

PROJECT MEMORANDUM

Impact of NVIC 11-93, Change 3, on *New Horizon*

TO: Captain Tom Althouse
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Purpose and Introduction

Glostten was tasked with investigating the impact that the recent Change 3 to Navigation and Vessel Inspection Circular (NVIC) 11-93 had on the intermediate-sized oceanographic research vessel, *New Horizon*, in the Scripps Institute of Oceanography fleet. In addition to investigating the direct impact on this vessel, we created a matrix that allows a reader to enter with a build/major modification or substantially altered date and vessel tonnage to view and determine the applicable SOLAS rules.

NVIC 11-93, Change 3 differences

The main differences contained in NVIC 11-93, Change 3 over Change 2 are as follows:

1. Recent additions to the SOLAS requirements must be applied using the ITC (convention measurement) system. Regulatory tonnage systems no longer apply to new conventions, regardless of keel laid or substantial alteration date. A system requirements matrix is included in the NVIC to determine what conventions apply and is based on whether a vessel is self-propelled or not, voyage routes, length of the vessel, and keel laid/major modification or substantially altered dates.
2. The regulatory tonnage system can no longer be used to determine if STCW requirements apply. All vessels must apply the convention measurement system to STCW requirements.
3. The radiotelephony requirements of IMO Resolution A.494(XII) have been deleted and the GMDSS program is now applicable to most vessels applying SOLAS requirements.

Industry and USCG responses to NVIC 11-93, Change 3

There have been a couple of Federal Register notices published by the USCG and responses have been issued by OMSA (Offshore Marine Service Association) and other interested parties. A timeline of events, documents issued, and responses related to Change 3 are presented below:



- 10 November 2003, USCG Tonnage branch issued (Marine Technical Note) MTN 01-99, Change 6
- 21 November 2003, USCG issues NVIC 11-93, Change 3
- 20 January 2004, the National GMDSS Implementation Task Force issues a policy statement regarding tonnage requirements and GMDSS
- 6 April 2004, USCG issues Federal Register [USCG-2004-17350] clarifying the interpretation of international voyage for security regulations
- 2 June 2004, Danos & Curole submits reply to USCG FR 17350
- 21 June 2004, USCG issues Federal Register [USCG-2004-17615] discussing the enforcement of SOLAS requirements
- 24 June 2004, Tidewater Marine submits reply to USCG FR 17350
- 6 July 2004, OMSA submits reply to USCG FR 17350 and 17615
- July 2004, OMSA issues its Summer newsletter with a discussion of NVIC 11-93, Change 3 and its impact on up to 100 member vessels of the association

SOLAS applicability to *New Horizon*

We discussed the interpretation of NVIC 11-93 with Mr. Peter Eareckson of the USCG Tonnage Branch and were told that regulatory tonnage would still apply to international conventions issued prior to 1982. He stated the NVIC was not intended to have a vessel go through a complete refurbishment to meet the structural fire protection requirements if they were not previously subject to the requirements. That type of modification would significantly impact industry and their ability to retain their current vessels. There may still be other costly requirements applicable to vessels with a more current conversion or build date, i.e. rescue boats.

Using the 1978 build date for the *New Horizon* and assuming that it has not undergone a major modification or been substantially altered since then, Table 5 of NVIC 11-93, Change 3 applies. As stated in the International Conventions section of this table, all international conventions in effect as of July 1982 can be applied using the U.S. regulatory tonnage value. Conventions that became effective after this date must be applied using the convention measurement system tonnage. The *New Horizon* measures 294 tons under the regulatory tonnage system and 797 tons using the convention tonnage system. Most of the international conventions of SOLAS apply to vessels larger than 500 tons. Thus, the ISM (International Safety Management) Code and ISPS (International Ship & Port Facility Security) Code requirements must be applied to the *New Horizon*.

The new requirements in the FTP Code are not applicable because they are considered a part of the Chapter II-2 fire protection requirements that became effective prior to July 1982 and they are applied to ships built on or after 1 July 1986. The GMDSS requirements are not applicable to the *New Horizon* since they only apply to vessels built on or after 1 February 1992. The Life Saving Appliances Code contained in the 1996 amendments with an entry into force date of 1998 only applies to vessels built on or after 1 July 1986 and thus rescue boats are not required on this vessel. As a result of using the ITC tonnage value of the *New Horizon* as stated in the NVIC Change 3, many requirements would not apply due to the build or major modification date. The Interim Schemes found in IMO Resolutions A.494 and A.541 also do not apply since the keel laid date of the *New Horizon* was prior to July 1982.

In conclusion, there are amendments and regulations entered into force after the build date that do apply, including the automatic identification system (AIS), the ISPS Code and ISM Code.

Installation of AIS

As detailed in the December 2000 amendments and revised by the December 2002 amendments, a revision to Chapter V of SOLAS requires that the New Horizon shall be fitted with an AIS not later than 31 December 2004 or earlier if the safety equipment survey is conducted prior to this date.

Application of the ISPS Code

The ISPS Code requirements for US flagged vessels are contained in 33 CFR 104. 33 CFR 104 requires the vessel owner to create a ship security plan that contains a clear statement emphasizing the Master's authority. By 31 December 2003, owners or operators of vessels should have submitted a Vessel Security Plan to the USCG for review and approval.

33 CFR 104 was published in 68 FR 39292 in July 2003 and 68 FR 60483 in October 2003. A summary of requirements include:

Fleet wide requirements

1. Company Security Officer designated

Vessel requirements

1. Vessel Security Officer designated
2. Completion of a Vessel Security Assessment (VSA) that can be used to help create the Vessel Security Plan and keep it updated.
3. Vessel Security Plan that includes security training for personnel, security plans for different levels as delegated by the US government, security incident procedures with actions that will be taken if there is an incident, and creation of Declaration of Security.
4. Vessel security drills conducted at least once every 3 months.
5. Vessel exercise conducted at least once each calendar year

Application of the ISM Code

The ISM Code, 33 CFR 96 in the U.S. regulations, applies to vessels greater than 500 gross tons (ITC). 33 CFR 96 requires documentation and implementation of a complete safety management system for each vessel in the company that meets the minimum required tonnage. The safety management system includes:

1. The safety and pollution prevention policy
2. Functional safety and operational requirements
3. Record keeping responsibilities

The safety management system should be consistent with the functional standards and performance elements of IMO Resolution A.741(18). A complete list of documents and reports that are required are contained in 33 CFR 96. A Document of Compliance certificate will be issued after a satisfactory safety management audit is completed. A Safety Management Certificate is also required for operations on a foreign voyage and requires a valid Document of Compliance.

SOLAS applicability to other Research Vessels

NVIC 11-93, Change 3 may have a different impact on other research vessels and each party will have to use the vessel build date/major modification date or substantially altered date, gross and ITC tonnage values and length to determine what regulations will apply. The attached matrix provides guidance on determining the applicable regulations for cargo vessels of different size and build date. A spreadsheet listing the SOLAS regulations and implementation dates is also provided for guidance.

Major Conversion and Substantially Altered dates

A major modification or major conversion essentially changes the build date for the vessel to the time when the conversion is commenced. Under Title 46, USC 2101 (14a) a "major conversion" means a conversion of a vessel that:

- a) Substantially changes the dimensions or carrying capacity of the vessel;
- b) Changes the type of the vessel;
- c) Substantially prolongs the life of the vessel; or
- d) Otherwise so changes the vessel that it is essentially a new vessel.

Major conversion rulings are made on a case-by-case basis by the USCG Marine Safety Center.

A vessel may also undergo a substantial alteration that is defined in NVIC 11-93, Change 3, as alterations or modification which result in an increase or decrease of more than 5% in either the gross regulatory or convention measurement system tonnage of the vessel.

A vessel may go through a major modification without a substantial alteration, but the build date will still be adjusted to the time of major modification.

Cargo Ship SOLAS applicability resulting from NVIC 11-93, Ch. 3

Build or Major Modification /Conversion date	Tonnage				
	>300 GRT	>300 ITC	<500 ITC	>500 ITC and <1600 ITC	>1600 ITC
Before July 18, 1982		Apply requirements of Chapter IV	Apply requirements of Chapter VI and VII as applicable	Apply requirements of Chapter IV, V, VI, VII, and VIII as applicable	Apply requirements of Chapter IV, V, VI, VII, and VIII as applicable
		Install Automatic Information System (AIS)		Apply regulations occurring after 1982: ISM Code, ISPS Code (including AIS).	Apply regulations occurring after 1982: ISM Code, ISPS Code (including AIS).
				Apply other SOLAS requirements in effect before July 18, 1982, using GRT value.	Apply other SOLAS requirements in effect before July 18, 1982, using GRT value.
				Interim Scheme not applicable since built prior to July 18, 1982.	Interim Scheme not applicable since built prior to July 18, 1982.
July 18, 1982 - Dec. 31, 1985				Per the Interim Scheme, apply regulations occurring after 1982: ISM Code, ISPS Code.	Per the Interim Scheme, apply regulations occurring after 1982: ISM Code, ISPS Code.
				Per the Interim Scheme, apply other SOLAS requirements in effect before July 18, 1982, using GRT value.	Per the Interim Scheme, apply other SOLAS requirements in effect before July 18, 1982, using GRT value.
January 1, 1986 - July 18, 1994				Per the Interim Scheme, apply regulations occurring after 1982: ISM Code, ISPS Code.	Apply all SOLAS regs using ITC tonnage only. Regulatory tonnage not applicable.
				Per the Interim Scheme, apply other SOLAS requirements in effect before July 18, 1982, using GRT value.	
July 1, 1986 and after				Apply requirements Chapter II-1	Apply requirements Chapter II-1
				Apply requirements of Parts A, C, and D of Chapter II-2	Apply requirements of Parts A, C, and D of Chapter II-2
				Apply requirements of Chapter III, includes rescue boats	Apply requirements of Chapter III, includes rescue boats
February 1, 1992 and after	GMDSS (grandfathering applies to vessels built prior to this date)			GMDSS applies	GMDSS applies

Cargo Ship SOLAS applicability resulting from NVIC 11-93, Ch. 3

				Ch. II-1, Regulation 12-1, double bottoms requirement applies	Ch. II-1, Regulation 12-1, double bottoms requirement applies
				If vessel over 90m in length, apply Chapter II-1, Part B-1	If vessel over 90m in length, apply Chapter II-1, Part B-1
July 19, 1994 and after				Apply all SOLAS regs using ITC tonnage only. Regulatory tonnage and Interim Scheme not applicable.	Apply all SOLAS regs using ITC tonnage only. Regulatory tonnage and Interim Scheme not applicable.
October 1, 1994 and after				Apply requirements of all Parts of Chapter II-2	Apply requirements of all Parts of Chapter II-2
July 1, 1998 and after				FTP Code applies	FTP Code applies
				LSA Code applies	LSA Code applies
Assumptions:					
(1) Vessel overall length is greater than 24 meters (79 feet)					
(2) All parts of SOLAS prior to July 1982 are applicable to all vessels subject to SOLAS					

SOLAS implementation dates for Cargo Vessels

		Regulation		
	Date of implementation/entry into force or date of revision	Chapter	Regulation	Summary description
	1-Nov-74	I	1 through 21	General Provisions
	(Updated 1 Sept 1984)	II-1	1 through 54	Subdivision and stability, machinery, and electrical installations
	(Updated 1 Sept 1984)	II-2		Fire protection, fire detection, and fire extinction
		III	Regulation 8,9,10,18,19, 21.3, 21.4, 25, 26.3, 17.2, 27.3, and 30.2.7 apply	Life saving appliances and arrangements
		IV	1 through 17	Radiocommunications
		V	1 through 23	Safety of navigation
		VI	1 through 9	Carriage of cargoes, primarily focused on grain carriage
		VII	1 through 13	Carriage of dangerous goods
	1-Jul-86			
1	(Revision to 1974 Convention)	II-1	1 through 54	Subdivision and stability, machinery, and electrical installations
1	(Revision to 1974 Convention)	II-2	Parts A, C, and D, unless noted	Fire protection, fire detection, and fire extinction
1	(Complete revision to chapter)	III	1 through 53	Life saving appliances and arrangements, including rescue boats
	1-Feb-92			
1		II-1	Part B-1, Regulation 25-1 to 25-10	Subdivision and damage stability of cargo ships over 90m
3		IV	1 through 17	Radiocommunications, revision that includes GMDSS
	1-Jul-98			
1		II-2		Fire Test Procedures (FTP Code) implemented
1		III	1 through 53	Life saving appliances and arrangements revised as LSA Code
2		IX	1 through 6	Management for the safe operation of ships, ISM Code
	1-Jul-02			
1		II-2		New Code for Fire Safety Systems (FSS Code) implemented
2		V	1 through 23	Safety of navigation, revision that includes VDRs and AIS
	1-Jul-04			
2		XI-2		ISPS Code implemented
*NOTE: This table does not detail regulations applicable to passenger ships, dry cargo ships or tankers and is specific to misc. cargo vessels.				
Footnotes:				
1	Only applies if vessel build/modification/substantial alteration date occurs after date of amendment or regulation. Regulations in force before the new revision still apply to the vessel.			
2	Applies to all vessels subject to SOLAS.			
3	Applies to all vessels over 300 ITC.			