

- While the direct threat to U.S. maritime CDC transshipment remains low, there are aspects that are cause for concern.
  - Chemicals have been used internationally by terrorists, criminals, and disgruntled employees in the past, often with devastating results.
  - Per the Coast Guard Intelligence experts, there are international terror groups that have shown a maritime capability during previous incidents.
  - Domestic terror groups and the insider threat/internal conspiracy remains viable.
  - Cybersecurity component of CDC threat is viable.
- Maritime Security Risk Assessment Model (MSRAM) is a significant component of current Coast Guard CDC risk management.
  - However, it has gaps in capability that need to be addressed for continued CDC maritime transshipment security risk management.
- The consequences of a security incident involving the maritime shipment of CDC vary according to the hazards of the commodity and the location of the incident.





- The most significant concern with CDC maritime shipment are that these products can be lethal if used improperly and they are shipped, transferred, and stored near large U.S. population areas.

## SESSION 2: CURRENT RISK MITIGATION

The second plenary session was entitled *Current Risk Mitigation*. The overarching focus was on the operational regimes, best practices and initiatives already being employed by the Coast Guard, State and local government and industry.

Presentations:

- Captain Joseph Conroy USCG (ret.) (Coast Guard Headquarters Office of Counter-Terrorism and Defense Operations), gave a detailed overview of the Coast Guard's Ports, Waterways and Coastal Security mission.
- Captain John Healy (Commander, Coast Guard Sector Boston), offered the audience insights on the Sector Boston Cargo Security Project which aimed to frame similar issues of the symposium as they specifically occur within his zone.
- Mr. James Prazak (Dow Chemical Corporation), gave a presentation on the post 9/11 security environment from the industry perspective (facility and vessel). He focused on efforts stemming from regulatory requirements as well as those best practices and innovative models aimed at bolstering deterrence and hardening targets.
- Mr. Matt Hahne (Coast Guard District Eight Staff), provided the attendees an inside look at the effective collaborative efforts of the Security Cooperatives recently developed on the Gulf Coast.

The following is a summary of the second plenary session.

- There are several mitigation measures that are currently employed.
  - Operation Neptune Shield is a set of Ports, Waterways and Coastal Security performance standards for Coast Guard field commanders to strive for within resource constraints.
    - The Coast Guard is resource constrained and cannot meet all Operation Neptune Shield requirements in all areas.
  - There are many locally generated mitigation measures in place such as the Sector Boston transit plan program.
    - It effectively deals with local transit performance standards through integrating the effort of multiple stakeholders.





- It uses a Sector specific approach versus national or regional strategy.



- Local security co-operative agreements are also successfully being used in various ports.
  - These co-ops are modeled on pollution response co-ops.
  - They use multi-stakeholder participation focused on shared responsibility.
  - In-place funding mechanisms may not be feasible in all areas.
  - There are legal constraints regarding law enforcement jurisdiction/use of force policies that must be addressed.

- The maritime Industry offered the following input to recent regulations.
  - TWIC is a help but has also created issues with regards to seafarer and labor access.
  - Security constraints on shore leave, etc., have driven some high skilled mariners from the profession, particularly relevant with CDC.
  - Security has clearly been enhanced via security zones, cameras/surveillance, Facility/Vessel Security Plans and vessel tracking.
  - Real risk has been marginally reduced. Many of the improvements are valuable for forensics, but less so for prevention/response.
  - Loading plans and typical quantities of CDCs shipped help to mitigate the consequences.
  - Consistency is challenging due to variety of the CDC infrastructure.
  - Need to maintain a continued balance between security requirements and the cost to the nation.



## LEGAL ISSUES PANEL

Following the breakout sessions, Captain Fred Kenney, Coast Guard Headquarters Office of Maritime and International Law, served as the moderator on the final plenary session - the *Legal Issues Panel*. The panel members offered insights and opinions on the issue of security from the perspective of potential legal hurdles from proposed actions as well as from the aspect of maintaining a status quo approach to the current system. The panel members took questions from the audience and offered limited comments on information that came out of the breakout sessions.



### Presentations:

- Mr. David Ventker (Ventker & Warman PLLC) offered his perspective on the contrasting authorities and liabilities associated with the source providing the security services;
- RADM John Crowley USCG (ret.) (Senior Vice President for Law and Regulatory Affairs APM Terminals), discussed the legal liabilities and issues imposed upon terminals and port operators;
- Mr. Michael Ryan (Hill, Betts & Nash LLP) gave a brief discussion on impacts of providing security on marine insurance and risk management;
- Ms. Joan Bondareff (Blank Rome LLP) gave a presentation on the security concerns from the “Hill” perspective. Her presentation took into account current legislation, potential bills that might be crafted to address the perceived gaps in security, and concluded with voicing the need to be proactive to avoid a “Hurricane Katrina-like” image of lack of preparedness.



The following is a summary of the Legal Issues Panel.

- Liability
  - Insurance is an extremely expensive operating cost for vessel operators.
  - Crew injury liability, particularly for U.S. crewmembers is also a significant factor for vessel operators. Security actions that have the potential to injure crew, or the lack of actions that might have prevented injury (physical or emotional) will be viewed through the crew liability prism by vessel operators.
- Legislative:
  - Lack of a clear overarching responsibility for CDC security between Coast Guard, state and local, and the private sector opens the door for Congressional activity.
  - Inherently governmental functions are not clearly defined which makes it difficult to assign responsibility between the public and private sectors.
  - It is crucial to identify economic and security risks for cargoes and let that influence prioritization decisions under current law.
  - The current state of the CDC transport environment is ripe for an overarching law to be drafted.





## BREAKOUT SESSIONS

Following the conclusion of the plenary sessions, participants divided into four groups. Each group had proportional representation from government and industry participants (relative to the total number of attendees). In the breakout sessions, each group held a facilitated discussion on the same three tasks during the course of the symposium (2 sessions on day 1; 1 session on day 2). The tasks were: (1) Defining Acceptable Risk; (2) Identifying Vulnerability and Consequence Mitigation Actions; and (3) Identifying Challenges to the Implementation of Mitigation Measures. Results from each individual group's discussions in sessions 1 and 2 were briefed at the start of the second day. Information from the first day of discussion was integral to the deliberations of the final group session. Results from session 3 were briefed out prior to the day 2 lunch break.

The breakout sessions results are as follows:

### TASK 1: DEFINING ACCEPTABLE RISK

This task was designed to identify which vulnerability and consequence mitigation actions (and their resource *budgets*) could be taken for U.S. maritime CDC transshipment security. Establishing an acceptable risk "line" for strategic planning purposes, drives the risk management effort.

The breakout session groups tackled their tasks dealing with acceptable risk differently. This was an acknowledgement of the difficulty of this task. Defining acceptable risk for CDC maritime transshipment in the United States presents public relations concerns, which several of the groups acknowledged. Below is a summary of the discussions within the groups:

- One group felt the Coast Guard could define acceptable risk mathematically. Discussion included European Union standards for acceptable risk as a function of societal and individual risk of death against the overall potentially exposed population during CDC transits. A draft formula capturing this was actually developed and discussed. Such a formula would allow a dynamic resource prioritization along transit routes to ensure risk was managed to the acceptable level.
- The aforementioned mathematical approach led to discussions of viewing acceptable risk as acceptable consequence from the public's perspective. Acceptable consequence as acceptable risk emerged in another group as well, though characterized slightly differently ("tolerance for risk is a function of the consequence").
- Several groups noted the utility the Coast Guard has experienced with a numerical Search And Rescue (SAR) standard—therefore the SAR acceptable risk. Groups felt this could be a starting point in approaching the CDC acceptable risk problem.





- Groups expressed the public relations difficulty in stating an acceptable risk. The reality of risk management, in which operations and resources are prioritized to achieve a stated or assumed level of risk, is that there was fear in publicly confiding that any successful attack was acceptable. Nonetheless, there was acknowledgement that at a strategic level, the Coast Guard should seek to set such a target so that vulnerability and consequence management could be budgeted and planned.
- To assist with the public relations concerns, several groups expressed interest in changing the term acceptable risk to “manageable risk” or “residual risk,” thus removing the implication that any risk of a successful CDC maritime security attack was acceptable. One group noted “the goal should always be zero risk,” yet several groups countered with the obvious “risk will never be eliminated” position. There were wide ranging views regarding the acceptable risk discussion based on which stakeholder group attendees represented.
- Several groups commented on the necessity of educating the public regarding the importance of CDCs to our economy, the transshipment security risk and the efforts employed to mitigate that risk.
- Two groups discussed the value of considering acceptable risk from a systems standpoint, including other modal elements of the CDC supply chain, before and/or after the U.S. maritime component.



## CONCLUSIONS AS A RESULT OF TASK 1:

Setting an acceptable risk for U.S. CDC maritime transshipment is an appropriate planning exercise that will provide a defensible approach to risk mitigation, particularly the vulnerability and, to a lesser extent, the consequence components. This is a difficult concept for many people to understand, and it is appropriate to restrict public access to potential terrorist targets to the extent feasible. Changing the name from acceptable risk to manageable or residual risk has no practical impact on the utility of defining the risk line and therefore can be considered as a tool to broaden support for the management to an acceptable risk concept. It is feasible, in fact, to mathematically arrive at acceptable risk numbers with internationally acceptable formulas. The Coast Guard has experience in this from numerous mission areas. Defining components in addition to death, such as injury and structural destruction, could be considered as part of the undertaking.



## TASK 2: IDENTIFYING VULNERABILITY AND CONSEQUENCE MITIGATION ACTIONS

**T**ask 2 was discussed in the context of threat being a constant component of the risk equation—Risk is a function of Threat, Vulnerability, and Consequence. The risk equation components that have the greatest controllable features from an incident prevention standpoint are vulnerability and consequence. Mitigating vulnerability and consequence surrounding U.S. CDC maritime transshipment involves multiple areas of action.

The breakout groups discussed actions that could be taken to achieve the desired risk level. These actions could include current initiatives as well as new ones. For this task, groups were not constrained by barriers to those actions such as cost. The groups were left to decide for themselves if mitigation measures were tied to specific threats or more general threats. Below is a summary of the discussions within the groups, divided into broad capture areas:

### Planning/Information Sharing

- There was a push for development of an overall Concept of Operations (CONOPS) at the tactical level to ensure security stakeholder coordination was understood for CDC maritime transshipments. Associated with this were development and discussion of transit plans with responsibilities assigned before CDC maritime cargo movement. It was felt that newly drafted Port-Wide Risk Management/Mitigation plans required as a part of the Port Security Grant Program should serve as the foundation for the CONOPS development.
- Several groups called for capturing “best” industry and government security practices, (operational and management) in each COTP zone as a precursor to promoting national consistency and sharing with other zones.
- Several groups discussed intelligence and other risk component sharing among stakeholders in the context of preparation before a CDC transit. One group recommended placing industry liaisons in government intelligence fusion centers to capture and disseminate threat data. Another group called for better risk communication among stakeholders, particularly following a CDC incident.
- Many discussions were based on the use of MSRAM as an operational planning tool, and the need to make it more dynamic and user-friendly. Lacking was local input into the model and the configuring of the model to be scalable to a national level.
- Several groups felt educating the public was a necessary mitigation measure, from potential cost increases in products, realistic risk management coverage, and





consequence response if a CDC were released. Related was a call for educating the boating public (and establishing standards) regarding safety and security issues surrounding commercial movement of commodities.

- One group called for rethinking vessel and facility security plans to better accommodate vulnerability assessments.
- Echoing the genesis of the symposium, several groups underscored the need for a national strategy for CDC maritime transshipment security.
- One group called for route analysis for CDC vessel transit to minimize time the vessel was adjacent to higher density population areas where feasible.
- One group called for the prioritization of CDCs by risk, based on consequence, and the allocation of security resources accordingly.
- One group called for inclusion of resiliency/trade resumption plans in any CDC maritime transshipment security strategy. The ability of a community to rapidly return to pre-incident conditions was seen as a security incident deterrent (Israeli model).
- Several groups recommended viewing CDC maritime security as part of the larger supply chain security system involving other modes of transportation. The Coast Guard should coordinate security of CDC efforts with other agencies overseeing their modal security so there is a consistent “hardening” of the transport, thus reducing weak link vulnerabilities.

## Escort/Boardings/Security Zones

- Most groups included some form of escort as a key component of CDC maritime transshipment security. Discussions included public sector escort versus private sector escort or some combination of the two. Discussions on the feasibility of using private security were called for.
- The means of providing escort security included the use of “co-ops,” composed of local maritime law enforcement in conjunction with Coast Guard law enforcement. Further research into the feasibility of co-op expansion beyond southeast Texas, including necessary statutory authorities, was called for.
- Several groups called for continuation or expansion of positive control boardings of vessels carrying CDCs.
- Within the context of escorts, discussion in one group included the need to clarify whether the escorts were operating in a “point defense” mode, interdiction mode (prosecution), or self-defense mode. Different legal ramifications accrue depending on which mode is called for in the strategy, especially with regard to private security.





- While waterborne escorts were principally discussed, one group called for consideration of ship riders (public or private sector) as the security escort force.
- That same group noted that “zone” escorts, i.e. waterway patrols, served as a deterrent and MDA/intelligence information provider.
- Nearly all groups called for security zones (both enforced and unenforced) as important mitigators.

## Maritime Domain Awareness (MDA)/Vessel Tracking/Vessel Traffic Management



- Several of the groups emphasized some form of Maritime Domain Awareness and/or vessel tracking as a vulnerability mitigator. Discussions included developing a CDC vessel identification system, comparable to the Automated Identification System (AIS) for inland waterways management. It was noted that there is a pilot program underway on the rivers that might satisfy this recommendation.
- Building upon the above discussion, the group called for a vessel identification system for small boats that might be operating in an area traversed by CDC vessels.
- One group discussed expansion of the Citizens Watch program, calling for greater coordination with overall MDA efforts.
- Positive vessel management on waterways where CDCs are moving was an extension of the MDA discussion in one group. As always, enforcement capability of vessel management is required.
- One group recommended expansion of security zones, use of speed restrictions and cameras to assist enforcement personnel in identifying potential perpetrators sooner.



- From a personnel awareness standpoint, one group noted that TWIC now provides a vulnerability mitigation that did not previously exist. Coordination of TWIC with other awareness systems is the logical next step.

## Physical Security

- As the topic included not just vessel transits, but also transfers and storage at waterfront facilities, enhancements to fences, lights, gates, and facility CCTV systems were viewed as valuable mitigation measures.
- Several groups felt installation of floating security barriers would address a significant vulnerability when a CDC vessel was moored to a facility and transferring cargo. Consideration should be given to outfitting the barriers with underwater threat mitigation capability.
- Non-lethal weapons on vessels (and facilities) were felt by most groups as an important mitigation measure that has not been fully explored. (There was a recommendation for lethal weapons on CDC vessels as well.)
- One group noted the mitigation value facility guards (both armed and unarmed) provided as a deterrent, interdiction force, and response force.
- That group also noted that silent security alarms on vessel bridges (called for under the International Ship & Port Facility Code (ISPS)) should be examined for all platforms carrying CDCs.

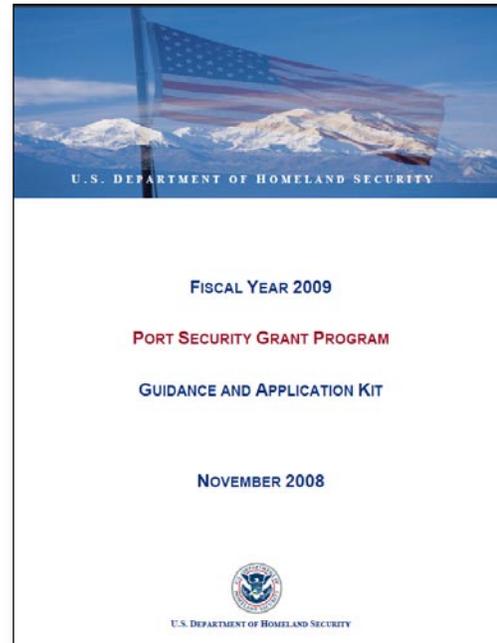
## Operational/Structural

- Several groups recommended including an emphasis on design of CDC cargo carriage tanks with an eye on security and consequence mitigation.
- One group discussed making up tows with a security and safety focus, protecting the CDC cargo with other barges and coordinating loading sequences to minimize CDC security exposure.
- One suggestion emerged to remove obvious hull painted designations so as not to call attention to the CDC cargo in transit. The group noted that required placarding, etc., should still be honored
- One group called attention to changing fleeting practices that might leave a barge with CDC cargo or residue unmonitored alongside a river bank.



## Grants

- Financing was recognized as an essential mitigation factor. As there is a system in place already disbursing port security grants, several groups suggested examining the current grant system for opportunities to improve support to CDC maritime transshipment. One group discussed tying grant awards to conditional agreement to participate in coordinated CDC maritime security efforts in a port/zone.
- That same group suggested expansion of the grant program to provide resources to state and local security (law enforcement) forces. The group recognized that more benefit would occur via the grant process if it could be used to fund operations and maintenance, not just hardware and training.



## Miscellaneous

- One group discussed the need to fully implement the DHS Small Vessel National Security Strategy.
- Two groups felt the need to implement special security requirements for CDC vessels transiting through locks. Specifics were not discussed, but the extreme vulnerability of the vessel while in the locks was noted.

## CONCLUSIONS AS A RESULT OF TASK 2:

The breakout group attendees offered, as vulnerability and consequence mitigation ideas, a combination of current actions sprinkled with new recommendations or adaptations of current actions. The categories noted above are a reasonable assimilation of the groups' logic. It was clear that the threat scenario most often considered by the attendees was that of a small boat attack on a CDC vessel that was in transit or moored to a facility during transfer. Time limitations on breakout sessions prevented more extensive discussions tied specifically to additional threat scenarios, though one breakout group did frame their discussion in terms of multiple scenarios. Not surprisingly then, much of the discussion and recommendations centered on appropriate CDC vessel escort capability—providing pickets against a small boat assault, whether the small boat was itself the weapon, or conveying the weapon(s). This did spark challenging discussions on public versus private security and state and local law enforcement versus federal law enforcement. An important topic to work through during the drafting of a national strategy will be a technical study of CDC vessel construction to analyze what it would take to compromise the cargo envelope and the likelihood of an escort stopping a determined and well trained adversary.



Maritime Domain Awareness captured the attendees' attention as a mitigator from both a prevention and response standpoint. As the Coast Guard already knows, this is a potentially rewarding program, but difficult to implement and coordinate practically. Nonetheless, integrating citizen participation with industry and public sector participation holds great promise from a risk assessment standpoint. Broadly interpreting MDA to include potential consequences as a vessel moves through the supply chain allows response/recovery preparation in the event of an incident.



Related to MDA is the coordinated and integrated sharing of information among/between stakeholders of intelligence, risk, and practical operations. Like MDA, this effort presents a long-standing challenge that also holds great promise for those charged with assuring maritime security. Classification issues, trust issues, and a broader understanding of the dividends received through information sharing are recurring constraints to full implementation.

Plans and policies that flowed from a national strategy to Sector-specific

CONOPS, and provided for national consistency, were a common theme among the groups. Individual COTP initiatives provided best practice examples, but analysis of their scalability and feasibility for national implementation has not yet been undertaken. These "work-arounds" include the security co-op concept that resonated with many of the attendees, but introduces jurisdictional and funding issues that restrict their broad application.

More fully utilizing the potential financial support via the security grants was raised as a means to overcome some of the traditional obstacles to implementation of security actions. There was acknowledgement that current thinking still has CDC security largely as a direct cost to commercial supply chain operators. Grants represent an offset to those costs and are therefore popular. Integrating the grant process with a national strategy for CDC maritime transshipment security was seen as an important step.

Two final potential actions resonated with most of the groups: MSRAM enhancement and risk reduction while a vessel was transferring cargo. If the Coast Guard intends to fully embrace a risk management approach to CDC security, and if MSRAM remains the acknowledged tool to capture the risk and influence action, then MSRAM must evolve into a much more dynamic tool that provides more local support while being capable of "rolling up" local risks into national products. There remains uncertainty over what MSRAM risk information can be shared with stakeholders. This is an area that is likely a quick hit fix for the Coast Guard, even with the current MSRAM product.



Vulnerability during vessel cargo transfer, centers on responsibility and practical actions. Most groups felt some sort of floating security barriers would afford mitigation against small boat attacks. However, the potential negative safety implications of such a barrier, including impairing the ability of the vessel to get rapidly underway in the event of a fire or other emergency at the transfer facility should also be examined. Allocating responsibility for that mitigation effort was not fully discussed.

## TASK 3: IDENTIFYING CHALLENGES TO THE IMPLEMENTATION OF MITIGATION MEASURES

This task was discussed in the context of “what currently prevents, or may prevent, the Coast Guard from implementing the mitigation actions discussed in Task 2.” The groups were encouraged to discuss these challenges from a very practical standpoint. While the Task 2 discussions were not constrained by costs or other challenges, Task 3 discussions were focused on those challenges that the Coast Guard and other stakeholders would need to address to implement a process/program that managed CDC maritime transshipment security to an acceptable risk level.

Different breakout groups addressed the challenges differently; some discussed challenges to the specific mitigation actions they had developed earlier while others discussed challenges more generally. Below is a summary of the breakout group discussions, divided into broad capture areas of the challenges to implement mitigation measures.



### Communication

- A lack of a cohesive risk communication program for CDC maritime transshipment security exists. As this is as important as crisis communication after an incident has occurred, the deficit in risk communication severely hampers stakeholder coordination.
- The unwillingness of various stakeholders to disclose risk to other stakeholders charged with CDC transshipment security further exacerbates coordination and communication challenges in implementing a prudent security approach. Similarly, the security classification of certain information limits its dissemination, inhibiting practical risk assessment and mitigation decisions necessary between stakeholders.
- MSRAM is not currently configured to provide the dynamic risk assessment that local stakeholders crave; neither is it currently configured to fully support national risk assessment in changing real time.



- Coordination with other federal agencies that have authority over other modes of transportation is inadequate. This limits systemic security along an entire supply chain, as well as reduces vulnerability mitigation actions against certain threats, e.g., aircraft attack.
- While educating and communicating with the general public and their political representatives is an important mitigation measure, shaping the right message to such a broad audience is very difficult. The nature of the CDC product, coupled with historical industrial and terrorist incidents that impacted surrounding populations, underscores the challenge of conveying a rational message.
- If rerouting CDC transits to lower the security risk to higher population areas, these population areas with an increased level of risk following such rerouting may object.
- There is a feeling that DHS bureaucracy and interagency cooperation challenges have hindered earlier attempts at the development of an industry wide risk analysis surrounding CDC maritime transshipment security.
- Uncertainty as to whether providing intelligence information to the industry will improve security introduces a degree of reluctance to actually share it.

## Plans

- Lack of standardization and consolidation of plans among stakeholders invites inconsistency in CDC maritime transshipment security. (State/regional continuity plans may serve as a model to overcome this challenge.)
- The vast number of stakeholders and jurisdictions make consolidated planning difficult.
- Prioritization within CDC maritime transshipment security poses significant challenges. While this has the most ramifications to the Coast Guard as overall manager of maritime CDC transshipment security, it has implications to all stakeholders. Any national strategy will need to address the prioritization issue, which is coupled with the risk management issue. Both concepts are easy to support in theory, but much more difficult to implement practically.



## Resources

- Resource costs were cited by every group as a significant challenge: costs in terms of operating budgets, maintenance budgets, personnel, and equipment.



- The current port security grant restrictions and application process make utilizing grants as an incentive for CDC maritime transshipment security enhancement difficult. Adding to the challenge is cumbersome hardware/software for participating in the grant application and administration process. Changes to the process would likely necessitate statutory amendment. Changes to the hardware/software problems require budget support.
- Installation of port security barriers raises the question of responsibility for payment for purchase, maintenance, and operations.
- Positive control boardings were cited in several groups as a mitigation action; yet limited availability of Coast Guard resources to conduct such boarding on a demand basis can introduce vessel delays that invoke demurrage and other commercial contract challenges.
- Turnover of Coast Guard personnel makes it difficult to establish long-term working relationships between industry and state/local personnel and the Coast Guard. This diminishes efficiency in CDC security planning.

## Legal

- Uncertainty over jurisdictions, responsibility, and expectations regarding the various stakeholders in CDC transshipment security significantly interferes with a cogent, consistent, national approach. While statute or regulation may be needed to clarify the current situation, both of those approaches are not without their own challenges. Lack of clarity on point defense versus interdiction for prosecution versus deterrence by presence enhances the challenge.
- Indemnification is a significant challenge to CDC transshipment security, especially if private sector security is involved. Furthermore, union contracts on vessels and Jones Act restrictions cause vessel and facility underwriters to resist certain security actions, particularly involving deadly force.
- The authority for state/local/federal law enforcement and security personnel to engage in CDC transshipment security are determined locally and vary widely around the country. This makes coordination among potential participating agencies and their resources that much more difficult.





- Related to the above two bullets are concerns over policies governing the use of force during CDC maritime transshipment. This is currently a challenge with public sector law enforcement; it becomes even more challenging if private sector security is introduced.
- Security and risk mitigation accountability, demanded of industry by the Coast Guard to meet its obligations to the Secretary of DHS, in the form of voluntary or mandatory standards and enforcement, triggers political considerations of such regulatory requirements. For voluntary practices, there is lack of accountability.
- Current maritime contracts language makes indemnification clarity that much more difficult. Demurrage payments responsibility due to security requirements imposed by the Coast Guard or others is unclear.



- Differences in enforcement policies of the Maritime Transportation Security Act (MTSA) from COTP zone to COTP zone present challenges for companies that operate in multiple zones.
- There are assumptions by foreign vessel operators that the U.S. government will protect their vessels in U.S. waters. This poses a significant challenge to the U.S. government. If this assumption is valid, U.S. vessels can then call upon similar protection when visiting foreign ports.



## Operations

- Achieving “buy-in” from America’s small vessel community has proven, and will continue to prove, challenging. While security often requires restrictions on heretofore free movement by small vessels, these operators and their associations generally oppose any restrictions.
- Maintaining and practical use of MDA in high volume/high traffic port areas is challenging as the “picture” changes rapidly.
- While port security barriers may be effective in reducing vulnerability to certain threats, they restrict mobility within the waterway which may have consequences during a vessel emergency.

## Miscellaneous

- Complacency among certain stakeholders will be reduced by an actual incident.
- Resistance to assuming costs associated with enhanced security will increase in the absence of an incident.
- The potential consequences of a release of CDC cargo may lead to a feeling that reducing risk to an acceptable level is impossible.

### CONCLUSIONS AS A RESULT OF TASK 3:

Breakout group participants clearly felt there are challenges to implementing vulnerability and consequence mitigation actions. Lack of stakeholder coordination, serious indemnification issues, resource scarcity, and jurisdiction/authority uncertainties all present significant hurdles to achieving an acceptable level of risk for CDC maritime transshipment security. Jurisdiction and authority resolution, coupled with indemnification resolution, pave the way for creative risk mitigation that may help in the area of constrained resources. A singular national strategy that sets the stage for consistent stakeholder coordination and clear establishment of accountability for security will go a long way in muting some of the current challenges.

### TASK 4: Identifying the Most Effective Mitigation Actions

**T**he breakout groups’ final task was to consider all of their recommended mitigation actions and identify their top three, considering cost and other challenges to implement. They were also tasked to identify the top recommended mitigation action regardless of cost and the challenges to implement. It was hoped that this would provide the Coast Guard a sense of prioritization from the breakout groups’ perspectives.

Below are the results of highest recommended mitigation actions when considering cost to implement (not ranked):



- Develop a national, risk-based policy for CDC maritime transshipment risk;
- Develop a coordinated CONOPS for security stakeholders (public and private sectors) to better manage and deploy resources;
- Clarify/harmonize authorities and jurisdictional issues among/between stakeholders;
- Prioritize CDC maritime transshipment risk and apply security resources accordingly;
- Conduct public outreach to educate the citizenry on CDC release consequences and necessary security operations to prevent incidents;
- Support security co-ops;
- Develop a vessel identification system comparable to AIS for inland waterways management;
- Internalize security costs within the supply chain and public sectors; and
- Quantify the threat to CDC transshipments.



Below are the recommended top mitigation actions, regardless of cost:

- Fully implement the DHS Small Vessel National Security Strategy;
- Develop a national policy for CDC transshipment security based on risk that is multimodal, multi-agency, and includes industry input during development; and
- Prioritize and manage scalable, dynamic risk, using MSRAM or a similar tool, incorporating input from local stakeholders.

## CONCLUSIONS AS A RESULT OF TASK 4:

There is clearly a need for national strategy/policy consistency that is practical, risk-based, and, to the extent feasible, accommodates local conditions. MDA adaptation would give security stakeholders greater information upon which to base risk decisions. Resourcing will remain a challenge but there is recognition that security must either provide help on the credit side of

industry's ledger or the cost of security must be incorporated into the cost of the supply chain—or both. Finally, there is a perception that small vessels present a high risk to CDC maritime transshipment security. The DHS Small Vessel Security Strategy contains elements that, if implemented, will mitigate that risk. The vulnerability of the types of vessels customarily used to transport CDC cargoes





to such an attack must be explored, with a view toward identifying the specific types of attack that would have a significant probability of compromising the CDC cargo envelope or otherwise cause the hazards of the cargo to the public to be realized, then evaluating the potential means to prevent such attacks.

The CSS was a positive first step and achieved its goal of identifying important elements of maritime transshipment security, particularly regarding CDC, that should inform the development of a national strategy. Participants in the symposium represented sufficient diversity among CDC security stakeholders that the Coast Guard can consider the breakout group recommendations valuable.

## SYMPOSIUM CONCLUSION

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**...it's very, very important for me to hear what comes out of this two-day conference because it's going to form the first iteration or a datum or a base point for talking about risk, acceptable risk...**

The Maritime Transportation System plays an integral role in the U.S. economy. On a daily basis, countless commodities flow throughout the nation's ports and waterways and

link directly into the inter-modal system for movement across the country. Use of the maritime mode for shipping cargo significantly alleviates congestion on highways and the potential impact of spills or releases of materials routinely circulating through high density population areas by way of the rail system or pipelines. Even with the positive aspects of these safety considerations, the stakeholders of the CDC operational community continually are seeking ways to improve security processes for the cargoes.

The CSS was an overwhelming success and the design team's goals were achieved. The collaborative dialog within each breakout session was invaluable as it put all attendees on common ground and enabled each stakeholder to voice concerns not only as a separate entity but also as a collective group working proactively in the best interest of all.

It was reiterated to all that, while the symposium was the initial step to help gauge opinions and craft a way forward, there will be much more work ahead on all

**...a framework to consider everything that moves out there on the water and a way to move forward that I hope will allow for a reasoned discussion about all of the commodities that are involved.**”

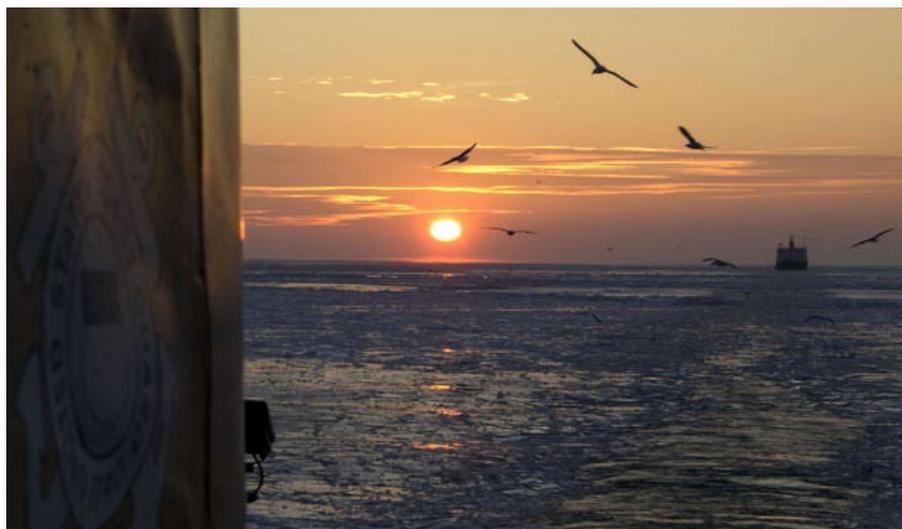




fronts in order to deliver a lucid construct en route to forming a national maritime policy for reducing the risks associated with the transport of CDCs.

## THE WAY AHEAD

**C**oast Guard Headquarters is chartering a Cargo Security Risk Reduction Workgroup comprised of DHS and Coast Guard staff members, Coast Guard field personnel and industry representatives. National Maritime Security Advisory Committee (NMSAC) and Chemical Transportation Advisory Committee (CTAC) are actively supporting the CDC security initiative by identifying the key issues that must be addressed in the development of a National Security Strategy for the maritime transportation and transfer of CDC. Through these and other unified efforts, the Coast Guard Headquarters workgroup will explore the significant factors impacting the movement of CDCs from a national level with a keen focus on the regional sensitivities involved. The regional perspective will partially help address the point that no two ports are the same. A solution that works in the port of Houston may not achieve the same degree of success if implemented in the port of New York, Tampa or Los Angeles based upon varying local factors. The workgroup goal is to gather and review data in order to build a robust national maritime policy. As the Coast Guard moves forward in shepherding the initiative, there will be continued collaboration with other agencies. This will include outreach to stakeholders via regional discussion sessions to gain more specific information and increase the technical knowledge of personnel developing policy.





## APPENDIX A – AGENDA

**OBJECTIVE:** Inform and guide the development of a national strategy for reducing the maritime security risks present in the bulk transportation and transfer of Certain Dangerous Cargoes within ports and waterways of the United States.

### **DAY ONE 24 September 2009**

#### **0730 – 0830 Registration**

- Retrieve Nametags / Information Packages / Non-Disclosure Agreements (SF-312) (*LTJG Eric Golder, Office of Port and Facilities Activities*)

#### **0830 – 0845 Introduction**

- Welcoming Remarks (*CAPT Ron Branch, USCG (ret.), NMSAC CDC Security Subcommittee Chair; RDML Kevin S. Cook, Director of Prevention Policy; CAPT Mark Johnson, USCG (ret.), Senior Vice President, C&H Patriot Security*)

#### **0845 – 0915 Opening Remarks** (*ADM Thad W. Allen, Commandant, USCG*)

#### **0915 – 1030 Why is the CDC Risk Currently Unacceptable?**

Risk Profile:

- a. MSRAM socialization centered on vulnerabilities - (*LT David Dixon, Office of International & Domestic Port Assessment*)
- b. Intelligence Brief (*Mr. Arthur Miller, Intelligence Coordination Center*)
- c. Defense Threat Reduction Agency briefing (*Mr. Ron Meris, Defense Threat Reduction Agency*)
- d. Consequence Study / CDC Risk Tool (*Mr. Myron Casada, ABS Consulting*)

#### **1030 – 1045 BREAK**

#### **1045 – 1215 Current Risk Mitigation Panel**

Current Risk Industry Actions on Mitigating Risk

- a. What is the CG doing Nationally (*Mr. Joe Conroy, Office of Counter-Terrorism and Defense Operations*)
- b. Sector Boston Cargo Security Project (*CAPT John Healey, Commanding Officer - Sector Boston*)
- c. Existing security practices of Vessels, Facilities, and Shippers (*James Prazak, DOW Chemical*)
- d. Security Cooperatives (*Mr. Matt Hahne, USCG District 8*)

#### **1215 – 1345 LUNCH**

#### **1345 – 1400 CDC Transport Risk Management Framework**

- Strategy Construct (proceedings of symposium; desired output of symposium)
- Process followed to achieve strategy construct



- Stakeholders roles & responsibilities (worked into each breakout by facilitators)

**1400 – 1700 Breakout Sessions**

1. Defining Acceptable Risk
2. Ways for Achieving Acceptable Risk (Vulnerability & Consequence)

**1700 Adjourn for the Day**

**Administrative Note:** *Facilitators/Recorders meet for post day events to summarize feedback from breakout sessions*

**DAY TWO 25 September 2009**

**0800 – 0845 Session 1 & 2 Overview**

**0845 – 1015 Breakout Sessions**

3. Challenges to Achieving Acceptable Risk

**1015 – 1045 Facilitation Break**

**1045 – 1115 Session 3 Overview**

**1115 – 1230 LUNCH**

**1230 – 1400 Legal Issues Panel** (*CAPT Fred Kenney, Office of Maritime and International Law –Moderator*)

- Private Security vs. Government Provided Security: Authorities and Liabilities – (*Mr. David Ventker, Ventker & Warman PLLC*)
- Legal Liabilities for Terminal and Port Operators – (*RADM John Crowley, USCG (ret.), APM Terminal*)
- Marine Insurance and Risk Management – (*Mr. Michael Ryan, Hill, Betts & Nash LLP*)
- View from the Hill: Current and Potential Legislation – (*Ms. Joan Bondareff, Blank Rome LLP*)

**1400 – 1410 BREAK**

**1410 – 1430 Closing Remarks** (*RADM Brian M. Salerno, Assistant Commandant for Marine Safety, Security & Stewardship*)

**1430 Adjourn**



## APPENDIX B – GLOSSARY

**AIS** – Automatic Identification Systems (AIS) is a maritime navigation safety communications system standardized by the International Telecommunication Union (ITU) and adopted by the International Maritime Organization (IMO) that provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft; receives automatically such information from similarly fitted ships; monitors and tracks ships; and exchanges data with shore-based facilities.

**BLEVE** – Boiling Liquid Expanding Vapor Explosion (BLEVE) is the catastrophic failure of a container into at least two major pieces and simultaneously releasing the contained liquid which is at a temperature well above its boiling point at normal atmospheric pressure.

**BULK CARGO** – Means cargo that is loaded and carried in bulk without mark or count.

**BULK CARRIERS** – Vessels designed to carry bulk cargo, such as grain, fertilizers, ore and oil.

**CDC** – Certain Dangerous Cargo (CDC) is as defined in 33 CFR 160.204.

**FERC** – The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects. For more information see <http://www.ferc.gov>

**Intermodal** – Means the interchangeable movement of cargo containers between different modes of transportation, primarily ship, truck and train, where the equipment is compatible with the multiple transport systems.

**LHG** – Liquefied Hazardous Gas (LHG) means a liquid containing one or more of the following products: Acetaldehyde; Ammonia, anhydrous; Butadiene; Butanes; Butane and Propane (mixtures); Butylenes; Chlorine ; Dimethylamine; Ethane; Ethyl Chloride; Ethylene; Ethylene Oxide; Methyl-Acetylene and propadiene (mixtures); Methyl Bromide; Methyl Chloride ; Propane; Propylene; Sulphur Dioxide; and Vinyl Chloride.

**LNG** – Liquefied Natural Gas (LNG) means a liquid or semisolid consisting mostly of methane and small quantities of ethane, propane, nitrogen, or other natural gases.

**LPG** – Liquefied Petroleum Gas (LPG) means a liquid consisting mostly of propane or butane or both.

**MSRAM** – Maritime Security Risk Analysis Model (MSRAM) is a terrorism risk analysis tool used by every Coast Guard unit. Enabling Federal Maritime Security Coordinators (FMSC) and Area Maritime Security Committees to perform detailed scenario risk assessments on all of their Critical Infrastructure and Key Resources (CI/KR). MSRAM combines these assessments and provides analysis to support risk management decisions. The tool's underlying methodology is designed to capture the security risk facing different types of targets spanning every DHS CI/KR





# Cargo Security Symposium

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industry sector, allowing comparison between different targets and geographic areas at the local, regional, and national levels.

**NMSAC** – The National Maritime Security Advisory Committee (NMSAC) established under the authority of the Maritime Transportation Security Act of 2002 (Public Law 107-295), provides advice to the Secretary of Homeland Security via the Commandant on matters such as national maritime security strategy and policy, actions required to meet current and future security threats, international cooperation on security issues, and security concerns of the maritime transportation industry. For more information see <http://homeport.uscg.mil/nmsac>

**MTSA** – Marine Transportation Security Act (MTSA) is as defined in PUBLIC LAW 107--295--NOV. 25, 2002.

**TWIC** – Transportation Worker Identification Credential (TWIC) means a Federal biometric credential, issued to an individual, when TSA determines that the individual does not pose a security threat.