

**From:** [Thomas Gruber](#)  
**To:** ["Stettler, Jeffrey \[REDACTED\] Stolzenberg Eric; DOMeara \[REDACTED\]"](#)  
**Subject:** RE: El Faro files - Feb 2  
**Date:** Friday, February 5, 2016 12:01:55 PM  
**Attachments:** [MARAD DESIGN LETTER 3.pdf](#)

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Gents,

Enclosed is a copy of MARAD Design Letter 3 (apologies for the rough condition). Please note the applicability date of 1 August 1983 means that the 1975 built EL FARO could not have been built under these auspices.

If further details of any MARAD requirements are necessary, I would suggest we contact Rich Sonnenschein at MARAD to see if he can provide details as to what was applicable at the time of build (possibly a precursor to Design Letter 3?), if the vessel was subject to these requirements, and what would the applicability be when the associated loans were paid off.

Now we also need to keep in mind that MARAD Design Letter 3 is not statutory requirement. It is essentially an owner's requirement. Further it is not an acceptable alternative to the SOLAS Probabilistic Damage Criteria, as it is not one of the listed "subdivision and damage stability regulations in other instruments developed by the Organization" (IMO), as noted in Chapter II-1, Part B-1 Regulation 25-1 of the SOLAS, Consolidated Edition, 1992. There have been numerous occasions in the past where the USCG (both the MSC and ENG-2) has affirmed this understanding.

Hope this helps.

Tom

Thomas M. Gruber  
Assistant Chief Engineer - Statutes  
Chief Engineer's Office  
ABS Corporate



-----Original Message-----

**From:** Stettler, Jeffrey W CIV [REDACTED]  
**Sent:** Friday, February 05, 2016 11:07 AM  
**To:** Stolzenberg Eric; Spencer Schilling  
**Cc:** Dennis O'Meara [REDACTED]; Thomas Gruber; Stettler, Jeffrey W CIV  
**Subject:** RE: El Faro files - Feb 2

Hello all,

I just wanted to make a note about Spencer's #2. I was talking with Bill Peters and Jaideep Sirkar the other day, and Bill Peters actually talked about how the EL FARO was originally built under a MARAD subsidy loan program and the Design Letter 3 was applicable, and it was required to meet the 1-cmpt damage. However, Bill did not know what would have happened if/when the loan was paid off. Bill apparently worked for a contractor back when he was a young lad and he had first-hand knowledge of this.

Jeff

-----Original Message-----

## Stolzenberg Eric

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**From:** Thomas Gruber [REDACTED]  
**Sent:** Wednesday, April 26, 2017 2:07 PM  
**To:** Stolzenberg Eric  
**Cc:** Young Brian; Louis O'Donnell  
**Subject:** RE: EL FARO, EL YUNQUE, EL MORRO: LL-11's

Eric,

The inlets had the watertight closures, so they weren't used as downflooding points. For the purposes of the damage stability calculations, we disregarded the dampers (conservative) in the exhausts and used those ducts as the downflood points.

In each hold, there were 2 exhausts on each side, with the inlet in between. We used both of the exhausts as downflood points (as did the USCG MSC in their report)

I hope this helps.

Tom

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Thomas M. Gruber  
ABS  
Chief Engineer - Statutes

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Wednesday, April 26, 2017 1:51 PM  
**To:** Thomas Gruber [REDACTED]  
**Cc:** Young Brian [REDACTED]; Louis O'Donnell [REDACTED]  
**Subject:** RE: EL FARO, EL YUNQUE, EL MORRO: LL-11's

Tom,

Follow-up to below.

Were both the supply and exhaust vents used, or just exhaust vents? I see one number 56.14, not two, like 56.14/not used or 56.14/55.

Eric

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**From:** Thomas Gruber [REDACTED]  
**Sent:** Wednesday, April 26, 2017 7:05 AM  
**To:** Stolzenberg Eric [REDACTED]  
**Cc:** Young Brian [REDACTED]; Louis O'Donnell [REDACTED]  
**Subject:** RE: EL FARO, EL YUNQUE, EL MORRO: LL-11's

Eric,

Sorry for the delay. My answers are noted below, following each of your questions.

Let me know if you have any questions or wish to discuss these issues further.

Best regards,

Tom

Thomas M. Gruber  
ABS  
Chief Engineer - Statutes

Email: [REDACTED] | [www.eagle.org](http://www.eagle.org)

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Wednesday, April 19, 2017 12:08 PM  
**To:** Thomas Gruber [REDACTED]  
**Cc:** Young Brian [REDACTED]; Louis O'Donnell [REDACTED]  
[REDACTED] EL FARO, EL YUNQUE, EL MORRO: LL-11's

Tom,

Thanks for taking the time to speak with me this morning regarding subject LL-11's. It helped greatly.

Per our conversation, could I get an email, or other releasable document answering the following two questions so I might include in factual report.

- 1) What "height" of ventilators used for damaged stability calculations in 1993 and by ABS in 2016 verification for Hold 2A and Hold 3, for both the supply and exhaust ventilators?

Year, Damaged Stability Run	Ventilators	Feet ABL	Feet Above 2 <sup>nd</sup> deck
1993	2A Supply/Exhaust	56.14	14.0
1993	3 Supply/Exhaust	56.14	14.0
2016, ABS verification	2A Supply/Exhaust	56.14	14.0
2016 ABS verification	3 Supply/Exhaust	56.14	14.0

- 2) Should the 3 Hold Emergency Fire Pump inlet pipe from sea chest be listed on LL-11D for El Faro? I noted it is not listed on any of the 4 LL11D PONCE class vessels provided.

Under the 1966 ICLL (the 1988 Protocol and 2005 amendments do not apply to these ships), Regulations 20(2) allows inlets in manned machinery spaces to be controlled locally. Based on that, inlets not in a manned machinery space must be controlled from the freeboard deck. A positive means of closure is to be provided. Since inlets are, by design, supposed to permit water in, the requirements for non-return valves do not apply. The 3 Hold Emergency Fire Pump inlets shown in the photographs of the EL YUNQUE ad EL FARO comply with the ICLL requirements.

Normally, we would expect all inlets, including the one for the 3 Hold Emergency Fire Pump, to be included on the LL-11.

Thank you,



## Stolzenberg Eric

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**From:** Louis O'Donnell [REDACTED]  
**Sent:** Friday, May 5, 2017 12:44 PM  
**To:** Stolzenberg Eric  
**Cc:** Thomas Gruber  
**Subject:** FW: ABS Rules on Bilge Alarms in Cargo Holds

Eric,

My apologies your request message went to my junk mail for some reason, Tom's too.

The only way EL FARO would have required bilge alarms in C/H's is if gravity drains from other spaces terminated in the cargo holds, which is not the case for EL FARO.

### Regulation 35-1

#### Bilge pumping arrangements

1 This regulation applies to ships constructed on or **after 1 January 2009.**

#### 2 Passenger ships and cargo ships

2.1 An efficient bilge pumping system shall be provided, capable of pumping from and draining any watertight compartment other than a space permanently appropriated for the carriage of fresh water, water ballast, oil fuel or liquid cargo and for which other efficient means of pumping are provided, under all practical conditions. Efficient means shall be provided for draining water from insulated holds.

2.2 Sanitary, ballast and general service pumps may be accepted as independent power bilge pumps if fitted with the necessary connections to the bilge pumping system.

2.3 All bilge pipes used in or under coal bunkers or fuel storage tanks or in boiler or machinery spaces, including spaces in which oil-settling tanks or oil fuel pumping units are situated, shall be of steel or other suitable material.

2.4 The arrangement of the bilge and ballast pumping system shall be such as to prevent the possibility of water passing from the sea and from water ballast spaces into the cargo and machinery spaces, or from one compartment to another. Provision shall be made to prevent any deep tank having bilge and ballast connections being inadvertently flooded from the sea when containing cargo, or being discharged through a bilge pump when containing water ballast.

2.5 All distribution boxes and manually operated valves in connection with the bilge pumping arrangements shall be in positions which are accessible under ordinary circumstances.

2.6 Provision shall be made for the drainage of enclosed cargo spaces situated on the bulkhead deck of a passenger ship and on the freeboard deck of a cargo ship, provided that the Administration may permit the means of drainage to be dispensed with in any particular compartment of any ship or class of ship if it is satisfied that by reason of size or internal subdivision of those spaces the safety of the ship is not thereby impaired.

#### 4 Cargo ships

At least two power pumps connected to the main bilge system shall be provided, one of which may be driven by the propulsion machinery. If the Administration is satisfied that the safety of the ship is not impaired, bilge pumping arrangements may be dispensed with in particular compartments.

### Regulation 25

#### *Water level detectors on single hold cargo ships other than bulk carriers*

1 Single hold cargo ships other than bulk carriers constructed before 1 January 2007 shall comply with the requirements of this regulation not later than 31 December 2009.

2 Ships having a length ( $L$ ) of less than 80 m, or 100 m if constructed before 1 July 1998, and a single cargo hold below the freeboard deck or cargo holds below the freeboard deck which are not separated by at least one bulkhead made watertight up to that deck shall be fitted in such space or spaces with water level detectors.\*

\* Refer to Performance standards for water level detectors on bulk carriers and single hold cargo ships other than bulk carriers (resolution MSC.188(79)).

3 The water level detectors required by paragraph 2 shall:

.1 give an audible and visual alarm at the navigation bridge when the water level above the inner bottom in the cargo hold reaches a height of not less than 0.3 m, and another when such level reaches not more than 15% of the mean depth of the cargo hold; and

.2 be fitted at the aft end of the hold, or above its lowest part where the inner bottom is not parallel to the designed waterline. Where webs or partial watertight bulkheads are fitted above the inner bottom, Administrations may require the fitting of additional detectors.

4 The water level detectors required by paragraph 2 need not be fitted in ships complying with [regulation XII/12](#), or in ships having watertight side compartments each side of the cargo hold length extending vertically at least from inner bottom to freeboard deck.

SOLAS requires a bilge system, but no alarms

So in summary based on EL FARO, vessel type, date of build, and arrangement, no bilge alarms were required to be fitted in the cargo holds. Only specific types of vessels (single hold vessel post 2007, bulk carriers, hatchless container vessels, ro-ro- passenger vessels with sprinkler system (post 2010) etc.) are required to have bilge alarms in cargo hold, not general cargo vessels.

As previously expressed the only reason EF had bilge alarms was for the security requirements of the facility she had laid-up at. If you wish to discuss give tom and I a call.

Hope this helps.

Regards,

—  
Louis O'Donnell  
ABS Americas Division  
Assistant Chief Surveyor

Note: When contacting the Americas Survey Department, please always copy [AmericasSurvey@eagle.org](mailto:AmericasSurvey@eagle.org)

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**From:** Thomas Gruber  
**Sent:** Monday, April 24, 2017 1:34 PM  
**To:** Louis O'Donnell  
**Subject:** FW: ABS Rules on Bilge Alarms in Cargo Holds

Thomas M. Gruber  
ABS  
Chief Engineer - Statutes

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From: Stolzenberg Eric [REDACTED]  
Sent: Monday, April 17, 2017 9:29 AM  
To: Louis O'Donnell [REDACTED]  
Cc: Thomas Gruber [REDACTED]  
Subject: ABS Rules on Bilge Alarms in Cargo Holds

Lou,

I reviewed CFR rules and have looked into ABS Class Mach. Rules for bilge alarms in cargo holds like El Faro's.

Can you provide overview, and reference for any reg that requires cargo hold bilge alarm on El Faro?

I do note that machinery part of ABS 2004 rules doe include requirement for unmanned space with thruster or fire pump.

I am including the rules and regs for cargo hold bilge alarms in my factual for technical review, so NTSB does not opine incorrectly later (in the event we include this in final report).

Thanks,

Eric

## Stolzenberg Eric

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**From:** Stettler, Jeffrey W CIV [REDACTED]  
**Sent:** Tuesday, April 25, 2017 10:49 AM  
**To:** Stolzenberg Eric  
**Cc:** Stettler, Jeffrey W CIV  
**Subject:** RE: El Faro: Clarification on downflooding points used in MSC Analysis Report

Eric,

Per our phone conversations, here are our interpretations:

1 and 2. This applies to both intact and damage stability criteria, although it is not quite as clearly stated for the damage stability.

The 2008 IS Code (Part A para 2.3.1) talks about limiting the GZ curve to the "angle of heel at which openings in the hull, superstructures or deckhouses which cannot be closed weathertight". This means that even a fire damper that is spray tight (but not necessarily waterproof or watertight) would be considered "weathertight" and would be OK for this purpose. So if EL FARO were considered under the 2008 IS Code, both supply and exhaust openings would not be considered as down-flooding for intact stability, since they could be closed weathertight (by manually closing the fire dampers).

SOLAS (for damage stability) talks about (Regulation 7-2, para 5.2) making the factor "s" zero ... "in those cases where the final waterline, taking into account sinkage, heel and trim, immerses: (1) the lower edge of openings through which progressive flooding may take place and such flooding is not accounted for in the calculation of factor "s". Such openings shall include air-pipes, ventilators and openings which are closed by means of weathertight doors and hatch covers." This means that "weathertight" openings would be considered as downflooding points for damage stability, but not "watertight" openings. So for the EL FARO, the exhaust openings would be considered as downflooding points, but not the supply openings. This is in fact the way we did our damage stability analysis (and was also how Tom Gruber did his analysis). See page 138 of Appendix B which provides a listing of the downflooding points (these are the exhaust openings only).

Hence the requirements are different for intact and damage stability. But from a practical perspective, in the case of the EL FARO, neither supply nor exhaust vent openings were actually closed in practice (ever).

Additionally, we learned from the VDR transcript that the operators for these fire dampers were actually not really accessible to the crew due to the water on deck.

Jeff

Dr. Jeffrey W. (Jeff) Stettler, P.E.  
Salvage Engineering Response Team (SERT)

USCG Marine Safety Center

From: Stolzenberg Eric

Sent: Friday, April 21, 2017 2:42 PM

To: P. E. Jeffrey W.

Subject: El Faro: Clarification on downflooding points used in MSC Analysis Report

Jeff,

1. Your final report notes in Section 6.6 Downflooding, that manual-closing fire dampers excluded them from stability consideration of stability criteria. This is only for intact stability- correct?

2. Did you use the supply vent openings as downflooding points in MSC Report damage analysis? If not, what guidance or reasoning? I note 55.9 feet as VCP for holds C and 56.5 feet for B.

I am attempting to understand the difference between weathertight and watertight closing appliances when they are fitted to the lower potential downflooding points on a ship.

Thank you,

Eric

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From: Louis O'Donnell [REDACTED]  
Sent: Thursday, December 8, 2016 9:59 PM  
To: Furukawa Robert [REDACTED]  
Cc: Young Brian [REDACTED]  
Subject: Re: Survival: El Faro construction question - clarifications

01 January 1975 delivery.

Regards,

Louis O'Donnell  
Assistant Chief Surveyor – Americas



When sending an E-Mail to an individual in the Americas Survey Department please also copy the message to E-Mail address: [AmericasSurvey@eagle.org](mailto:AmericasSurvey@eagle.org)

Sent from iPad

On Dec 8, 2016, at 7:40 PM, Furukawa Robert [REDACTED] wrote:

Thanks Lou.

Is the date for time of build 1975 when the Northern Lights was delivered?

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From: Louis O'Donnell [REDACTED]  
Sent: Thursday, December 8, 2016 5:40:07 PM  
To: Furukawa Robert  
Cc: Young Brian  
Subject: RE: Survival: El Faro construction question - clarifications

Jon,

The lifeboat winch and davits construction and testing would not be based on ABS Rules. [ABS Steel Vessel Rules do not have requirements for lifesaving appliances](#). The lifeboat winch and davits would have been based/constructed to SOLAS regulations and USCG CFR 160 requirements in effect at the time of build. The vessel hull and machinery construction is based on 1973 Steel Vessel Rules based on contract signing.

Regards,

---

Louis O'Donnell  
ABS Americas Division  
Assistant Chief Surveyor

Note: When contacting the Americas Survey Department, please always copy [AmericasSurvey@eagle.org](mailto:AmericasSurvey@eagle.org)

**From:** Furukawa Robert [<mailto:robert.furukawa@ntsb.gov>]  
**Sent:** Thursday, December 08, 2016 4:32 PM  
**To:** Louis O'Donnell  
**Subject:** FW: Survival: El Faro construction question - clarifications

Lou,

Why does the El Faro's lifeboat/davit/winch follow the 1973 Steel Vessel Rules and not the 1975 Steel Vessel Rules?

Best regards,

R. Jon Furukawa

## Stolzenberg Eric

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**From:** Louis O'Donnell [REDACTED]  
**Sent:** Thursday, June 30, 2016 8:15 AM  
**To:** Young Brian; Stolzenberg Eric; Kucharski Michael  
**Cc:** Thomas Gruber; Erik Garza  
**Subject:** RE: El Faro construction question

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**Categories:** Work- Important

Brain,

Apologies for the delayed reply, I'm about a day behind on email from traveling. Steel Vessel Rules for this vessel would be 1973 Steel Vessel Rules. As for CFR's would assume 73/74' CFR, but I would confirm same with LCDR Venturella or Capt. Mauger at the Marine Safety Center to be 100% sure.

Regards,

Louis O'Donnell  
Assistant Chief Surveyor – Americas

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**From:** Young Brian [REDACTED]  
**Sent:** Wednesday, June 29, 2016 6:44 AM  
**To:** Louis O'Donnell  
**Subject:** El Faro construction question

Lou,

Hope all is well with you. Busy here. Wondering if you may be able to assist with a historical question about construction dates for El Faro with regards to rules and CFR's?

According to the Sub website, the Puerto Rico was launched on November 1 1974. Do you know what 'CFR year' would have been used during construction as well as ABS rules?

A bit of a question for Eric and Mike too since they are referring to the rules that the vessel was constructed to for their factuals.

Thank very much,  
Brian

## Stolzenberg Eric

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**From:** [REDACTED]  
**Sent:** Tuesday, April 19, 2016 9:33 AM  
**To:** Stolzenberg Eric  
**Subject:** RE: Ship Data/Doc Request: MARAD Program Vessels

**Categories:** Work- Important

As clarification we wanted to add :

As constructed, the then-SS PUERTO RICO (eventually renamed SS EL FARO) met Design Letter No. 3 damage criteria. By the time the vessel was lengthened, in 1993, new international rules for dry cargo ships had entered into force, and it is believed that these damage survival criteria were offered as an alternative to Design Letter No. 3.

Thanks  
Dave

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Monday, April 18, 2016 9:50 AM  
**To:** Heller, David (MARAD)  
**Subject:** RE: Ship Data/Doc Request: MARAD Program Vessels

David,

Thank you and your staff for the prompt reply.

This certainly provides some clarity on my questions, which I would not have been able to learn.

Regards,

Eric

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**From:** [REDACTED]  
**Sent:** Monday, April 18, 2016 9:41 AM  
**To:** Stolzenberg Eric [REDACTED]  
**Subject:** FW: Ship Data/Doc Request: MARAD Program Vessels

Below is my staff's recollection to answer the questions you had. Please let me know if you have any other questions.

Thanks  
Dave

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**From:** Sonnenschein, Richard (MARAD)  
**Sent:** Monday, April 18, 2016 9:25 AM  
**To:** Heller, David (MARAD)  
**Subject:** RE: Ship Data/Doc Request: MARAD Program Vessels

Dave, here's my response to NTSB's questions and comments, to the best of my recollection:

- 1) "MARAD Outside Design Designations" simply refers to vessels not falling under a Government construction program (such as CDS, ODS, or other), where MARAD would normally apply its own hull design number.



- 2) I don't know what the re-configuration in 1973 entailed.
- 3) My second-hand understanding is that Design Letter No. 3 was applied to all of the hulls, with the exception that when the LURLINE was lengthened (in 1982?) it needed, but did not install, a watertight door at the lower end of one internal cargo ramp (I believe it was the aft, but am not certain) leading to the weather deck, in order to meet the one-compartment damage survival criteria.

I do not believe ABS had any responsibility to review the damage stability analysis for these vessels, since this exceeded the US-flag regulatory requirements for dry cargo ships.

Rich

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**From:** Heller, David (MARAD)  
**Sent:** Friday, April 15, 2016 6:44 AM  
**To:** Sonnenschein, Richard (MARAD)  
**Subject:** FW: Ship Data/Doc Request: MARAD Program Vessels

FYI

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Thursday, April 14, 2016 9:36 AM  
**To:** Heller, David (MARAD)  
**Subject:** RE: Ship Data/Doc Request: MARAD Program Vessels

David,

In sharing this information with some other member of the Naval Architecture investigative group a couple questions came up which you might be able to easily clarify.

- 1) Can you provide some understanding of what "MARAD Outside Design Designations" mean?
- 2) On page 1 of the PONCE's T&S booklet, it states that the lightship info was modified in accordance with a re-configuration in 1973. Any thoughts on what that reconfiguration entailed?
- 3) Is MARAD able to definitively say if Design Letter 3 was applied to Sun 670 or any of the other similar hulls? Similar to the GREAT LAND's T&S booklet from 1975, I didn't see any reference to damage stability/subdivision in the PONCE stability booklet.

ABS is trying to get the Load Line folder for the PONCE ( it was scrapped in 2000) to see if it contains any details or the re-configuration, as well as the actually stability approvals, so those may shed some light as well.

Thank you again for your time. Please feel free to call me today on this as well- [REDACTED]

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**From:** [REDACTED]  
**Sent:** Monday, April 11, 2016 11:57 AM  
**To:** Stolzenberg Eric [REDACTED]  
**Subject:** FW: Ship Data/Doc Request: MARAD Program Vessels

Eric,

Attached are the files my staff and I found.

Attached is the 1965 version of MARAD Design Letter No. 3 (for One-Compartment Damage Stability), which was in force at the time of the construction of the then-SS PUERTO RICO.

As indicated in the attached, undated Sun RoRo Vessels Configurations schematic, the SS EL FARO (then-SS PUERTO RICO) was originally constructed with an LBP of 643 ft, similar to then-sister ship, SS PONCE (later renamed SS PONCE DE LEON in 1977, and SS OSPREY in 1996).

Also attached is a copy of the Trim & Stability Booklet for the SS PONCE DE LEON, dated June 1977 (the year of its renaming), whose LBP at the time is listed as 643 ft. While it is obviously not the original version of the vessel's Trim & Stability Booklet, I believe it is consistent with the original configuration, and applicable to the originally constructed SS PUERTO RICO), as well.

Please let me know if you need additional information.

Thanks  
Dave

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**From:** Heller, David (MARAD)  
**Sent:** Friday, April 08, 2016 4:10 PM  
**To:** Sonnenschein, Richard (MARAD)  
**Subject:** FW: Ship Data/Doc Request: MARAD Program Vessels

FYI

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Friday, April 08, 2016 4:00 PM  
**To:** Heller, David (MARAD)  
**Subject:** RE: Ship Data/Doc Request: MARAD Program Vessels

David,

Thank you for the prompt reply and good news.

I am not in a rush, as I am going out on an EL FARO VDR search for about 20 days beginning next Friday. Anytime next week would be great.

I have heard from different sources (some folks with decades of experience) that vessels built under MARAD had a damage stability component going back for some time- but they are unsure how far. The copy of Design Letter No. 3 in my possession references the year 1983 or 1985 as I recall. But the El Faro was built in 1975. So I am unsure of damage requirements for the originally built hull.

Also, I am just a couple metro stops away, so if there is something to be discussed in person I could meet you sometime.

Regards,

Eric

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**From:** [REDACTED]  
**Sent:** Friday, April 08, 2016 3:48 PM  
**To:** Stolzenberg Eric [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Ship Data/Doc Request: MARAD Program Vessels

We have the original stability booklet, I will check on any damage information we might have. I believe that all vessels built under MARAD programs have met design letter No. 3, I am not sure we still have any files showing that or not, but will check as well.

If you need something and can't reach me Richard Sonnenschein, [REDACTED] may also be able to help you.

I will put together some information and get back to you next week. Do you have a deadline or timeframe in mind?

Thanks  
David Heller  
[REDACTED]

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Friday, April 08, 2016 2:42 PM  
**To:** Heller, David (MARAD)  
**Subject:** Ship Data/Doc Request: MARAD Program Vessels

Mr. Heller,

Per earlier discussion below, I am the Naval Architecture group chairman for the NTSB investigation into the El Faro sinking and Mr. Gilmour has directed me to you regarding information on the El Faro.

As part of the investigation I have been gathering stability and other related information through the history of the vessel.

I understand that the El Faro, originally delivered in 1975 as the Puerto Rico (Sun Shipbuilding Hull 670), was likely built under a MARAD subsidy of some type.

My hope is that you might help me determine what, if any, required MARAD design standards might have been applicable to the original hull, and help me obtain them.

Additionally, I was looking for any documentation that still exists for the hull. In particular, the original stability book and any damaged stability requirement that MARAD may have necessitated at the time (such as MARAD Design Letter No. 3).

I appreciated your time, and look forward to hearing from you.

Regards,

Eric Stolzenberg



**From:** [Heller, David \( \[REDACTED\] \)](#)  
**To:** [Stolzenberg Eric](#)  
**Subject:** RE: General roll for 1970 RO/RO  
**Date:** Thursday, August 25, 2016 10:12:14 AM

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These came from a spec from a RO/RO ship built in 1972. These are not MARAD generated requirements and MARAD's Design Letter No 3 would not drive those requirements either. The standard spec we found from the 70s is blank on the roll/ list numbers, as they were to be filled in by the owner. I think it is reasonable to assume that those recommended numbers came from SNAME or some other group that would develop guidelines in that time period. I can check with SNAME to see if they have anything.

If we don't have the El Faro or other Ponce Class RO/RO spec we can't be 100% sure, but should be similar since the vessels are similar.

We are still looking for a Ponce Class spec, don't expect to find it, but never know.

Thanks  
Dave

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Thursday, August 25, 2016 9:50 AM  
**To:** Heller, David (MARAD)  
**Subject:** Re: General roll for 1970 RO/RO

Dave, thank you for the continued assistance.

These design requirement dynamic and static roll/trim periods are exactly what I am attempting to determine for El Faro. Are the extracted specs generated or requirements from MARAD? Or are they standard ship specs? Can we assume that the specification for El Faro was similar? Basically, what confidence do we have that el faro would have these requirements?

I'm in training today- so I can call you if convenient.

Eric

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From: Heller, David (MARAD) [REDACTED]  
Sent: Thursday, August 25, 2016 09:31  
Subject: General roll for 1970 RO/RO  
To: Stolzenberg Eric [REDACTED]

The attached file shows roll and list operating conditions for a RO/RO built in the same time period



Ductile iron in accordance with ASTM A395, A445, A536 Grade 60-40-18, or Military Specification MIL-I-24137, Class A, may be used as alternate for steel, where applicable. During construction and before delivery, the Contractor shall be responsible for protection of all material, equipment, etc. intended for the ship.

5

The overweight tolerance of steel members shall be within limits defined by specifications of the American Society for Testing and Materials.

10

All lumber sizes shown on plans and specified herein are to be "finished" sizes as established by the American Lumber Standards of the U. S. Department of Commerce.

15

All machinery, structure and outfit, except the washer-extractor, shall be designed to withstand the resultant forces from the following ship conditions.

Mod XI

20

A complete 30° roll, port and starboard (i.e., through 120°), in a period of 16 seconds.

A pitch of 6° half amplitude in a pitch period of 6 seconds, (i.e., through 24° in 6 seconds).

25

Equipment operated at sea shall be designed to operate under any of the following conditions:

30

Above dynamic conditions

15° List (each side)

5° Trim (by bow or stern)

The emergency generator shall conform to list and trim requirements of U. S. Coast Guard. Performance criteria for equipment not operated at sea shall be as required by individual sections.

35

Names of manufacturers and trade designations of items are mentioned in this Specification only as a means of describing the quality and construction of the various articles or materials. It is not the intention of this Specification to restrict the supplying of such articles to the makes so named, but to provide a ready criterion for determining the quality and construction of equipment which will be acceptable. Substitute articles of a nature similar in design and equal in quality, construction, performance and ease of maintenance may be submitted to the Owner for consideration. Prospective suppliers must submit evidence of the successful application and maintainability of their product and of its suitability for marine service. Service availability in or near West Coast ports shall be included in manufacturer's proposal.

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All materials shall be free from imperfections of manufacture and from defects which adversely affect appearance or serviceability. All sharp edges or projections which constitute a personnel hazard shall be removed.

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May 4, 1972

Dec. 3, 1974, Mod XI

## Stolzenberg Eric

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**From:** Young Brian  
**Sent:** Friday, August 11, 2017 10:52 PM  
**To:** Kucharski Michael; Stolzenberg Eric  
**Subject:** Fwd: Cargo Max Training Document  
**Attachments:** cargo max.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**Categories:** Work- Important

FYI

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**From:** Lee Peterson [REDACTED]  
**Sent:** Friday, August 11, 2017 2:38:05 PM  
**To:** Young Brian  
**Subject:** Cargo Max Training Document

Brian,

In the course of preparing our responses to the NTSB draft Naval Architecture Report and following up with various witnesses, the attached document was provided to us by Ronald Rodriguez. We are producing the document to the NTSB and Coast Guard under what we believe to be our continuing obligation to do so.

It is probably responsive to a previous request from either the NTSB or the Coast Guard MBI for procedures related to loading the vessel. But, apparently, none of us supporting either investigation asked a question sufficiently on point to cause Ronald to bring up this document.

The attached document was used by the TMPR personnel in the terminal. It was originally provided to Mr. Rodriguez in approximately 2007, when he was trained on procedures for using CargoMax and the processing of various forms of cargo documentation. Ronald believes he received this document from Marshall Kaltenback, who Ronald believes was the author (with Bill Weisenborn possibly contributing as well). This document was used locally in Jacksonville, essentially as an informal SOP and training aid.

My apologies for the late production of this document, but we just became aware of it. We ask that you consider adding it to the NTSB docket, as it sheds light on the testimony of several witnesses and exhibits. If necessary, we can make Ronald available for a brief interview to "authenticate" the document.

Regards, Lee

**K. L. Peterson** | Project Director | **TOTE Maritime Alaska**  
[REDACTED]

**From:** [Thomas Gruber](#)  
**To:** [Stolzenberg Eric](#)  
**Subject:** RE: el faro: cfr's applicable  
**Date:** Monday, June 27, 2016 2:18:14 PM

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Eric,

Since the USCG did the original stability reviews for the vessels (the authorization ABS to do so was NVIC 3-84), I can't give a specific date on it. What I do know is that the weather criteria is the same now as it was then. Since the Third USCG District did the approvals (per the USCG stability letters previously provided), there probably isn't going to be a good way to nail down the CFR date used.

Hull 670 was launched in Nov 1974, so a 1974 keel laid date is much more likely. Best guess would be a 1973/74 CFR date (not that it will affect the weather criteria).

Tom

Thomas M. Gruber

Assistant Chief Engineer - Statutes  
Chief Engineer's Office  
ABS Corporate

Washington DC contacts:

[REDACTED]  
[REDACTED]

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**From:** Stolzenberg Eric [REDACTED]  
**Sent:** Monday, June 27, 2016 1:29 PM  
**To:** Thomas Gruber <tgruber@eagle.org>  
**Subject:** RE: el faro: cfr's applicable

Thanks on no. 1.

On no. 2, yes, for starters the stability CFR's that would be applicable. I am assuming they are keel date (which I think is 74), or possibly the 1975 delivery date as I have seen that CFR mentioned. Basically, I plan on defining some ABS and CFR rules in my factual report that would have been applicable to the hull as built originally. All parties will get a chance to review my report and comment on my errors, but I would prefer to be as correct as possible on first draft.

Eric

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**From:** Thomas Gruber [REDACTED]  
[REDACTED] June 27, 2016 1:19 PM  
**To:** Stolzenberg Eric [REDACTED]