



# Oil Companies International Marine Forum

## MTIS Programme

### Terminal TPQ

**Terminal TPQ: REPSOL BUTANO**

ReportName 6532f7b3-d26b-4bb2-83fd-f49ef9dd68de

**Terminal Name: REPSOL BUTANO**

**Terminal Port: PUERTO DE CARTAGENA.**

**Terminal Port Authority: AUTORIDAD PORTUARIA DE  
CARTAGENA (APC).**

**Country: Spain**

12 November 2015

## 1 General

1.1	Date this TPQ document was completed/updated	26 June 2014
1.2	Specify units used	Metres and Metric Tonnes

## 2 Port Details

2.1	Port Name	PUERTO DE CARTAGENA.
2.2	UN LOCODE	escar
2.3	Country	Spain
2.4	Latitude and Longitude of Port	
1	Latitude	373403 North
2	Longitude	0005707 West
2.5	Is this location affected by ice?	No
2.6	Name of port authority	AUTORIDAD PORTUARIA DE CARTAGENA (APC).
2.7	Port authority contact name and title	JAVIER DELGADO TRAPIELLA, JEFE DE DIVISIÓN OPERACIONES PORTUARIAS.
2.8	Port authority full style contact address	
1	Address Line 1	PLAZA HEROES DE CAVITE, S/N.
2	Address Line 2	N/A.
3	Address Line 3	N/A.
4	City	CARTAGENA..
5	County/State	SPAIN.
6	Postcode/Zipcode	30.201
7	Phone	34968325800
8	Fax	34968325824
9	Email	JDELGADO@APC.ES
10	Website	WWW.APC.ES

## 3 Terminal Details

3.1	Terminal name	REPSOL BUTANO
3.2	Terminal owner	APC.
3.2	Number of berths included in this TPQ	3
3.3	Name of first point of contact for terminal owner	JAVIER DELGADO TRAPIELLA.
3.4	Terminal owner full style contact address	
1	Address Line 1	PLAZA HEROES DE CAVITE, S/N
2	Address Line 2	N/A
3	Address Line 3	N/A
4	City	CARTAGENA
5	County/State	SPAIN

6	Postcode/Zipcode	30.201
7	Phone	34968325800
8	Fax	34968325824
9	Email	JDELGADO@APC.ES
10	Website	WWW.APC.ES
3.5	Terminal operator, if different from owner	REPSOL BUTANO
3.6	Name of first point of contact for terminal operator	DAVID VEGANZONES BAYÓN
3.7	Terminal operator full style contact address	
1	Address Line 1	VALLE DE ESCOMBRERAS S/N
2	Address Line 2	N/A
3	Address Line 3	N/A
4	City	CARTAGENA
5	County/State	SPAIN
6	Postcode/Zipcode	30.350
7	Phone	34968167702
8	Fax	34968167197
9	Email	dveganzonesb@repsol.com
10	Website	www.repsol.com

#### 4 TPQ Accountability

4.1	Name and title of person completing this TPQ	DAVID VEGANZONES BAYÓN
4.2	Full style contact details of person completing this TPQ	
1	Address Line 1	VALLE DE ESCOMBRERAS, S/N
2	Address Line 2	N/A
3	Address Line 3	N/A
4	City	CARTAGENA
5	County/State	SPAIN
6	Postcode/Zipcode	30.350
7	Phone	34968167702
8	Fax	34968167197
9	Email	dveganzonesb@repsol.com

#### 5 Port Facility Security Officer Details

5.1	Does the port facility comply with the ISPS code?	
1		Yes
2	Port Facility Security Officer contact name	DAVID VEGANZONES BAYÓN
5.2	Port Facility Security Officer full style contact details	
1	Address Line 1	VALLE DE ESCOMBRERAS, S/N
2	Address Line 2	N/A
3	Address Line 3	N/A
4	City	CARTAGENA

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5	County/State	SPAIN
6	Postcode/Zipcode	30.350
7	Phone	34968167702
8	Fax	34968167197
9	Email	DVEGANZONESB@REPSOL.COM

## 6 Operational Integrity Details

6.1	State details of any pre-arrival/operational clearance formalities for vessels	Confirm vessel acceptability by Repsol Vetting.
6.2	Has the terminal completed an assessment using the standard industry process?	
1		Yes
2	If 'Yes', state date completed	08 November 2012
6.3	Additional comments or information	None



# Oil Companies International Marine Forum

## MTIS Programme

### Berth TPQ

**Berth TPQ: E014**

ReportName 9904048c-39a4-47b2-973f-56c97fb3f23a

**Terminal Name: REPSOL BUTANO**

**Terminal Port: PUERTO DE CARTAGENA.**

**Terminal Port Authority: AUTORIDAD PORTUARIA DE  
CARTAGENA (APC).**

**Country: Spain**

**Berth Name: E014**

12 November 2015

## 1 Berth General

1.1	Berth name or number	E014
1.2	Berth type	
1		Wharf or Quay
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373358 North
2	Longitude	0005731 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO, REPSOL BUTANO.
1.5	Has a structural survey of the berth been undertaken, including its underwater structure?	
1		No
2	If 'Yes', state date of last survey	
1.6	Has an engineering (mooring and fendering) analysis of berth been undertaken?	
1		No
2	If 'Yes', state date of last analysis	
1.7	Additional comments or information	None

## 2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No exceptions.
2.2	State distance from pilot station(s) to berth	No exemptions
2.3	Is a waiting anchorage available?	
1		Yes
3	If 'Yes', state distance from waiting anchorage to berth	From 3 to 6 miles.
2.4	Controlling depth of water for transit to and from berth	
1	Water depth	11.10 Metres
2	State datum used	
3	If 'Other' please specify datum	
2.5	Date of latest survey from which transit depth has been determined	31 March 2014
2.6	Date next survey is due	31 March 2016
2.7	State Maximum Tidal Range in berth approaches	0.30
2.8	Is laden transit to and/or from the berth conducted using the tide?	
1		No
2	If 'Yes', state optimum transit window (i.e. at High Water, HW +/- 1 hr)	
2.9	State details of any specific berthing and/or unberthing restrictions	Not applicable.

2.10	Minimum under keel clearance (UKC) in berth approaches	
1	Value	0.60 Meters
2	Percentage	5.80 Vessel static draft
3	Specify other UKC criterion where applicable	None.
2.11	Absolute maximum draught in berth approaches, if applicable	10.50
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	999.00 Metres
2	State datum used	
3	If 'Other' specify other datum used	
4	Further details	Not applicable.
2.13	Does the port require tankers and gas carriers to be escorted by tugs?	
1		Yes
2	If 'Yes', state whether Active or Passive escort is employed and the maximum towline force that the tug is able to generate	Active, 60 mt.

2.14 Additional comments or information

### 3 Water Depth Alongside

3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	11.10 Metres
2	State datum used	Chart Datum (CD)
3	If 'Other' specify datum	
3.2	Date of latest survey from which alongside depth has been determined	31 March 2014
3.3	Date next survey is due	31 March 2016
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.30 Meters
2	Percentage	2.90 Vessel static draft
3	Specify other UKC criterion where applicable	None.
3.5	State range of water densities at berth	
1	From	1025.00
2	To	1028.00
3	Further details	Us ordinary survey practice.
3.6	Type of bottom alongside berth	
1		Mud
2	If 'Other' please specify	
3.7	Absolute maximum draft alongside, if applicable	10.50
3.8	State maximum tidal range at berth, if applicable	0.30
3.9	Are 'over-the-tide' cargo handling operations permitted at the berth?	No
3.10	Does the berth location experience water-level anomalies?	

1		No
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2	Provide details	
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### 3.11 Additional comments or information

## 4 Limiting Vessel Dimensions

### 4.1 Summer deadweight

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.2 Berthing displacement

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.3 Alongside displacement

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.4 State any deadweight/displacement exceptions

1	TPQ NA Selector	No restrictions
2		No exceptions

### 4.5 Cubic capacity (gas carriers)

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Cubic metres
3	Maximum	0.00 Cubic metres

### 4.6 Length over all (LOA)

1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	230.00 Metres

### 4.7 Beam

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres

### 4.8 Minimum parallel body length (PBL)

1	TPQ NA Selector	No restrictions
2		0.00

### 4.9 Minimum PBL forward of manifold

1	TPQ NA Selector	No restrictions
2		0.00

### 4.10 Minimum PBL aft of manifold

1	TPQ NA Selector	No restrictions
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2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.13	Freeboard	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	2.40 Metres
3	Maximum	18.80 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4	Specify whether height is from the deck or the drip tray	No restrictions. As per OCIMF
4.17	Manifold spacing	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.18	Maximum air draft alongside	
1	TPQ NA Selector	No restrictions
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	No restrictions
2		0.00
4.20	Additional comments or information	None

## 5 Mooring and Berthing Information

5.1	State availability and specifications of tugs and mooring craft required for berthing and/or unberthing.	<p>5 TUGS AVAILABLE</p> <p>Tug V.B. ANIBAL 5,263 HP and 57.10 MT. Lenght:29.50 m Breadth 11.00.m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT. Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT. Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT. Lenght 29.50 m Breath 11.00 m</p> <p>Tug V.B. TIRRENO 5,000 HP and 52 MT. Lenght 28.00 m Breath 11.00 m</p> <p>4 MOORING CRAFTS AVAILABLE</p> <p>AMARRE 2: 160 HP and Lenght 8.5 m</p> <p>AMARRE 3: 90 HP and Lenght 8.5 m</p> <p>AMARRE 5: 210 HP and Lenght 9.0 m</p> <p>AMARRE 6: 210HP and Lenght 9.0 m</p>
5.2	Are ship's or tug's lines used?	
1	Ship/Tug	Tug's Lines
2	Comments	As per pilot advise
5.3	Type of fenders installed at berth	
1		Cell Type
2	If 'Other' please specify	
5.4	State orientation of vessel alongside berth	Either Port & Starboard Side To
5.5	At buoy moorings, state which side hose is normally connected	
1		Not applicable
2	If 'Other' please specify	
5.6	Minimum mooring arrangement	<p>2 Headlines</p> <p>2 Forward Breastlines</p> <p>2 Forward Back-Springs</p> <p>2 Sternlines</p> <p>2 After Breastlines</p> <p>2 After Back-Springs</p>
5.7	Describe any additional mooring requirements	None.
5.8	Are there any restrictions using wire mooring ropes?	
1		No
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	Must be in good condition
5.9	Are there any restrictions using synthetic mooring ropes?	
1		No
2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	Must be in good conditiong
5.10	Are there any restrictions on using high modulus synthetic mooring ropes?	
1		No
2	If 'yes' provide details	must be in good condition
5.11	Details of any specific mooring equipment required for any vessel utilising the berth	None.

5.12	Does the terminal require the vessel to rig Emergency Towing Off Pennants (ETOPs) while at the berth?	
1		Yes
2	If 'Yes', provide details of particular requirements regarding ETOPs.	Hanging off-shore 1 or 2 meters above sea water level.
5.13	Details of any shore-provided mooring equipment	None.
5.14	Are berthing aids provided?	
1		No
2	If 'Yes', state type of aids	
5.15	State allowable speed of approach if applicable	
1		As per pilot advise.
1		0.80 Knots
5.16	Is a mooring tension monitor fitted?	No
5.17	Are mooring hook quick release arrangements provided?	Yes
5.18	Chain stopper requirements	
1	Applicable	No
2		Not an SBM
5.19	Largest ship handled at berth to date	DJANET 242 m
5.20	Additional comments or information	None.

## 6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	1 X 300 ANSI 8" LOADING ARM.
6.2	List grades handled at berth	Commercial LPG
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	BUTANE AND PROPANE.
6.3	State transfer rate restrictions and back pressure for each cargo grade	Minimum pressure at manifold 15 kg/cm <sup>2</sup> . Maximum pressure at manifold 18 kg/cm <sup>2</sup> .
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Annual testing.
6.5	State storage type for LPG	Pressurised
6.6	Describe any terminal-specific requirements for vessel manifolds	None.
6.7	Is berth fitted with a vapour manifold connection?	
1		No
2	If 'Yes' state type and size of vapour connection	
3	State cargo types for which it is required to use vapour connection (if applicable)	
6.8	State throughput rate(s) of vapour recovery system	Not applicable.
6.9	Are Powered Emergency Release Couplings (PERCS) installed to the cargo transfer arms?	

1		Yes
2	Supply details	Hydraulic system.
6.10	Does the berth have an emergency shutdown (ESD) capability that can be activated by the ship?	
1		No
2	If 'yes' provide details	
6.11	Describe access arrangements between ship and shore.	Ship and shore gangway.
6.12	Does the berth have pollution response equipment?	
1		No
2	If 'yes' provide details	
6.13	Additional comments or information	
<b>7</b>	<b>Berth Operations</b>	
7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH06 Backup by Voice
7.2	Is it required that terminal or shore representatives stay on board during operations?	
1		No
2	If 'Yes', state requirements including number of persons and their roles	
7.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth?	30 Knots for stopping Cargo 35 knots for disconnecting Arms
7.4	Are there any restrictions regarding tank cleaning/Crude Oil Washing (COW) operations at the berth?	
1		No
2	If 'Yes' provide full details of these restrictions	
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		No
2	If 'Yes', state requirements	
7.6	Is there a temperature limit for cargo handled?	
1		Yes
2	If 'Yes', state temperature limits	Minimum temperature 0° C.
7.7	Is it permitted for vessels to undertake double-banked operations alongside the berth?	
1		No
2	If 'Yes', state limiting criteria	
7.8	Is vessel required to pump water ashore or receive water on board for line clearance purposes?	
1		No
2	If 'Yes', provide operational details	
7.9	Can the berth be used for Ship-to-Ship transfers using terminal facilities?	
1		No
2	Provide details	

7.10	State details regarding any environmental restrictions applicable at the berth	None.
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		No
2	If 'Yes', state restriction	
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		No
2	If 'Yes', state restriction	
7.13	Are there any restrictions on handling stores when a ship is moored alongside berth?	
1		Yes
2	If 'Yes', state restriction	Not allowed during cargo operations.
7.14	Additional comments or information	

## 8 Available Services

8.1	Are Fuel Oil bunkers available?	
1		No
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	
8.2	Are Diesel Oil bunkers available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-barge. Not operated by Repsol.
8.3	Are Intermediate Oil bunkers available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe.
8.4	Is fresh water available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe. Not operated by Repsol.
8.5	Are slop reception facilities available?	
1		No
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	
3	State capacity of slop reception facilities (if applicable)	
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	
8.6	Are dirty ballast reception facilities available?	
1		No
2	If 'Yes', state how received	
3	State capacity of dirty ballast reception facilities	
8.7	Are engine room sludge and bilge reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-pipe, barge, truck)	Ex-barge. Not operated by Repsol.
8.8	Are garbage reception facilities available at the berth.	

1		Yes
2	If 'Yes', provide details	Containers.
8.9	Additional comments or information	

## 9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	
9.2	Which months of the year can ice be expected?	
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	
9.4	State any limitations for cargo operations in sub-zero temperatures	
9.5	State the minimum allowable ambient temperature for safe cargo operations	
9.6	State the minimum temperature of cargoes handled	
9.7	State the minimum temperature for the emergency shut-down system to operate safely	
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		
2	If 'Yes' provide details and specify how they can be requested	
9.9	Are there icebreakers available to operate in the terminal area	
1		
2	Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)	
9.10	Does the terminal have ice-capable tugs and support craft	
1		
2	Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)	
9.11	Does the terminal have specific requirements for the vessel speed and manoeuvrability characteristics in ice?	
1		
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	
1		
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	

## 10 Supplementary Information

10.1	Berth transparency	Solid wharf.
10.2	Specify datum used for height and depth measurements in this section	
1		Chart Datum (CD)
2	If 'Other' please specify other	
10.3	Berth height above datum	2.70
10.4	Berth heading	145/325

10.5	Width of the channel adjacent to the berth	400.00
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10.6	Position of mooring bollards and hooks				
	Hook/Bollard ID Number and Type	'x' dist to Fender Face (m)	'y' dist to Target Line (m)	Height (m)	SWL (tonnes)
	A(4)	-188.00	21.00	3.00	100.00
	B(4)	-148.00	21.00	3.00	60.00
	C	-68.00	2.00	3.00	61.00
	D(2)	-68.00	12.00	3.00	60.00
	E	-30.00	2.00	3.00	60.00
	F	-10.00	2.00	3.00	60.00
	G	30.00	2.00	3.00	60.00
	H	47.00	2.00	3.00	60.00
	I	65.00	2.00	3.00	60.00
	J(2)	100.00	14.00	3.00	100.00
	K(2)	135.00	8.00	3.00	100.00

10.7	Position of mooring buoys
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10.8	Fender Location					
	Fender ID Number	'x' Dist to Target Line (m)	Elevation of Fenders (m)	Fender Width (m)	Fender Height (m)	Fender Contact Area (m2)
	AA	-32.00	-1.00	2.00	3.00	6.00
	BB	-12.00	-1.00	2.00	3.00	6.00
	CC	1.00	-1.00	2.00	3.00	6.00
	DD	16.00	-1.00	2.00	3.00	6.00
	EE	31.00	-1.00	2.00	3.00	6.00
	FF	46.00	-1.00	2.00	3.00	6.00
	GG	65.00	-1.00	2.00	3.00	6.00

10.9	Fender Reaction Data
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10.10	Fender friction coefficient ( $\mu$ )
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10.11	State identity and horizontal position of loading arms					
	Loading Arm/Shore Connection ID Number	Horizontal co-ordinate X	Horizontal co-ordinate Y	Max Excursion Surge	Max Excursion Sway	Max Excursion Heave
	L1	0.10	0.10			

10.12	State loading arm operating limits					
	Loading Arm ID Number	Max Op Height	Min Op Height	Max Excursion Surge	Max Excursion Sway	Max Excursion Heave
	L1	16.70	-0.30	5.50	8.00	17.00

10.13	Additional comments or information
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# Oil Companies International Marine Forum

## MTIS Programme

### Berth TPQ

**Berth TPQ: E012**

ReportName a9063513-3067-4dce-b468-a8ca70aee10b

**Terminal Name: REPSOL BUTANO**

**Terminal Port: PUERTO DE CARTAGENA.**

**Terminal Port Authority: AUTORIDAD PORTUARIA DE  
CARTAGENA (APC).**

**Country: Spain**

**Berth Name: E012**

12 November 2015



## 1 Berth General

1.1	Berth name or number	E012
1.2	Berth type	
1		Wharf or Quay
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373357 North
2	Longitude	0005723 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO, LBC, BUNGE, ECOCARBURANTES, REPSOL BUTANO
1.5	Has a structural survey of the berth been undertaken, including its underwater structure?	
1		No
2	If 'Yes', state date of last survey	
1.6	Has an engineering (mooring and fendering) analysis of berth been undertaken?	
1		No
2	If 'Yes', state date of last analysis	
1.7	Additional comments or information	None

## 2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	NO EXEMPTIONS
2.2	State distance from pilot station(s) to berth	Approx. 3 miles
2.3	Is a waiting anchorage available?	
1		Yes
3	If 'Yes', state distance from waiting anchorage to berth	Approx. 3 miles.
2.4	Controlling depth of water for transit to and from berth	
1	Water depth	8.60 Metres
2	State datum used	
3	If 'Other' please specify datum	
2.5	Date of latest survey from which transit depth has been determined	31 March 2014
2.6	Date next survey is due	31 March 2016
2.7	State Maximum Tidal Range in berth approaches	0.30
2.8	Is laden transit to and/or from the berth conducted using the tide?	
1		No
2	If 'Yes', state optimum transit window (i.e. at High Water, HW +/- 1 hr)	
2.9	State details of any specific berthing and/or unberthing restrictions	Not applicable

2.10	Minimum under keel clearance (UKC) in berth approaches	
1	Value	0.60 Meters
2	Percentage	7.50 Vessel static draft
3	Specify other UKC criterion where applicable	no
2.11	Absolute maximum draught in berth approaches, if applicable	8.00
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	999.00 Metres
2	State datum used	
3	If 'Other' specify other datum used	
4	Further details	Not applicable
2.13	Does the port require tankers and gas carriers to be escorted by tugs?	
1		Yes
2	If 'Yes', state whether Active or Passive escort is employed and the maximum towline force that the tug is able to generate	Active, 60 mt
2.14	Additional comments or information	
<b>3 Water Depth Alongside</b>		
3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	8.60 Metres
2	State datum used	Chart Datum (CD)
3	If 'Other' specify datum	
3.2	Date of latest survey from which alongside depth has been determined	31 March 2014
3.3	Date next survey is due	31 March 2016
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.60 Meters
2	Percentage	7.50 Vessel static draft
3	Specify other UKC criterion where applicable	Not applicable
3.5	State range of water densities at berth	
1	From	1025.00
2	To	1028.00
3	Further details	As ordinary survey practice.
3.6	Type of bottom alongside berth	
1		Mud
2	If 'Other' please specify	
3.7	Absolute maximum draft alongside, if applicable	8.00
3.8	State maximum tidal range at berth, if applicable	0.30
3.9	Are 'over-the-tide' cargo handling operations permitted at the berth?	No
3.10	Does the berth location experience water-level anomalies?	

1		No
---	--	----

2	Provide details	
---	-----------------	--

### 3.11 Additional comments or information

## 4 Limiting Vessel Dimensions

### 4.1 Summer deadweight

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.2 Berthing displacement

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.3 Alongside displacement

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.4 State any deadweight/displacement exceptions

1	TPQ NA Selector	No restrictions
2		No exceptions

### 4.5 Cubic capacity (gas carriers)

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Cubic metres
3	Maximum	0.00 Cubic metres

### 4.6 Length over all (LOA)

1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	150.00 Metres

### 4.7 Beam

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres

### 4.8 Minimum parallel body length (PBL)

1	TPQ NA Selector	No restrictions
2		0.00

### 4.9 Minimum PBL forward of manifold

1	TPQ NA Selector	No restrictions
2		0.00

### 4.10 Minimum PBL aft of manifold

1	TPQ NA Selector	No restrictions
---	-----------------	-----------------

2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.13	Freeboard	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	2.50 Metres
3	Maximum	7.90 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4	Specify whether height is from the deck or the drip tray	No restrictions
4.17	Manifold spacing	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.18	Maximum air draft alongside	
1	TPQ NA Selector	No restrictions
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	No restrictions
2		0.00
4.20	Additional comments or information	Distance with any vessel at berth E013 should not be less than 35 meters.

## 5 Mooring and Berthing Information

5.1	State availability and specifications of tugs and mooring craft required for berthing and/or unberthing.	<p>5 TUGS AVAILABLE</p> <p>Tug V.B. ANIBAL 5,263 HP and 57.10 MT. Lenght:29.50 m Breadth 11.00.m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT. Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT. Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT. Lenght 29.50 m Breath 11.00 m</p> <p>Tug V.B. TIRRENO 4,200 HP and 52 MT. Lenght 28.00 m Breath 11.00 m</p> <p>4 MOORING CRAFTS AVAILABLE</p> <p>AMARRE 2: 160 HP and Lenght 8.5 m</p> <p>AMARRE 3: 90 HP and Lenght 8.5 m</p> <p>AMARRE 5: 210 HP and Lenght 9.0 m</p> <p>AMARRE 6: 210HP and Lenght 9.0 m</p>
5.2	Are ship's or tug's lines used?	
1	Ship/Tug	Tug's Lines
2	Comments	As per pilot instructions
5.3	Type of fenders installed at berth	
1		Cell Type
2	If 'Other' please specify	
5.4	State orientation of vessel alongside berth	Either Port & Starboard Side To
5.5	At buoy moorings, state which side hose is normally connected	
1		Not applicable
2	If 'Other' please specify	No buoy moorings
5.6	Minimum mooring arrangement	<p>2 Headlines</p> <p>2 Forward Breastlines</p> <p>2 Forward Back-Springs</p> <p>2 Sternlines</p> <p>2 After Breastlines</p> <p>2 After Back-Springs</p>
5.7	Describe any additional mooring requirements	None.
5.8	Are there any restrictions using wire mooring ropes?	
1		No
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	Ropes in good condition
5.9	Are there any restrictions using synthetic mooring ropes?	
1		No
2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	Ropes in good condition
5.10	Are there any restrictions on using high modulus synthetic mooring ropes?	
1		No
2	If 'yes' provide details	Ropes in good condition
5.11	Details of any specific mooring equipment required for any vessel utilising the berth	None.

5.12	Does the terminal require the vessel to rig Emergency Towing Off Pennants (ETOPs) while at the berth?	
1		Yes
2	If 'Yes', provide details of particular requirements regarding ETOPs.	Hanging outboard fore and aft about 1 to 2 metres above sea water level.
5.13	Details of any shore-provided mooring equipment	None
5.14	Are berthing aids provided?	
1		No
2	If 'Yes', state type of aids	
5.15	State allowable speed of approach if applicable	
1		As per pilot instructions
1		0.80 Knots
5.16	Is a mooring tension monitor fitted?	No
5.17	Are mooring hook quick release arrangements provided?	Yes
5.18	Chain stopper requirements	
1	Applicable	No
2		Not an SBM
5.19	Largest ship handled at berth to date	OCEAN PRIMERO 101
5.20	Additional comments or information	None

## 6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	1 x 300 ANSI 6 " LOADING ARM.
6.2	List grades handled at berth	Commercial LPG
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	Butane and Propane
6.3	State transfer rate restrictions and back pressure for each cargo grade	Minimum manifold pressure 15 kg/cm <sup>2</sup> . Maximum manifold pressure 18 kg/cm <sup>2</sup> .
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Annual testing.
6.5	State storage type for LPG	Pressurised
6.6	Describe any terminal-specific requirements for vessel manifolds	Not applicable.
6.7	Is berth fitted with a vapour manifold connection?	
1		No
2	If 'Yes' state type and size of vapour connection	
3	State cargo types for which it is required to use vapour connection (if applicable)	
6.8	State throughput rate(s) of vapour recovery system	Not applicable.
6.9	Are Powered Emergency Release Couplings (PERCS) installed to the cargo transfer arms?	

1		Yes
2	Supply details	Hydraulic system.
6.10	Does the berth have an emergency shutdown (ESD) capability that can be activated by the ship?	
1		No
2	If 'yes' provide details	
6.11	Describe access arrangements between ship and shore.	Ship or shore gangway.
6.12	Does the berth have pollution response equipment?	
1		No
2	If 'yes' provide details	
6.13	Additional comments or information	
<b>7</b>	<b>Berth Operations</b>	
7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH06 Backup by voice.
7.2	Is it required that terminal or shore representatives stay on board during operations?	
1		No
2	If 'Yes', state requirements including number of persons and their roles	
7.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth?	30 Knots for stopping Cargo 35 knots for disconnecting hoses
7.4	Are there any restrictions regarding tank cleaning/Crude Oil Washing (COW) operations at the berth?	
1		Yes
2	If 'Yes' provide full details of these restrictions	This type of operations not required for LPG tankers.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		No
2	If 'Yes', state requirements	
7.6	Is there a temperature limit for cargo handled?	
1		Yes
2	If 'Yes', state temperature limits	Minimum allowed 0 degree centigrades.
7.7	Is it permitted for vessels to undertake double-banked operations alongside the berth?	
1		No
2	If 'Yes', state limiting criteria	
7.8	Is vessel required to pump water ashore or receive water on board for line clearance purposes?	
1		No
2	If 'Yes', provide operational details	
7.9	Can the berth be used for Ship-to-Ship transfers using terminal facilities?	
1		No

2	Provide details	
7.10	State details regarding any environmental restrictions applicable at the berth	None
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		No
2	If 'Yes', state restriction	
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		No
2	If 'Yes', state restriction	
7.13	Are there any restrictions on handling stores when a ship is moored alongside berth?	
1		Yes
2	If 'Yes', state restriction	Not permitted during cargo handling.
7.14	Additional comments or information	

## 8 Available Services

8.1	Are Fuel Oil bunkers available?	
1		No
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	
8.2	Are Diesel Oil bunkers available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe.
8.3	Are Intermediate Oil bunkers available?	
1		No
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	
8.4	Is fresh water available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe. Not operated by Repsol.
8.5	Are slop reception facilities available?	
1		No
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	
3	State capacity of slop reception facilities (if applicable)	
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	
8.6	Are dirty ballast reception facilities available?	
1		No
2	If 'Yes', state how received	
3	State capacity of dirty ballast reception facilities	
8.7	Are engine room sludge and bilge reception facilities available?	
1		No
2	If 'Yes', state how received (e.g. Ex-pipe, barge, truck)	



- 8.8 Are garbage reception facilities available at the berth.
- 1 Yes
- 2 If 'Yes', provide details Containers.

8.9 Additional comments or information

## 9 Berth Low Temperature Impact

9.1 What is the typical range of temperatures the terminal operates in during a winter season?

9.2 Which months of the year can ice be expected?

9.3 Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities

9.4 State any limitations for cargo operations in sub-zero temperatures

9.5 State the minimum allowable ambient temperature for safe cargo operations

9.6 State the minimum temperature of cargoes handled

9.7 State the minimum temperature for the emergency shut-down system to operate safely

9.8 Does the terminal have its own resources for conducting icebreaker escort

1

2 If 'Yes' provide details and specify how they can be requested

9.9 Are there icebreakers available to operate in the terminal area

1

2 Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)

9.10 Does the terminal have ice-capable tugs and support craft

1

2 Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)

9.11 Does the terminal have specific requirements for the vessel speed and manoeuvrability characteristics in ice?

1

2 If 'Yes', provide details

9.12 Does the terminal provide its own ice navigator/advisor?

1

2 If 'Yes', provide details of how the service may be requested

9.13 Additional comments or information

## 10 Supplementary Information

10.1 Berth transparency Solid wharf.

10.2 Specify datum used for height and depth measurements in this section

1

Chart Datum (CD)

2 If 'Other' please specify other

10.3 Berth height above datum 2.70

10.4 Berth heading 237

10.5 Width of the channel adjacent to the berth 260.00

10.6 Position of mooring bollards and hooks

Hook/Bollard ID Number and Type	'x' dist to Fender Face (m)	'y' dist to Target Line (m)	Height (m)	SWL (tonnes)
A(2)	-95.00	4.00	3.00	100.00
B	-65.00	4.00	3.00	100.00
C	-40.00	4.00	3.00	100.00
D	-6.00	4.00	3.00	100.00
E	18.00	4.00	3.00	100.00
F	40.00	4.00	3.00	100.00
G	65.00	4.00	3.00	100.00
H(2)	95.00	4.00	3.00	100.00

10.7 Position of mooring buoys

10.8 Fender Location

Fender ID Number	'x' Dist to Target Line (m)	Elevation of Fenders (m)	Fender Width (m)	Fender Height (m)	Fender Contact Area (m2)
AA	-98.00	-1.00	2.00	3.00	5.00
BB	-75.00	-1.00	2.00	3.00	5.00
CC	-51.00	-1.00	2.00	3.00	5.00
DD	-31.00	-1.00	2.00	3.00	5.00
EE	-11.00	-1.00	2.00	3.00	5.00
FF	9.00	-1.00	2.00	3.00	5.00
GG	27.00	-1.00	2.00	3.00	5.00
HH	47.00	-1.00	2.00	3.00	5.00
II	68.00	-1.00	2.00	3.00	5.00

10.9 Fender Reaction Data

10.10 Fender friction coefficient ( $\mu$ )

10.11 State identity and horizontal position of loading arms

Loading Arm/Shore Connection ID Number	Horizontal co-ordinate X	Horizontal co-ordinate Y	Max Excursion Surge	Max Excursion Sway	Max Excursion Heave
L1	-1.50	0.10			

10.12 State loading arm operating limits

Loading Arm ID Number	Max Op Height	Min Op Height	Max Excursion Surge	Max Excursion Sway	Max Excursion Heave
L1	5.80	-0.20	4.50	6.45	6.00

10.13 Additional comments or information



# Oil Companies International Marine Forum

## MTIS Programme

### Berth TPQ

**Berth TPQ: E013**

ReportName 8d6619f5-7164-4344-a4db-e495b5602f4c

**Terminal Name: REPSOL BUTANO**

**Terminal Port: PUERTO DE CARTAGENA.**

**Terminal Port Authority: AUTORIDAD PORTUARIA DE  
CARTAGENA (APC).**

**Country: Spain**

**Berth Name: E013**

12 November 2015

## 1 Berth General

1.1	Berth name or number	E013
1.2	Berth type	
1		Wharf or Quay
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373359 North
2	Longitude	0005728 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO, CLH, REPSOL BUTANO
1.5	Has a structural survey of the berth been undertaken, including its underwater structure?	
1		No
2	If 'Yes', state date of last survey	
1.6	Has an engineering (mooring and fendering) analysis of berth been undertaken?	
1		No
2	If 'Yes', state date of last analysis	
1.7	Additional comments or information	None

## 2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No exemptions.
2.2	State distance from pilot station(s) to berth	Approx. 2 miles.
2.3	Is a waiting anchorage available?	
1		Yes
3	If 'Yes', state distance from waiting anchorage to berth	From 3 to 6 miles.
2.4	Controlling depth of water for transit to and from berth	
1	Water depth	14.10 Metres
2	State datum used	Chart Datum (CD)
3	If 'Other' please specify datum	
2.5	Date of latest survey from which transit depth has been determined	31 March 2014
2.6	Date next survey is due	31 March 2016
2.7	State Maximum Tidal Range in berth approaches	0.30
2.8	Is laden transit to and/or from the berth conducted using the tide?	
1		No
2	If 'Yes', state optimum transit window (i.e. at High Water, HW +/- 1 hr)	
2.9	State details of any specific berthing and/or unberthing restrictions	Not applicable

2.10	Minimum under keel clearance (UKC) in berth approaches	
1	Value	0.90 Meters
2	Percentage	6.80 Vessel static draft
3	Specify other UKC criterion where applicable	None
2.11	Absolute maximum draught in berth approaches, if applicable	13.20
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	999.00 Metres
2	State datum used	
3	If 'Other' specify other datum used	
4	Further details	Not applicable.
2.13	Does the port require tankers and gas carriers to be escorted by tugs?	
1		Yes
2	If 'Yes', state whether Active or Passive escort is employed and the maximum towline force that the tug is able to generate	Active, 60 mt.
2.14	Additional comments or information	
<b>3 Water Depth Alongside</b>		
3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	14.10 Metres
2	State datum used	Chart Datum (CD)
3	If 'Other' specify datum	
3.2	Date of latest survey from which alongside depth has been determined	31 March 2014
3.3	Date next survey is due	31 March 2016
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.90 Meters
2	Percentage	6.80 Vessel static draft
3	Specify other UKC criterion where applicable	None.
3.5	State range of water densities at berth	
1	From	1025.00
2	To	1028.00
3	Further details	as ordinary Survey Practise.
3.6	Type of bottom alongside berth	
1		Mud
2	If 'Other' please specify	
3.7	Absolute maximum draft alongside, if applicable	13.20
3.8	State maximum tidal range at berth, if applicable	0.30
3.9	Are 'over-the-tide' cargo handling operations permitted at the berth?	No
3.10	Does the berth location experience water-level anomalies?	

1		No
---	--	----

2	Provide details	
---	-----------------	--

### 3.11 Additional comments or information

## 4 Limiting Vessel Dimensions

### 4.1 Summer deadweight

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.2 Berthing displacement

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.3 Alongside displacement

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

### 4.4 State any deadweight/displacement exceptions

1	TPQ NA Selector	No restrictions
2		No exceptions

### 4.5 Cubic capacity (gas carriers)

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Cubic metres
3	Maximum	0.00 Cubic metres

### 4.6 Length over all (LOA)

1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	230.00 Metres

### 4.7 Beam

1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres

### 4.8 Minimum parallel body length (PBL)

1	TPQ NA Selector	No restrictions
2		0.00

### 4.9 Minimum PBL forward of manifold

1	TPQ NA Selector	No restrictions
2		0.00

### 4.10 Minimum PBL aft of manifold

1	TPQ NA Selector	No restrictions
---	-----------------	-----------------

2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.13	Freeboard	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	2.40 Metres
3	Maximum	18.80 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4	Specify whether height is from the deck or the drip tray	No restrictions. As per OCIMF
4.17	Manifold spacing	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.18	Maximum air draft alongside	
1	TPQ NA Selector	No restrictions
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	No restrictions
2		0.00
4.20	Additional comments or information	None

## 5 Mooring and Berthing Information

5.1	State availability and specifications of tugs and mooring craft required for berthing and/or unberthing.	<p>5 TUGS AVAILABLE</p> <p>Tug V.B. ANIBAL 5,263 HP and 57.10 MT. Lenght:29.50 m Breadth 11.00.m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT. Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT. Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT. Lenght 29.50 m Breath 11.00 m</p> <p>Tug V.B. TIRRENO 5,000 HP and 52 MT. Lenght 28.00 m Breath 11.00 m</p> <p>4 MOORING CRAFTS AVAILABLE</p> <p>AMARRE 2: 160 HP and Lenght 8.5 m</p> <p>AMARRE 3: 90 HP and Lenght 8.5 m</p> <p>AMARRE 5: 210 HP and Lenght 9.0 m</p> <p>AMARRE 6: 210HP and Lenght 9.0 m</p>
5.2	Are ship's or tug's lines used?	
1	Ship/Tug	Tug's Lines
2	Comments	Follow pilots instructions.
5.3	Type of fenders installed at berth	
1		Cell Type
2	If 'Other' please specify	
5.4	State orientation of vessel alongside berth	Either Port & Starboard Side To
5.5	At buoy moorings, state which side hose is normally connected	
1		Not applicable
2	If 'Other' please specify	
5.6	Minimum mooring arrangement	<p>2 Headlines</p> <p>2 Forward Breastlines</p> <p>2 Forward Back-Springs</p> <p>2 Sternlines</p> <p>2 After Breastlines</p> <p>2 After Back-Springs</p>
5.7	Describe any additional mooring requirements	None
5.8	Are there any restrictions using wire mooring ropes?	
1		No
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	
5.9	Are there any restrictions using synthetic mooring ropes?	
1		No
2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	
5.10	Are there any restrictions on using high modulus synthetic mooring ropes?	
1		No
2	If 'yes' provide details	
5.11	Details of any specific mooring equipment required for any vessel utilising the berth	None.



5.12	Does the terminal require the vessel to rig Emergency Towing Off Pennants (ETOPs) while at the berth?	
1		Yes
2	If 'Yes', provide details of particular requirements regarding ETOPs.	Hanging off-shore 1 or 2 meters above sea water level.
5.13	Details of any shore-provided mooring equipment	None
5.14	Are berthing aids provided?	
1		No
2	If 'Yes', state type of aids	
5.15	State allowable speed of approach if applicable	
1		As per pilot instructions
1		0.80 Knots
5.16	Is a mooring tension monitor fitted?	No
5.17	Are mooring hook quick release arrangements provided?	Yes
5.18	Chain stopper requirements	
1	Applicable	No
2		Not an SBM
5.19	Largest ship handled at berth to date	DJANET 242 m
5.20	Additional comments or information	None.

## 6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	1 x 300 ANSI 8 " LOADING ARM.
6.2	List grades handled at berth	Commercial LPG
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	BUTANE AND PROPANE.
6.3	State transfer rate restrictions and back pressure for each cargo grade	MINIMUM MANIFOLD PRESSURE 15 KG/CM2. MAXIMUM MANIFOLD PRESSURE 18 KG/CM2.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Annual testing.
6.5	State storage type for LPG	Pressurised
6.6	Describe any terminal-specific requirements for vessel manifolds	Not applicable.
6.7	Is berth fitted with a vapour manifold connection?	
1		No
2	If 'Yes' state type and size of vapour connection	
3	State cargo types for which it is required to use vapour connection (if applicable)	
6.8	State throughput rate(s) of vapour recovery system	Not applicable.
6.9	Are Powered Emergency Release Couplings (PERCS) installed to the cargo transfer arms?	

1		Yes
2	Supply details	Hydraulic system.
6.10	Does the berth have an emergency shutdown (ESD) capability that can be activated by the ship?	
1		No
2	If 'yes' provide details	
6.11	Describe access arrangements between ship and shore.	Ship or shore gangway.
6.12	Does the berth have pollution response equipment?	
1		No
2	If 'yes' provide details	
6.13	Additional comments or information	
<b>7</b>	<b>Berth Operations</b>	
7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH06 Backup by Voice
7.2	Is it required that terminal or shore representatives stay on board during operations?	
1		No
2	If 'Yes', state requirements including number of persons and their roles	
7.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth?	30 Knots for stopping Cargo 35 knots for disconnecting Arms
7.4	Are there any restrictions regarding tank cleaning/Crude Oil Washing (COW) operations at the berth?	
1		Yes
2	If 'Yes' provide full details of these restrictions	Not allowed.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		No
2	If 'Yes', state requirements	
7.6	Is there a temperature limit for cargo handled?	
1		Yes
2	If 'Yes', state temperature limits	Minimum allowed temperature 0 degrees centigrades.
7.7	Is it permitted for vessels to undertake double-banked operations alongside the berth?	
1		No
2	If 'Yes', state limiting criteria	
7.8	Is vessel required to pump water ashore or receive water on board for line clearance purposes?	
1		No
2	If 'Yes', provide operational details	
7.9	Can the berth be used for Ship-to-Ship transfers using terminal facilities?	
1		No

2	Provide details	
7.10	State details regarding any environmental restrictions applicable at the berth	None.
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		No
2	If 'Yes', state restriction	
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		No
2	If 'Yes', state restriction	
7.13	Are there any restrictions on handling stores when a ship is moored alongside berth?	
1		Yes
2	If 'Yes', state restriction	Not allowed during cargo operations.
7.14	Additional comments or information	

## 8 Available Services

8.1	Are Fuel Oil bunkers available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe. not operated by Repsol.
8.2	Are Diesel Oil bunkers available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe.
8.3	Are Intermediate Oil bunkers available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe.
8.4	Is fresh water available?	
1		Yes
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	Ex-pipe. not operated by Repsol.
8.5	Are slop reception facilities available?	
1		No
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	
3	State capacity of slop reception facilities (if applicable)	
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	
8.6	Are dirty ballast reception facilities available?	
1		No
2	If 'Yes', state how received	
3	State capacity of dirty ballast reception facilities	
8.7	Are engine room sludge and bilge reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-pipe, barge, truck)	Barge. Not operated by Repsol.

- 8.8 Are garbage reception facilities available at the berth.
- 1 Yes
- 2 If 'Yes', provide details Containers and barge.

8.9 Additional comments or information

## 9 Berth Low Temperature Impact

9.1 What is the typical range of temperatures the terminal operates in during a winter season?

9.2 Which months of the year can ice be expected?

9.3 Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities

9.4 State any limitations for cargo operations in sub-zero temperatures

9.5 State the minimum allowable ambient temperature for safe cargo operations

9.6 State the minimum temperature of cargoes handled

9.7 State the minimum temperature for the emergency shut-down system to operate safely

9.8 Does the terminal have its own resources for conducting icebreaker escort

1

2 If 'Yes' provide details and specify how they can be requested

9.9 Are there icebreakers available to operate in the terminal area

1

2 Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)

9.10 Does the terminal have ice-capable tugs and support craft

1

2 Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)

9.11 Does the terminal have specific requirements for the vessel speed and manoeuvrability characteristics in ice?

1

2 If 'Yes', provide details

9.12 Does the terminal provide its own ice navigator/advisor?

1

2 If 'Yes', provide details of how the service may be requested

9.13 Additional comments or information

## 10 Supplementary Information

10.1 Berth transparency Solid wharf.

10.2 Specify datum used for height and depth measurements in this section

1

Chart Datum (CD)

2 If 'Other' please specify other

10.3 Berth height above datum 2.70

10.4 Berth heading 145/325

10.5 Width of the channel adjacent to the berth 220.00

10.6 Position of mooring bollards and hooks

Hook/Bollard ID Number and Type	'x' dist to Fender Face (m)	'y' dist to Target Line (m)	Height (m)	SWL (tonnes)
A(2)	-150.00	22.00	3.00	100.00
B(2)	-115.00	29.00	3.00	100.00
C	-78.00	2.00	3.00	60.00
D	-45.00	2.00	3.00	60.00
E	-13.00	2.00	3.00	60.00
F	18.00	2.00	3.00	60.00
G	56.00	2.00	3.00	60.00
H(2)	56.00	26.00	3.00	60.00
I(4)	135.00	35.00	3.00	60.00
J(4)	173.00	35.00	3.00	100.00

10.7 Position of mooring buoys

10.8 Fender Location

Fender ID Number	'x' Dist to Target Line (m)	Elevation of Fenders (m)	Fender Width (m)	Fender Height (m)	Fender Contact Area (m2)
AA	-77.00	-1.00	2.00	3.00	6.00
BB	-60.00	0.10	2.00	3.00	6.00
CC	-45.00	-1.00	2.00	3.00	6.00
DD	-28.00	-1.00	2.00	3.00	6.00
FF	2.00	-1.00	2.00	3.00	6.00
GG	18.00	-1.00	2.00	3.00	6.00

10.9 Fender Reaction Data

10.10 Fender friction coefficient ( $\mu$ )

10.11 State identity and horizontal position of loading arms

Loading Arm/Shore Connection ID Number	Horizontal co-ordinate X	Horizontal co-ordinate Y	Max Excursion Surge	Max Excursion Sway	Max Excursion Heave
L1	0.10	0.10			

10.12 State loading arm operating limits

Loading Arm ID Number	Max Op Height	Min Op Height	Max Excursion Surge	Max Excursion Sway	Max Excursion Heave
L1	16.70	-0.30	5.50	8.00	17.00

10.13 Additional comments or information