NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division Washington, D.C. 20594

June 1, 2012

Voyage Data Recorder Factual Report

By Christopher Babcock

1. EVENT SUMMARY

Location: Bayport, Texas
Date: October 29, 2012

Vessels: M/V MSC Nederland (IMO 8918954) & M/V Elka Apollon (IMO 9299111)

NTSB Number: DCA12FM002

On October 29, 2011, about 0905 Central Daylight Time (CDT)¹, the 777-foot Panamanian flagged container vessel *MSC Nederland* and the 799-foot Greek flagged chemical tanker *Elka Apollon* collided at a point in the Houston ship channel referred to as Five Mile, Bayport, Texas. Both ships sustained hull damage and the *MSC Nederland* lost three containers which landed on the forward deck of the *Elka Apollon*. Both vessels were equipped with a Voyage Data Recorder (VDR). The data from both recorders were recovered and transported to the National Transportation Safety Board's Vehicle Recorder Laboratory for evaluation.

2. GROUP

A group was convened on January 24, 2012.

Chairman: Christopher Babcock

Vehicle Recorder Specialist

National Transportation Safety Board

Member: Captain Rob Jones

Marine Safety Investigator

National Transportation Safety Board

Member: Lieutenant Edward Lacy

Investigating Officer

United States Coast Guard

Member: Captain Robert Hanson

Marine Safety Investigator

Cheryl K

Member: Captain Dean Kutz

Director of Safety

Mediterranean Shipping Company

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¹ All times refer to local CDT

Member: Captain Konstantinos Tsartsaris

Operations Manager

European Product Carriers

Member: Captain Robert Thompson

Presiding Officer

Houston Pilot's Association

3. DETAILS OF INVESTIGATION

According to Chapter 5 of the International Convention for Safety of Life at Sea (SOLAS) Regulation 20, ships constructed after July 2002 must be equipped with a VDR. Ships larger than 20000 gross tons constructed prior to July 2002 must be equipped with a Simplified VDR (SVDR). Constructed in 2005, the *Elka Apollon* was equipped with a Broadgate Systems G2 VDR. Constructed in 1992, the *MSC Nederland* was equipped with a Broadgate Systems G2S SVDR. Table 1 shows the different requirements for the VDR and SVDR.

Table 1. VDR and SVDR inputs.

Input	VDR	SVDR
Date and Time	Х	X
Position	X	X
Speed	X	X
Heading	X	X
Bridge Audio	X	X
Communications Audio	X	X
Radar Image	X	X
AIS		If no radar interface available
IMO Bridge Alarms	X	
Rudder Order/Response	X	
Engine Order/Response	X	
Hull Opening Status	X	> If IEC 61162 interface is available
Watertight Door Status	X	> II IEC 01 102 Interface is available
Acceleration Hull Stress	If fitted	
Wind Speed/Direction	X	
Echo Sounder	X	J

^a IEC 61162: Maritime Navigation and Radiocommunication Equipment and Systems

Both SVDR and VDR units are required to store the last 12 hours of bridge audio, radar, and parametric data. Means must also "be provided whereby recorded data may be saved after an incident with minimal interruption to the recording process."²

3.1. Elka Apollon VDR Contents

The VDR aboard the *Elka Apollon* stored 12 hours of data. Five audio tracks from microphones located on and around the bridge were recorded: one track of VHF radio communications from the main bridge console VHF radio, one track of bridge audio mixed from microphones located above the port side bridge console and RPC station, one track of audio mixed from microphones located at the starboard side bridge console and GMDSS console, one track of VHF communication from the GMDSS radio, and one track of audio mixed from microphones located on the port and starboard bridge wings. The

² IMO Assembly Resolution A.861 (20) Performance Standards for Shipborne Voyage Data Recorders

bridge audio ranged from fair to good quality.³ A transcript was prepared for the time period surrounding the accident and is included as an attachment to this report.

The VDR performance standard requires engine RPM order and response to be recorded as well as post-display selection radar imagery, however no information about engine operation or radar imagery was present on the VDR dataset from the *Elka Apollon*. Additionally, "RCS Failure" and "Steering Gear – Low Oil Level" alarms were present for the duration of the 12 hour recording.

3.2. MSC Nederland VDR Contents

The SVDR aboard the *MSC Nederland* stored 12 hours of data. Four audio tracks from the VHF radios and microphones located in and around the bridge were recorded: one track of bridge audio mixed from microphones located above the port radar console and chart table, one track of bridge audio mixed from microphones located above the helm station and GMDSS area, one track of bridge audio mixed from microphones located at the port and starboard bridge wings, and one track of VHF audio communications recorded from the DEBEG 6348 VHF radio on the bridge. The bridge audio ranged from fair to good quality. A transcript was prepared for the time period surrounding the accident and is included as an attachment to this report.

3.3. Timing and Correlation

Timing on the audio transcript was established using the GPS timestamp in the file name of each audio file. Timing on the parametric data was established from the timestamp provided with each NMEA sentence. This timestamp was compared with the ZDA time and date sentence sent from the GPS unit aboard each ship and was found to match for both ships.

3.4. Plot Description

Figure 1 shows a plot of relevant data from the *Elka Apollon* surrounding the time of the accident. Figure 2 shows a plot of relevant data from the *MSC Nederland* surrounding the time of the accident.

3.5. Crew Review of Transcript

As part of the Safety Board investigation, the crew involved was offered an opportunity to review the group transcript. As of this publication date, no response has been received.

Christopher Babcock Aerospace Engineer Vehicle Recorder Division

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³ See attached audio quality scale

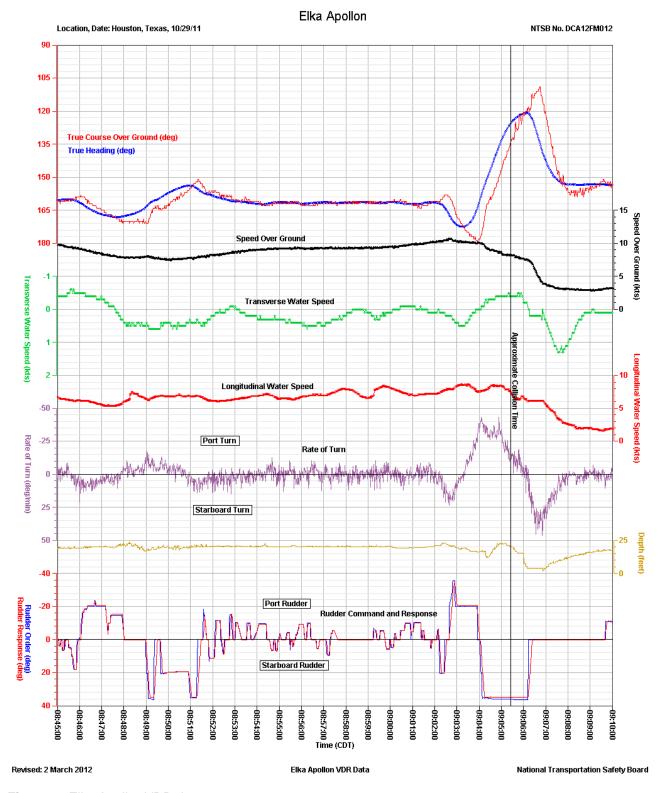


Figure 1. Elka Apollon VDR data.

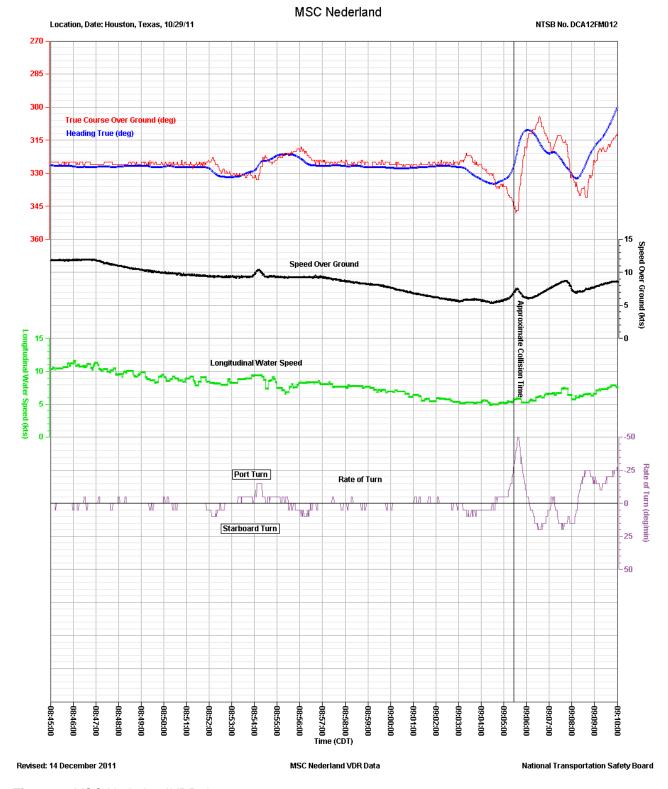


Figure 2. MSC Nederland VDR data.

Audio Quality Rating Scale

The levels of recording quality are characterized by the following traits of the voyage recorder information:

Excellent Quality

Virtually all of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate only one or two words that were not intelligible. Any loss in the transcript is usually attributed to simultaneous bridge/radio transmissions that obscure each other.

Good Quality

Most of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate several words or phrases that were not intelligible. Any loss in the transcript can be attributed to minor technical deficiencies or momentary dropouts in the recording system or to a large number of simultaneous bridge/radio transmissions that obscure each other.

Fair Quality

The majority of the crew conversations were intelligible. The transcript that was developed may indicate passages where conversations were unintelligible or fragmented. This type of recording is usually caused by bridge noise that obscures portions of the voice signals or by a minor electrical or mechanical failure of the VDR system that distorts or obscures the audio information.

Poor Quality

Extraordinary means had to be used to make some of the crew conversations intelligible. The transcript that was developed may indicate fragmented phrases and conversations and may indicate extensive passages where conversations were missing or unintelligible. This type of recording is usually caused by a combination of a high bridge noise level with a low voice signal (poor signal-to-noise ratio) or by a mechanical or electrical failure of the VDR system that severely distorts or obscures the audio information.

Unusable

Crew conversations may be discerned, but neither ordinary nor extraordinary means made it possible to develop a meaningful transcript of the conversations. This type of recording is usually caused by an almost total mechanical or electrical failure of the VDR system.

Voyage Data Recorder Transcript

A full transcript from 0844 to 0910 was prepared for the bridge audio from the *MSC Nederland*. A full transcript from 0844 to 0906 was prepared for the bridge audio from the *Elka Apollon*. The following transcript is in a three-column format with the bridge audio from the *MSC Nederland* in the left column, VHF communication in the center column, and bridge audio from the *Elka Apollon* in the right column.

LEGEND

CAPT	Voice identified as the master
DECK	Voice of unidentified deck officer
HELM	Voice identified as the helmsman

OOW Voice identified as the officer of the watch

CP Voice identified as the conning pilot aboard the *Elka Apollon*NCP Voice identified as the non-conning pilot aboard the *Elka Apollon*

PILOT Voice identified as the pilot aboard the MSC Nederland

Voice identified as the second officer aboard the Elka Apollon

RANGER VHF radio transmission from the Ranger
PADDY VHF radio transmission from the Paddy
NU VHF radio transmission from the Uncle Nu
LEROY VHF radio transmission from the Leroy
VHF radio transmission from the Mr. Earl

? Unidentified voice
* Unintelligible word
@ Non-pertinent word
[] Editorial insertion

Note 1: Times are expressed in Central Daylight Time (CDT).

Note 2: A non-pertinent word, where noted, refers to a word not directly related to the operation, control or condition of the vessel.

Elka Apollon Bridge Audio

08:44:13 START OF TRANSCRIPT

08:44:30

CP slow ahead.

08:44:31

CREW slow ahead.

08:44:40

PILOT good morning @ [first name]. good morning @ [first name]. how're you

doing?

08:44:47

PILOT think I called you @ [first name]day before yesterday. I knew who I was talking to I was just looking at the sheet wondering where I was gonna meet @ [first name]. sorry about that.

08:44:54

08:44:56

? *

08:44:59

CP dead slow ahead.

08:45:00

CREW dead slow ahead.

08:45:00

PILOT oh okay. [sound of laughter]

VHF Ship-to Ship Communication MSC Nederland Bridge Audio

Elka Apollon Bridge Audio

08:45:06

PILOT I was gonna be turning in to Bayport here shortly I didn't know if you wanted to try to get close to that wide body ahead of you or if you want me to try to go in between you and him. I can do whatever you want there @ [first name]. I can slow her down some more or I can kind of keep it running hot until the last minute.

08:45:28

PILOT you bet. I'll just keep running her easy and be turning in behind you.

08:45:37

CP one six two.

08:45:39

HELM one six two.

08:45:43

PILOT [sound of laughter] well I'll just **.

08:45:51

PILOT * well I'll plan on running her easy and making sure you get on through before I make that turn. I may be meeting you close to the turn or at the turn but I'll make sure you get on through.

08:46:01

08:46:05

PILOT yeah I'll just be close to you you know? how's that sound? okay?

MSC Nederland Bridge Audio

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

08:46:19

LEROY Captain Leroy to the outbound ship uh

just above the dredge * at Five Mile.

08:46:26

CP go ahead with the Captain Leroy.

08:46:29

Captain Leroy back. yeah I'm inbound with a bulk of * right behind the first ship. * over here on the red side to try to cool her off uh give you time to get

through there.

08:46:41

CP okay appreciate it. see you on one on

your side.

08:46:45

LEROY alright. sure appreciate it * Captain

Leroy.

08:46:46

PILOT slow ahead.

08:46:47

OOW slow ahead.

08:46:55

OOW slow ahead.

08:46:56

PILOT thank you.

08:47:06

CP steady as she goes.

MSC Nederland Bridge Audio

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

08:47:08

HELM steady as she goes.

08:47:46

CP full ahead.

08:47:47

CREW full ahead.

08:47:58

CP midships.

08:47:59

HELM midship.

08:48:02

PILOT good morning Ranger. see you on

one.

08:48:05

RANGER you bet @ [first name]. see you on

one.

08:48:07

PILOT one whistle.

08:48:23 **.

08:48:41

08:48:59

CP starboard twenty.

08:49:01

HELM starboard twenty.

Elka Apollon Bridge Audio

08:49:05

CP hard starboard.

08:49:06

HELM hard starboard.

08:49:09

? yeah roger Mr. Earl.

08:49:20

CP midship.

08:49:22

HELM midship.

08:49:39

CP starboard twenty.

08:49:40

HELM starboard twenty.

08:50:07

20 [discussion between master and 2nd mate

regarding underway navigation lasting 65

seconds, in Greek]

08:50:55

CP starboard twenty.

08:50:57

HELM starboard twenty.

08:50:58

CP hard starboard.

08:50:58

HELM hard starboard.

MSC Nederland Bridge Audio

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

08:51:16

PADDY Paddy southbound going to Bayport flare * I'm making a turn outbound. Paddy.

08:51:17

CP midship.

08:51:18

HELM midship.

08:51:23

CP steady one six one.

08:51:25

HELM steady one six one.

08:51:27

[unintelligible conversation between conning and non-conning pilots]

08:51:35

NCP I'm on a big time work out. I'm losing weight right now.

08:51:38

CP I got ya. me too.

08:51:41

NCP no your not. [sound of laughter]

08:51:42

CP [sound of laughter] I'm on a seafood diet.

08:51:42

PILOT starboard ten.

08:51:44

HELM starboard ten.

Elka Apollon Bridge Audio

08:51:46

NCP I can eat anything I want the rest of my life

including now.

08:51:53

PILOT starboard twenty.

08:51:54

HELM starboard twenty.

08:52:03

PILOT midship.

08:52:03

HELM midship.

08:52:17

PILOT port ten.

08:52:18

HELM port ten.

08:51:53

[unintelligible conversation between conning and non-conning pilots]

08:52:03

NCP ** and I'm down to two hundred I want to

get down to one eighty.

08:52:12

NCP **

08:52:16

CP I need to get **.

08:52:20

NCP I've been doing— I've been doing real

good on my own.

08:52:23

[unintelligible conversation between conning and non-conning pilots]

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Elka Apollon Bridge Audio

08:52:27

PILOT midship.

08:52:27

HELM midship.

08:52:30

NCP well I lost five pounds in seven days. **.

08:52:35

[conversation regarding diet and workout continues lasting 80 seconds]

08:53:39

[unintelligible conversation between crew]

08:53:59

EARL Mr. Earl's outbound one empty coming

out of Bayport-- approaching the Bayport flare be turning outbound. Mr.

Earl.

08:54:06

PILOT starboard ten.

08:54:07

HELM starboard ten.

08:54:11

PILOT starboard twenty.

08:54:12

HELM starboard twenty.

08:54:11

NCP this girl I've been seeing wants to meet

down there.

08:54:15

NCP she's teaching. she's going down there in

the summer. getting a house and ***.

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MSC Nederland Bridge Audio VHF Ship-to Ship Communication Elka Apollon Bridge Audio

08:54:20

PILOT ease to ten.

08:54:21

HELM easy to ten.

08:54:27

PILOT midship.

08:54:28

HELM midship.

08:54:25

CP is that the twenty-seven year old?

08:54:27

NCP um-hum.

08:54:28 CP #.

08:54:30

20 do you want to have someone go down to

eat? [in Greek]

08:54:32 CREW *.

08:54:33

do you want to have someone go down to 20

eat? [in Greek]

08:54:37 CREW **.

08:54:46

PILOT starboard ten.

08:54:47

HELM starboard ten.

08:54:53

CP hey come in @ [first name]. @ [last

name].

MSC Nederland Bridge Audio

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

08:54:56

PILOT hey good morning @ [first name]. see

you on one.

08:54:58

CP I'm just checking to see what you

wanted to do. I've got this thing wound up but it's on this computer. so by the time I get to Galveston it might be full

ahead.

08:55:06

PILOT okay. roger that. we've got maybe--

close to turn * we'll keep well out of

your way on that one.

08:55:11

CP okay. if it looks different just holler

we'll do something else **.

08:55:17 08:55:17

PILOT okay thank you. NCP we're up to about seventy now on our way

up to eighty five...see what I'm talking

about?

08:55:21

CP yeah. oh yeah.

08:55:22

08:55:28

NU Uncle Nu to that double wide tow

coming out of Bayport.

08:55:31

Elka Apollon Bridge Audio

08:55:43

CP **.

08:55:53

CP ** got a new name *.

08:55:56

NCP probably opened that.

08:55:57

CP ah they opened it.

08:55:58

NCP * everybody calls me crazy of course

08:56:02

CP alright.

08:56:03

NCP [sound of laughter]

08:56:03

NCP *.

08:56:05

CP I played rock for a while.

08:56:07

NCP yeah yeah and my Continental Airlines

buddy @ [name] he likes to go there. always feel like I need to shower couple

times after I leave there.

08:56:07

EARL Mr. Earl to the Paddy *

08:56:08

PILOT midship.

08:56:09

HELM midship.

MSC Nederland Bridge Audio VHF Ship-to Ship Communication Elka Apollon Bridge Audio 08:56:10 **PADDY** Paddy Cenac to the Mr. Earl. 08:56:11 **EARL** you got 'em all cooled off yet? 08:56:14 **PADDY** yeah we're running slow right now babe. ***. 08:56:16 PILOT port ten. 08:56:17 **HELM** port ten. 08:56:18 **CP** *. 08:56:21 **EARL** alright you are going to go in behind him though. 08:56:24 СР been years since I've been there. 08:56:25 NCP got a new crop now.

08:56:27

PILOT midship.

08:56:28

HELM midship.

08:56:27

CP yup.

08:56:29

CP **.

Elka Apollon Bridge Audio

08:56:33

NCP un-huh.

08:56:37

CREW **.

08:56:39

CP need any help with that?

08:56:40

08:56:43

NCP * as old as I am.

08:56:48 ******.

08:56:53

PILOT dead slow ahead.

08:56:54

OOW dead slow ahead.

08:56:57

CP * getting anything *.

08:57:00

NCP *.

08:57:01

OOW dead slow ahead.

08:57:23

PILOT what's your heading?

08:57:24

HELM three two six now.

MSC Nederland Bridge Audio VHF Ship-to Ship Communication Elka Apollon Bridge Audio

08:57:25

PILOT let's make it steady on three two

seven.

08:57:27

HELM three two seven steady.

08:57:33

[radio crosstalk from other ship in vicinity]

08:57:41

[conversation obscured by radio crosstalk]

08:57:50

[unintelligible conversation between crew]

08:58:03

[unintelligible conversation between crew]

08:58:10

[unintelligible conversation between crew]

08:58:29

PILOT ahh captain probably we got about oh

twenty to thirty minutes for the

tugboat.

08:58:32

CAPT okay thank you.

08:58:33

[unintelligible conversation between crew]

08:58:34

PILOT and whenever we can get the bow thruster available.

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Elka Apollon Bridge Audio

08:58:35

CAPT just now I prepared it.

08:58:37

PILOT okay very good.

08:58:39

CAPT *.

08:58:40

PILOT okay

08:58:40

CAPT **.

08:58:42

PILOT okay very good.

08:59:11

? there's more tows out here than you can shake a stick at.

08:59:13

NCP my problem is I have to find a place to * it

in.

08:59:17

* when you're coming up and see a string

coming ** don't wany any tugboats *.

08:59:21

NCP [sound of laughter]

08:59:23

PILOT stop engine.

08:59:24

OOW stop engine.

Elka Apollon Bridge Audio

08:59:25

CP I don't know where he's gonna turn in at.

08:59:27

NCP right on our stern.

08:59:28

CP no way @ [first name] back there.

08:59:30

NCP can't make it.

08:59:42

08:59:31

NCP I guess we're gonna leave that to him.

08:59:44

08:59:41

PILOT captain?

08:59:45

CAPT *.

08:59:45

PILOT the two outbounders-- the first two outbounders we're ** let them clear. we're gonna turn after the blue hulled ship. okay. I just want to let you know. okay?

08:59:54

CAPT * two two vessels.

MSC Nederland Bridge Audio

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

[sound of three beeps]

08:59:56

PILOT the two vessels and then we'll turn

close to the stern of the second one okay?

08:59:59

CAPT I understand. roger.

0.00.00

09:00:03

PILOT port ten.

09:00:04

HELM port ten.

09:00:10

PILOT good morning @ [first name] see you

on one.

09:00:18

? roger @ [first name] see you on one.

09:00:19

PILOT one whistle thank you.

09:00:20

08:59:59

CAPT **.

09:00:22

NCP hmm?

09:00:22

CAPT **.

09:00:24

NCP I got her.

09:00:28

CP *

Elka Apollon Bridge Audio

09:00:29

20 tug.

09:00:31

NCP **.

09:00:34

NCP we can go diving *.

09:00:37

CP **.

09:00:39

NCP keep the carbs down. **. worked out like a

#. [sound of laughter]

09:00:50

CP what're you doing with your b--

boys...girls? you're not having to take care

of them like you used to?

09:00:57

NCP ** dad **.

09:00:59

PILOT midship.

09:01:00

HELM midship.

09:01:01

CP ** history. I hear that. *.

09:01:08

CP ya'll work out how to take care of the kids

though.

Elka Apollon Bridge Audio

09:01:11

NCP

yeah I mean we're gonna we're gonna have a standard custody agreement but I'm gonna see them every every time I want. she can *. she # around on me big time. * can pick up the boys every day if I want to.** as soon as possible.

09:01:33

PILOT @ [name].

09:01:34

NCP ***.

09:01:41

NCP ***

09:02:10

CP starboard twenty.

09:02:11

HELM starboard twenty.

09:02:25

CP midship.

09:02:26

HELM midship.

09:02:37

CP port twenty.

09:02:39

HELM port twenty.

09:02:46

CP hard port.

Elka Apollon Bridge Audio

09:02:47

09:02:54

09:02:55

CP

HELM hard port.

port twenty.

HELM port twenty.

09:02:51

PILOT starboard twenty.

09:02:53

HELM starboard twenty.

09:02:54

PILOT dead slow ahead.

09:02:55

OOW dead slow ahead.

09:03:00

OOW dead slow ahead.

09:03:14

hey uh come in Paddy Cenac. CP

09:03:17

PADDY Paddy.

09:03:19

09:03:20

hey Paddy be alright to slip by on two? CP

09:03:20

PILOT midship. PADDY yeah bring it on.

09:03:21

HELM midship.

09:03:23

alright appreciate it. Uncle Nu? can I CP

get by you on two?

MSC Nederland Bridge Audio

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

09:03:28

NU yeah roger on two.

09:03:31

CP * appreciate it.

09:03:39

CP roger he's still coming in to it.

09:03:41

CP Mr. Earl don't squeeze over here. I'm

getting ready to— my stern's getting

ready to come your direction.

09:03:48

EARL right yeah squeezing over.

09:03:48

PILOT stop engine.

09:03:49

OOW stop engine.

09:03:54

CP midship.

09:03:55

HELM midships.

09:04:02

CP starboard twenty.

09:04:03

PILOT port twenty.

09:04:04

HELM starboard twenty.

Elka Apollon Bridge Audio

09:04:04

NCP I don't know what he's thinking @ [first

name].

09:04:05

HELM port twenty.

09:04:06

CP hard starboard.

09:04:07

HELM hard starboard.

09:04:11

PILOT hard to port.

09:04:12

HELM hard to port.

09:04:13

NCP way over here.

09:04:14

CP I know it.

09:04:16

EARL yeah ship ahh we're not looking to good there buddy.

09:04:16 CP

getting ready to hit us.

09:04:19

PILOT dead slow ahead.

09:04:20

OOW dead slow ahead.

09:04:23

09:04:23

I don't know why you come over here **NCP** CP

I can't look through the doors.

with me. **.

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Elka Apollon Bridge Audio

09:04:25

OOW dead slow ahead.

09:04:28

CP hey @ [first name] can you kick up *.

getting ready to come at you.

09:04:34 09:04:34

PILOT slow ahead. CAPT he's going to send us without blessings [in

Greek]

09:04:35

OOW slow ahead.

09:04:36

PILOT midship. NCP I don't (think/know) if you ever touched or

not.

09:04:37

HELM midship.

09:04:38

09:04:38

PILOT half ahead.

09:04:39

OOW half ahead.

09:04:40 09:04:40

PILOT @ [first name] I * see you on two. CAPT emergency full ahead.

09:04:41

09:04:42

? roger on that.

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MSC Nederland Bridge Audio VHF Ship-to Ship Communication Elka Apollon Bridge Audio

09:04:43

PILOT full ahead.

09:04:44

OOW full ahead.

09:04:47

CP not good.

09:04:49

CAPT full ahead emergency.

09:04:50

CAPT full ahead.

09:04:51

? cut her way back @ [first name] **.

09:04:52

* oooh.

09:04:55

PILOT hard to port.

09:04:56

hard to port. [several people]

09:04:58

PILOT full ahead emergency sea speed.

09:04:59

? full ahead.

09:04:56

CAPT @ [last name] stand by **.

09:04:59

CP *board anchor. drop the starboard anchor.

09:05:01

CAPT starboard anchor [in English] go [in Greek].

*.

Elka Apollon Bridge Audio

09:05:03 **CAPT** full emergency power * power *. 09:05:08 PILOT sound collision sound collision. 09:05:11 09:05:12 **PILOT** sound collision captain. 09:05:13 09:05:14 [crew communication in Russian] 09:05:19 **CAPT** number two. 09:05:20 ? number two. 09:05:20 **CAPT** number two. [Russian] 09:05:26 [sound of scraping] 09:05:27

CAPT ***.

09:05:07 CAPT # [in Greek] 09:05:17

Elka Apollon Bridge Audio

09:05:27

PILOT midship the wheel.

09:05:30

CP #.

09:05:31

CAPT oooh.

09:05:32

HELM #.

09:05:34

? *:

09:05:35

[sound similar to alarm tone]

09:05:39

PILOT hard to starboard.

09:05:40

HELM hard to starboard.

09:05:35

CP * hardover. * nothing.

09:05:36

NCP couldn't do nothing.

09:05:39

CP stop the engine.

09:05:40

NCP #.

09:05:40

CAPT stop the engine.

09:05:42

[sound similar to EOT]

09:05:44

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09:05:51

[sound similar to intermittent alarm tones]

09:05:53

CP * fine captain.

09:06:01

[multiple people talking at once]

09:06:02

CAPT ***.

09:06:03

NCP ** I don't know if we even touched him. I

can't tell.

09:06:06

CAPT what about speed Mr. Pilot?

09:06:06

CREW what is happening? [new voice, in Greek]

09:06:08

? **

09:06:08

PILOT what's the engine revs captain? what's the engine revs?

09:06:08

CAPT stop talking. [in Greek]

09:06:09

CP stop engine.

09:06:10

CAPT stop the engine.

09:06:11

CP rudder midship.

09:06:12

HELM rudder midship.

09:06:12

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09:06:12

CAPT stop stop. * it's coming.

09:06:13

PILOT very good. on full ahead?

09:06:15

*. captain uh...the rudder didn't respond at all. the other one is going to hit the barge

[in Greek]

09:06:16

? *

09:06:18

CAPT on the starboard bow.

09:06:19

PILOT very good.

09:06:22

PILOT are we on full ahead captain?

09:06:22

CREW what do you mean the rudder didn't respond. [in Greek, same voice who asks

"what's happening?"]

09:06:23

CAPT full ahead.

09:06:24

PILOT yeah.

09:06:25

CAPT **.

09:06:26

PILOT midship the wheel.

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09:06:27

HELM midship the wheel.

09:06:29

[Russian over UHF]

09:06:32

? **

09:06:46

PILOT starboard twenty.

09:06:48

HELM starboard twenty.

09:06:49

? ^^

09:06:29

CP [unintelligible conversation between

conning and non-conning pilots]

09:06:35

CP midship.

09:06:36

HELM rudder midship.

09:06:40

CP who's on that ** ship I'm getting ready to

meet.

09:06:44

NCP hang on.

09:06:45

CREW he's going to make us crazy. now we're

going to see our faces on glass [tv]. [in

Greek]

09:06:50

END OF TRANSCRIPT

09:06:53 ***

09:06:59

09:06:59

PILOT midship.

09:07:00

HELM midship.

09:07:01

PILOT starboard twenty.

09:07:02

HELM starboard twenty.

09:07:08

09:07:09

PILOT are we on half ahead or full ahead right now captain?

09:07:10

HELM starboard twenty.

09:07:11

CAPT now full ahead. full ahead maneuvering revolutions.

09:07:14

PILOT let's go half ahead captain.

09:07:15

CAPT half ahead.

Elka Apollon Bridge Audio

09:07:16 PILOT yep. 09:07:16 [sound similar to quacking] 09:07:20 **PILOT** midship the wheel. 09:07:21 **HELM** midship the wheel. 09:07:22 [sound similar to quacking] 09:07:26 [unintelligible conversation] 09:07:30 Elka Apollon. ? 09:07:31 the Elka Apollon *. 09:07:33 **PILOT** hard to port. 09:07:34 **HELM** hard to port. 09:07:41 [alarm tone ends] 09:07:57 **PILOT** slow ahead. 09:07:58

OOW slow ahead.

Elka Apollon Bridge Audio

09:08:03

PILOT bow full to port.

09:08:07

CAPT bow bow bow.

09:08:09

PILOT bow full to port captain.

09:08:10

CREW bow full to port captain.

09:08:14 •**.

09:08:20

PILOT stop the bow.

09:08:21

CREW stop the bow.

09:08:22

PILOT half ahead.

09:08:23

CREW half ahead.

09:08:25

CREW half ahead.

09:08:30

CREW half ahead now.

09:08:33

PILOT midship the wheel.

09:08:34

HELM midship the wheel.

MSC Nederland Bridge Audio V

VHF Ship-to Ship Communication

Elka Apollon Bridge Audio

09:08:38

CAPT chief ***.

09:08:46

CP yeah come in @ [first name].

09:08:46

CREW **.

09:08:47

PILOT @ [first name] everybody okay on

board there?

09:08:49

CP yes everything's fine. I'll talk to you in

a little bit when we get out of this

mess. **.

09:08:53

PILOT **.

09:08:55

CP roger.

09:09:10

PILOT port twenty.

09:09:11

HELM port twenty.

09:09:24

PILOT captain do we have a hole? everything

okay? is there--.

09:09:26

CAPT ***.

Elka Apollon Bridge Audio

09:09:29

PILOT let me know what we got going on

captain.

09:09:31

CAPT okay.

09:09:31

PILOT we're going to continue on for now

with our transit but let me know of any

damage captain okay?

09:09:35

CAPT okay will do. this is the rescue boat

now overboard.

09:09:39

PILOT the rescue boat? okay.

09:09:41

PILOT is everybody okay on board captain?

no injuries?

09:09:44

PILOT no injuries at all captain?

09:09:46

CAPT no.

09:09:46

PILOT okay.

09:09:47

CREW ***.

09:09:49

[UHF conversation between captain

and crew

MSC Nederland Bridge Audio VHF Ship-to Ship Communication Elka Apollon Bridge Audio

09:10:08

PILOT port ten

09:10:09

HELM port ten.

09:10:14

PILOT slow ahead.

09:10:16

CREW slow ahead.

09:10:16

CREW slow ahead.

09:10:18

END OF TRANSCRIPT