

# A Bridge to Inspection...



Bill Perkins, Senior Marine Inspector  
Towing Vessel National Center of Expertise

# Towing Vessel Bridging

Why do we need a bridge?



UNINSPECTED TOWING VESSEL

## SAFETY EXAMINATION

UTV

**ROUTE**

Inland

Coastal

Oceans

Great Lakes

MTSA Regulations Apply



**EXPIRES**

2012

2013

2014

2015

U.S. Department of Homeland Security

THIS VESSEL MEETS ALL USCG UNINSPECTED TOWING VESSEL REGULATIONS

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
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United States of America  
Department of Homeland Security  
United States Coast Guard

Certification Date: 07 May 2007

Expiration Date: 07 May 2007

SGI Number: 720447

## Certificate of Inspection

Vessel Name <b>CONSTITUTION</b>	Vessel Number <b>8300T</b>	Call Sign <b>WC4850</b>	Service <b>Towing Vessel</b>
Builder/Port <b>WILMINGTON DC</b>	Net Tonnage <b>5641</b>	Displacement <b>11125</b>	Propulsion <b>Diesel/Reduction</b>
Owner/Operator <b>GLENN L.A. UNITED STATES</b>	IMO Number <b>16241871</b>	Class Year <b>8470</b>	IMO Type <b>8481</b>
Class <b>1001</b>	Length <b>196</b>	Beam <b>34.00</b>	Depth <b>8.10</b>
MARITIME CONSTITUTION CO TWO HARBOUR PLACE AVE 12FL TAMPA FL 33602 UNITED STATES		MARITIME OPERATING COMPANY LP 302 KNIGHTS RUN AVE 1200 TAMPA FL 33602 UNITED STATES	

**This vessel must be manned with the following licensed and unlicensed personnel. Included in which there must be:**

1 Master	1 Mate	1 Chief Officer	1 Deck Officer
1 2nd Mate/Deck	1 2nd Mate/Deck	1 2nd Mate/Deck	1 2nd Mate/Deck
1 3rd Mate/Deck	1 3rd Mate/Deck	1 3rd Mate/Deck	1 3rd Mate/Deck
1 4th Mate/Deck	1 4th Mate/Deck	1 4th Mate/Deck	1 4th Mate/Deck

In addition, this vessel may carry 0 passengers, 2 other persons in crew, 0 persons in addition to crew, and 0 others. Total persons allowed: 20

Route Permitted and Conditions of Operation:  
 ---Oceans---  
 NOT ON AN INTERNATIONAL VOYAGE.

WHEN OPERATING ON VOYAGES OF LESS THAN 400 MILES, THE MINIMUM CREW MAY BE REDUCED TO THE FOLLOWING:

1 MASTER	1 CHIEF ENGINEER	1 AIDE DE CAMP
1 MATE	1 ASST ENGINEER	1 DECISION MAKER
2 OTHER PERSONS IN CREW	11 PERSONS IN ADDITION TO CREW	

\*\*\*SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION\*\*

With this inspection for Certification having been completed at Philadelphia, PA, the Officer in Charge, Marine Inspection, Philadelphia, Pennsylvania certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

Annual/Periodic/Quarterly Inspections		This Amended certificate issued by:	
Date	Zone	AIPOG	Signature
			<b>B. M. SALERNO, CAPT, USCG</b>
			<b>MSO BOSTON</b>

# Towing Vessel Bridging – Current Plan

## High Priority Vessel

- Company has not participated in Phase 1
- Vessel has not been examined

## Low Priority Vessel

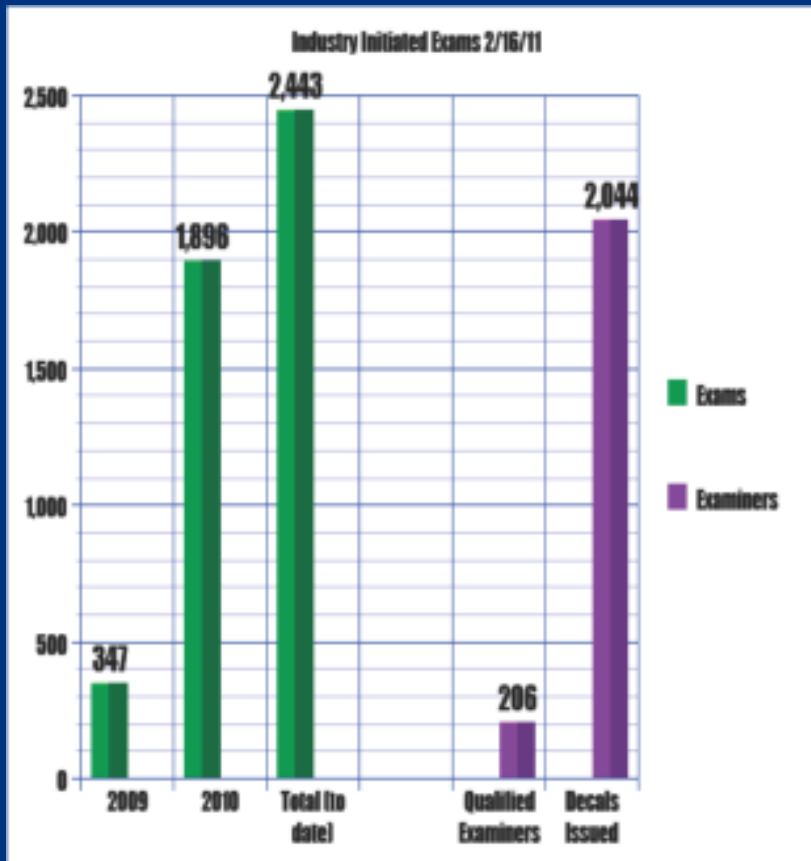
- Company participated in Phase 1
- Vessel has not been examined

## Non-Priority Vessel

- Company participated in Phase 1
- Vessel have been examined

# UTV Fleet of Responsibility





- 3500 Industry Initiated Exams
- 2700 Decals Issued
- 248 Qualified Coast Guard Examiners

# THE SEVEN COE'S



# Towing Vessel National Center of Expertise



**504 Broadway Suite 101  
Paducah, KY 42001  
Phone: (270) 444-7715**

## Why is the Towing Vessel National Center of Expertise in Paducah, KY?

- Hub of the inland waterways
- Tow Boat City USA
- Seamen's Church Institute



# Our Team:

## Active Military:

### **LCDR Russell**

Supervisor  
COE Manager  
Marine Inspector

### **LCDR Bethke**

ASST. Supervisor  
Asst. Manager  
Marine Inspector

### **LT Keogh**

Marine Inspector

## Civilians:

### **Roy Murphy**

Industry  
Licensed Master  
Training

### **Steven Douglass**

Industry  
Licensed Master  
Chief Engineer

### **Bill Perkins**

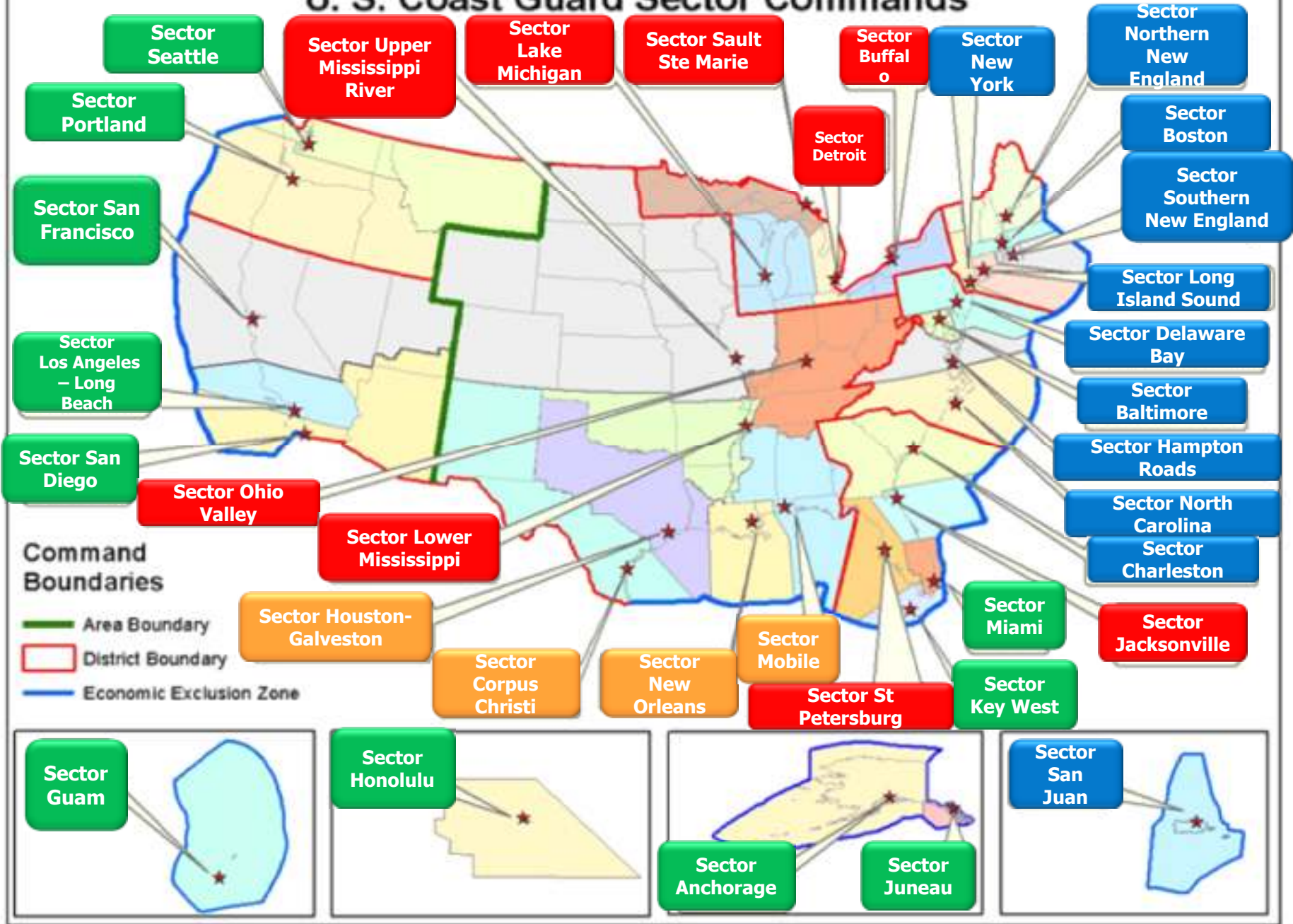
USCG retired  
Marine Inspector  
Investigator

### **Mike Kelly**

USCG retired  
Marine Inspector  
Investigator



# U. S. Coast Guard Sector Commands



## CG's Experts on Towing Vessels

- **Training**
  - Assist in the development of curriculum
  - Improve consistency of exams, inspections
- **Information brokers**
  - Gather, organize, distribute important data
- **Subject Matter Expertise**
  - Identify issues and help shape policy
  - Bring the industry and Coast Guard together



# Training

- UTV “Just-in-Time” Orientation Course
- 8 convening's total for 2010 and 2011
- 145 Coast Guard students
- 40 Industry Reps
- 30 Companies Represented:

AEP River Operations	Golding Barge Line	Marathon Oil	Ingram Barge	United Barge Line
Campbell Transportation	Kirby Corp	Vane Brothers	Hunter Marine	Foss Maritime
	Penn Maritime, Inc	Canal Barge	MARCOM Survey	

# UTV Examiner Training Schedule 2012

28 Nov - 02 Dec	Yorktown, VA
27 Feb – 02 Mar	Yorktown, VA
14-18 May	Paducah, KY
17-21 Sep	Yorktown, VA

# Just in Time Orientation Course

## *Objective*

Examination, not Inspection

## *Theme*

CONSISTENCY

## *Motto*

“Teeth cleaning, not a root canal”

# Class 1



# Class 2



## Class 3



## Class 4



## Class 5



## Class 6



# Class 7



After nearly 3500 uninspected towing vessel exams, some key issues have surfaced.

## **CURRENT COMPLIANCE ISSUES**



# Unfired Pressure Vessels (UPV) Air Receivers

- E.g. engine start/clutch air receivers
- Currently not regulated by CG
- Problem: found some UPVs may present a **“hazardous condition”** which could seriously injure crewmembers
  - Missing or improperly rated relief valve
  - Missing data plate or documentation to prove that the tank was built to a standard
  - Improper maintenance and/or repairs



# Problems Found



# Problems Found



# Failed Pressure Vessel



Towing Vessel National  
Center of Expertise



# Safety Alert

## Air Receivers and Relief Valves

- Issue identified during UTV Exams
- Hazardous Condition Issue
- Jurisdictional Questions
- Joint effort between USCG Office of Investigations and Analysis and the TVNCOE
- Educational Tool



**UNITED STATES COAST GUARD**  
U.S. Department of Homeland Security  
**MARINE SAFETY ALERT**  
Assistant Commandant for Marine Safety, Security and Stewardship

February 14, 2011  
Washington, DC

Alert 02-11

### Air Receivers and Relief Valves

*A reminder that shouldn't be necessary!*

This Safety Alert addresses safety issues relating to air receivers on Uninspected Towing Vessels (UTV), but may apply to air receivers on any vessel. Air receivers, regardless of specific use onboard a UTV, contain extreme amounts of potential energy; an uncontrolled release of this energy may lead to serious injury, death and catastrophic vessel damage. Although this issue involves basic safety and good marine practice, too many related problems have been recently discovered.

Not long ago, an air receiver unexpectedly ruptured with terrible results onboard an UTV on the Upper Mississippi River. A crewmember was seriously injured and paralyzed. Several causal factors were noted during the casualty investigation; the lack of a relief valve to protect the system and significant corrosion within the receiver. It's important to note that on unprotected systems, all it takes for the system to be over-pressurized is for the compressor's pressure switch/contact or unloader to fail and not shut off the machine. Further, internal corrosion on aged tanks present a latent unsafe condition and may go unnoticed if not inspected.

(Parted air receiver.)



As a result of this casualty and other similar incidents, the U. S. Coast Guard **strongly recommends** that UTV Owner/Operators, vessel engineers, insurance surveyors and other inspectors **ensure** that:

- A proper sized pressure relief device is installed on all air receivers. The pressure relief device should not be rated higher than the Maximum Allowed Working Pressure (MAWP) stamped on the air receiver's data plate;
- A data plate is attached to the receiver and pressure relief devices. If missing or damaged the UTV representative should provide evidence to prove the components were constructed to an approved standard. Otherwise this equipment should be taken out of service or replaced;
- The data plate associated with the receiver and pressure relief device remain unpainted and legible. Take care to minimize damage to the plates if paint needs to be removed. Pressure relief devices should not be painted as paint can interfere with the lifting of the valve. Those that are painted should be lift tested to ensure proper operation;



1

- 46 CFR 25
- Vessels built before July 7, 2002 are not required to be fitted with Perko navigation lights.
- Any certificate of inspection that is modified for any bulb or fixture that doesn't meet what's specified in the rules voids the certificate.

16711 / Serial No. 155  
CG-543 Policy Letter 11-02

FEB 28 2011

From: Eric P. Christensen, CAPT  
COMDT (CG-543)

Reply to: Mr. Patrick Lee  
Attn of: (202) 372-1135

To: Distribution

Subj: GUIDELINES FOR ACCEPTANCE OF PERKO NAVIGATIONAL LIGHT FIXTURES ON UNINSPECTED COMMERCIAL VESSELS

Ref: (a) Title 46, Code of Federal Regulations, Subchapter C, 25.10  
(b) COMDTINST M16672.2(series), Navigation Rules  
(c) 33 CFR 83.22, Inland Navigation Rules, Rule 22  
(d) 33 CFR 83.38, Inland Navigation Rules, Rule 38

1. Purpose. This policy letter provides guidelines for acceptance of the installation of Perko navigation lights on uninspected commercial vessels of less than 20 meters in length, operating on inland waters of the United States. Continued use of these light fixtures on towing vessels will likely be affected by pending regulatory changes for the inspection of towing vessels.

2. Directives Affected. None.

3. Action. Sector Commanders and Officers in Charge, Marine Inspection (OCMIs) shall direct their Marine Inspectors and Vessel Examiners to use this policy when examining Perko navigation light fixtures on uninspected commercial vessels.

4. Background.

- On May 17, 2010, the Inland Navigation Rules (NAV Rules) were relocated from the United States Code to Title 33 of the Code of Federal Regulations (CFR). Reference (b) went into effect December 24, 1981 and still provides illustrations and guidance on the NAV Rules now found in 33 CFR.
- Reference (c) gives range requirements for various navigation lights. Annex I of the NAV Rules, codified at 33 CFR part 84, gives the positioning and technical details for these lights.
- Reference (d) provides for certain exemptions based on vessel build date and length. This Rule states "Any vessel or class of vessels, the keel of which is laid or which is at a corresponding stage of construction before December 24, 1980, provided that she complies with the requirements of - (d) Sections 3, 4, and 5 of the Act of April 25, 1940 (54 Stat. 163), as amended (46 U.S.C. 526b, c, and d) for motorboats navigating the waters subject to that statute; shall be exempted from compliance with the technical Annexes to these Rules as follows:

The installation of lights with ranges prescribed in Rule 22 [range of visibility], until 4 years after the effective date of the Inland Navigational Rules Act of 1980 (Pub. L. 96-591), except that vessels of less than 20 meters (65') in length are permanently exempt."

# Fixed CO<sub>2</sub> Fire Suppression Systems

- Must be type approved or accepted by CG IAW 46 CFR 25.30-15
- Must be installed IAW 46 CFR 76.15



## Problems Found

- CO<sub>2</sub> systems with over 300lb capacity are located inside the space being protected.
- Inadequate amounts of CO<sub>2</sub> to protect the space.

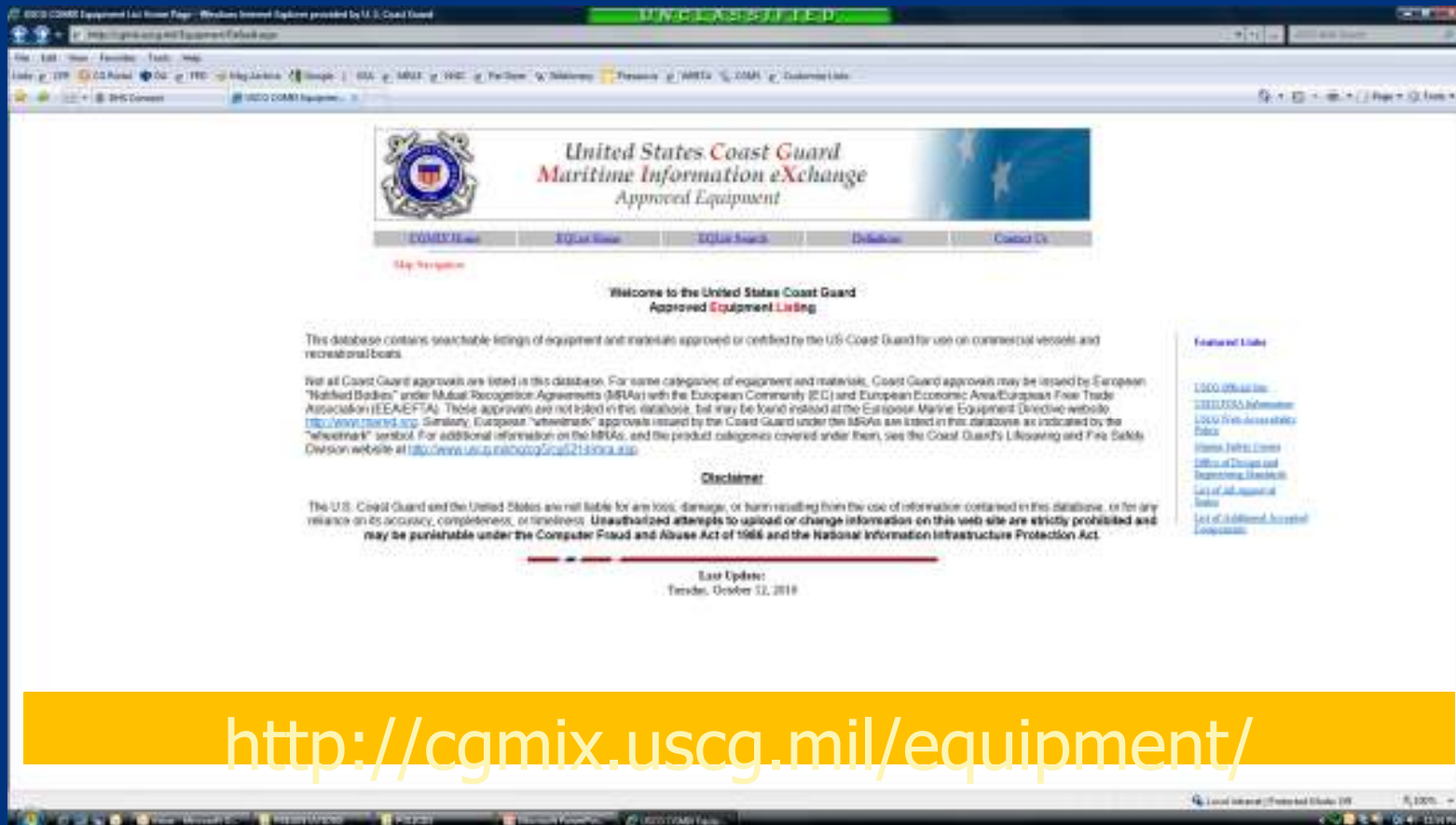


# Fire Detection Systems

- 46 CFR 27.203
- Must be CG approved or listed by independent testing laboratory
- Vessels whose construction was contracted for before Jan. 18, 2000, may use existing engine-room-monitoring system (w/ fire detection capability) if it's operable and complies with the installation requirements
- Must be certified by Professional Engineer or Classification Society as complying with installation requirements
- Problems: vessels found with unapproved/unlisted detection systems; missing certification letters



# Listing of CG Approved Equipment



The screenshot shows a web browser window displaying the "United States Coast Guard Maritime Information eXchange Approved Equipment" website. The page features a header with the USCG logo and navigation tabs for "Equipment", "Equipment", "Equipment", "Database", and "Contact Us". Below the header, a "Map Request" link is visible. The main content area includes a "Welcome to the United States Coast Guard Approved Equipment Listing" section, followed by a paragraph explaining the database's purpose and a "Disclaimer" section. A "Last Update" notice indicates the date as Tuesday, October 11, 2011. On the right side, there is a "Featured Links" section with several hyperlinks.

**United States Coast Guard  
Maritime Information eXchange  
Approved Equipment**

[Equipment](#) | [Equipment](#) | [Equipment](#) | [Database](#) | [Contact Us](#)

[Map Request](#)

**Welcome to the United States Coast Guard  
Approved Equipment Listing**

This database contains searchable listings of equipment and materials approved or certified by the US Coast Guard for use on commercial vessels and recreational boats.

Not all Coast Guard approvals are listed in this database. For some categories of equipment and materials, Coast Guard approvals may be issued by European "Notified Bodies" under Mutual Recognition Agreements (MRAs) with the European Community (EC) and European Economic Area/European Free Trade Association (EFTA). These approvals are not listed in this database, but may be found instead at the European Marine Equipment Directive website: <http://www.tmsd.org>. Similarly, European "white-label" approvals issued by the Coast Guard under the MRAs are listed in this database, as indicated by the "white-label" symbol. For additional information on the MRAs, and the product categories covered under them, see the Coast Guard's Licensing and Fee Safety Division website at <http://www.uscg.mil/cg521300a.asp>.

**Disclaimer**

The U.S. Coast Guard and the United States are not liable for any loss, damage, or harm resulting from the use of information contained in this database, or for any reliance on its accuracy, completeness, or timeliness. **Unauthorized attempts to upload or change information on this web site are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and the National Information Infrastructure Protection Act.**

**Last Update:**  
Tuesday, October 11, 2011

**Featured Links**

- [USCG Official Site](#)
- [USCG Information](#)
- [USCG Web Accessibility](#)
- [Data](#)
- [Home Page Links](#)
- [Office of Design and Engineering Services](#)
- [List of Additional Approved Equipment](#)

<http://cgmix.uscg.mil/equipment/>



- Found on some towing vessels
- This system is not listed and/or Coast Guard approved. It should not be an engine-room monitoring system.
- Not Coast Guard approved and not listed by an independent testing laboratory.
- Hiller Systems Inc. is currently working with FM Approvals to conduct the re-testing of the system in an engine room. It is not listed and/or Coast Guard approved.
- This system should not be installed on towing vessels unless it is listed and/or Coast Guard approved.



MARINE INSPECTION NOTICE

01-10

**HILLERSAFE FIRE DETECTION SYSTEMS ONBOARD UNINSPECTED TOWING VESSELS**

Recently, while conducting inspections onboard towing vessels, Coast Guard inspection personnel have discovered vessels equipped with HillerSAFE fire detection/engine room monitoring systems. The use of such systems is dependent upon the following:

- **Currently Unacceptable:** Any Hiller system installed on an uninspected towing vessel after January 18, 2000. However, commencing June 2010 Hiller Systems Inc. is working with an independent laboratory to conduct the testing of this system to have it listed and/or Coast Guard approved. As long as the HillerSAFE system is working properly, owners should not remove this equipment until the testing is complete and a determination has been made on this system meeting the acceptable standards.
- **Acceptable:** Any system installed on a vessel contracted to be built before January 18, 2000. The system is acceptable because approved laboratory listing requirement was not required. Note: each detector head must be current and listed by one of the three approved laboratories, Underwriters Laboratories, FM Approvals, or Intertek Testing Services.

Hiller's product literature may be misleading. It advertises these systems as having been tested by Retlif Testing Laboratories to Lloyds Register (LR) Type Approval System Test Specification 1. See attached advertisement. Retlif Testing Laboratories does not list fire detection equipment.

Background:

Title 46 Code of Federal Regulations (CFR), Part 27, Subpart B – Fire Protection Measures for Towing Vessels, establishes requirements for fire detection on towing vessels. Specifically, 46 CFR 27.203(a) requires each detector, each control panel, and each fire alarm (the fire detection system) to be Coast Guard approved or listed by an independent testing laboratory. However, if you use an existing engine-room monitoring system (with fire detection capability), only the detectors must be listed by the independent laboratory. Further, 46 CFR 27.203 allows the use of existing engine-room monitoring systems (with fire detection capability) on towing vessels whose construction was contracted before January 18, 2000.

Access - <http://www.uscg.mil/hq/cg5/cg5214/regtow.asp> for additional information.

The Coast Guard **strongly reminds** owners and operators of domestic uninspected towing vessels to inspect their current systems and initiate appropriate action as needed.

Developed by the U.S. Coast Guard Office of Vessel Activities and Lifesaving and Fire Safety Division. Questions concerning this notice may be directed to Mr. Patrick Lee in the Office of Vessel Activities, Domestic Compliance Division (CG-5431) at 202-372-1135 or Mr. Louis Nash at Coast Guard Headquarters Lifesaving and Fire Safety Division (CG-5214) at (202) 372-1388.



# Fuel Shut-Off Valves

- 46 CFR 27.207
- Positive remote fuel shut-off valve
- Near source of supply
- Remotely operable outside the space (i.e. reach-rod, pull cable)

## Problems Found

- Valve installed at the engine instead of near the tank.
- Valves not functional
- Valves not labeled properly



## Appeals, Exemptions, and Equivalencies

- Appeals (COTP)
- Exemption meeting
- Equivalency substitution



## Roadmap to Successful Submissions: Exemptions, Appeals & Equivalencies

A Guide for Owner/Operators of Commercial Vessels



Towing Vessel National Center of Expertise  
504 Broadway Street # Suite 101 # Paducah # Kentucky 42001  
[www.uscg.mil/tvncoe](http://www.uscg.mil/tvncoe) # Main Line 270-444-771 # Fax 270-444-8091

which

Port

from

for

U.S. COAST GUARD

# Policy Letters

U.S. Department of  
Homeland Security  
United States  
Coast Guard

Commandant  
CG-543

U.S. Department of  
Homeland Security  
United States  
Coast Guard

Commandant (CG-543)  
Office of Vessel Activities  
United States Coast Guard

2100 7<sup>th</sup> ST. S.W. Stop 7101  
Washington, DC 20528-7101  
SST 202-273-0431  
Phone: (202) 273-1234  
Fax: (202) 273-0921  
E-mail: [CG543@uscg.mil](mailto:CG543@uscg.mil)

3500 / Serial No. #93  
CG-543 Policy Letter  
10.04

From: Eric P. Christensen, CAPT  
COMDT (CG-543)

To: Distribution

Subj: EXISTING SYSTEMS AND EQUIPMENT

Ref: (a) 46 CFR Subchapter C  
(b) CG-543, Coast Guard Towing Vessels  
(c) 46 CFR 76.15

- Purpose:** The purpose of this policy letter is to provide guidance regarding the carriage of excess equipment on uninspected towing vessels (UTVs).
- Action:** Sector Commanders and OCMI's at Examiners to use the guidance in this letter when examining equipment on UTVs until final regulations for the inspection of UTVs are promulgated.
- Directives Affected:** None.

**Background:** Many towing vessels are not subject to Federal Regulations. Because of this, the equipment previously subjected to plan review or inspection.

A rulemaking project has been initiated to amend Federal Regulations to allow the carriage of excess equipment on towing vessels. This policy letter applies this same philosophy to uninspected towing vessels, but is not limited to the fire suppression and detection equipment mentioned in ref (a).

The Towing Vessel Bridging Program (TVBP) is a future inspection regime (see ref (b)). We will use our newly created UTV Examiners in respect to equipment previously inspected under (a).

**Discussion:** With the increased emphasis on the number of approved systems have not been inspected UTVs. Examples of the deficiencies include: CO2 cylinder protected, no means of discharging/dumping gas systems not certified by a Professional Engineer.

**Policy:** Marine Inspectors and Towing Vessel Examiners shall be used on the Uninspected associated MDSLE Activity. Generally, define

## MEMORANDUM

From: Eric P. Christensen, CAPT  
COMDT (CG-543)

Reply to P. J. Lee, Mr.  
Auth. of (202) 372-1135

To: Distribution

Subj: CARRIAGE OF SYSTEMS AND EQUIPMENT IN EXCESS OF SUBCHAPTER C REQUIREMENTS ON BOARD UNINSPECTED TOWING VESSELS

Ref: (a) 46 CFR 28.155  
(b) 46 CFR 28.105 (b)

- Purpose:** This policy letter establishes guidance with regards to the carriage of excess equipment on uninspected towing vessels (UTVs). This policy may be superseded in the future by promulgation of towing vessel inspection regulations which are currently being developed.
- Action:** Sector Commanders and OCMI's shall direct their Marine Inspectors and Towing Vessel Examiners to use the guidance in this letter when examining equipment on UTVs until final regulations for the inspection of UTVs have been promulgated.
- Directives Affected:** None.
- Background:** Currently 46 CFR Subchapter C does not address carriage of excess equipment on UTVs. Regulations (a) and (b) allow the carriage of excess equipment on towing vessels if certain conditions are met. This policy letter applies this same philosophy to uninspected towing vessels, but is not limited to the fire suppression and detection equipment mentioned in ref (a).
- Policy:** Pending promulgation of regulations or other guidance, uninspected towing vessels may carry equipment in excess of that required by applicable regulations, provided that the excess equipment does not endanger the vessel or individuals on board in any way.
  - Any Coast Guard type-approved equipment may be carried in excess, as long as it is maintained in accordance with the equipment manufacturer's recommendations and appropriate national industry consensus standard(s).
  - Excess equipment that is not Coast Guard approved must, at a minimum, be listed and labeled by an independent testing laboratory (as discussed below) and be designed, installed, tested, and maintained in accordance with the equipment manufacturer's recommendations and appropriate national industry consensus standard(s). (i.e., UL, ASTM, NFPA, NEC, etc.)
    - Example: If a vessel meets the applicable fire suppression equipment requirement by having a B-V extinguisher on board that meets all of the regulatory requirements,

# Towing Vessel National Center of Expertise Website

Homeport Link



United States Coast Guard  
U.S. Department of Homeland Security

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Policy & Guidance

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Security Levels

MARSEC LEVEL 1 SIGNIFICANT RISK

National Threat Advisory: ELEVATED

Significant Risk Of Terrorist Attacks

Towing Vessel National Center of Expertise (TVNCOE)

CG-AWO Travel Time Report

News, Events and Announcements

Policy, Guidance, and Appeals

Requirements for Uninspected Towing Vessel Guide Book

Towing Vessel Bridging Program

Towing Vessel Bridging Program Outreach Materials

- Help ensure high level of consistency through training and policy guidance - click on [Courses](#)
- Train towing vessel examiners - Click on [Courses](#)
- Provide onsite assistance - click on [Contact Us](#)

What's New

Current OSHA policy, information and guidance with respect to OSHA on vessels and facilities on or adjacent to U.S. navigable waters are available at [click here](#).

<http://www.uscg.mil/tvncoe>

# Questions?

