



Oil Companies International Marine Forum

MTIS Programme

Terminal TPQ

Terminal TPQ: REPSOL PETROLEO, S.A. - CARTAGENA

ReportName 58c59862-0eeb-44b0-98e7-91f27a9b02fb

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

05 October 2017

1 General

1.1	Date this TPQ document was completed/updated	05 October 2017
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	373350 North
2	Longitude	0005732 West
2.5	Is this location affected by ice?	No
2.6	Name of port authority	Autoridad Portuaria de Cartagena
2.7	Port authority contact name and title	Javier Delgado Trapiella & Jefe División Operaciones Portuarias
2.8	Port authority full style contact address	
1	Address Line 1	Plaza Héroes de Cavite, S/N
2	Address Line 2	nil
3	Address Line 3	nil
4	City	Cartagena
5	County/State	Spain
6	Postcode/Zipcode	30201
7	Phone	+34 968 325 800
8	Fax	+34 968 325 824
9	Email	jdelgado@apc.es
10	Website	www.apc.es

3 Terminal Details

3.1	Terminal name	REPSOL PETROLEO, S.A. - CARTAGENA
3.2	Terminal owner	APC
3.2	Number of berths included in this TPQ	8
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 Héroes de Cavite, S/N
2	Address Line 2	nil
3	Address Line 3	nil
4	City	Cartagena
5	County/State	Spain

6	Postcode/Zipcode	30201
7	Phone	+34 968 325 800
8	Fax	+34 968 325 824
9	Email	jdelgado@apc.es
10	Website	www.apc.es
3.5	Terminal operator, if different from owner	REPSOL PETROLEO,S.A.
3.6	Name of first point of contact for terminal operator	Jesus Novo Aparicio
3.7	Terminal operator full style contact address	
1	Address Line 1	Edificio del Terminal Maritimo de Repsol
2	Address Line 2	Terminal de Graneles Líquidos /TGL)
3	Address Line 3	Valle de Escombreras S/N
4	City	Cartagena
5	County/State	Murcia
6	Postcode/Zipcode	30350
7	Phone	+34968129398
8	Fax	+34968129496
9	Email	rpcartagenapuerto@repsol.com
10	Website	www.repsol.energy

4 TPQ Accountability

4.1	Name and title of person completing this TPQ	Jesus Novo & José Vilas
4.2	Full style contact details of person completing this TPQ	
1	Address Line 1	Edificio Terminal Maritimo Repsol
2	Address Line 2	Terminal de Graneles Líquidos (TGL)
3	Address Line 3	Valle de Escombreras S/N
4	City	Cartagena
5	County/State	Murcia/Spain
6	Postcode/Zipcode	30350
7	Phone	+34 968 129 398; +34 968 129 494
8	Fax	+34 968 129 496
9	Email	jvilasg@repsol.com; jmnovoa@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	Jesus Novo Aparicio
5.2	Port Facility Security Officer full style contact details	
1	Address Line 1	Edificio del Terminal Maritimo de Repsol
2	Address Line 2	Terminal de Graneles Líquidos (TGL)
3	Address Line 3	Valle de Escombreras S/N
4	City	Cartagena

5	County/State	Murcia
6	Postcode/Zipcode	30201
7	Phone	+34 968 129 494
8	Fax	+34 968 129 496
9	Email	jmnovoa@repsol.com

6 Operational Integrity Details

6.1	State details of any pre-arrival/operational clearance formalities for vessels	- Confirm Vessel Status for REPSOL Vetting and Confirm Vessel Clearance by Port Authorities - REPSOL CARTAGENA PRE-ARRIVAL QUESTIONNAIRE
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	NIL



Oil Companies International Marine Forum

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Berth TPQ

Berth TPQ: E017

ReportName 27e36b3f-0da3-46b3-a8b2-02b77fc38708

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E017

13 October 2017

1 Berth General

1.1	Berth name or number	E017
1.2	Berth type	
1		Wharf or Quay
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373354 North
2	Longitude	0005747 West
1.4	Berth users for liquid and gas cargoes	Operator : REPSOL PETROLEO,S.A.
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	NOT APPLICABLE

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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	11.60 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 December 2012
2.6	Date next survey is due	31 December 2017
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	0.80 Meters
2	Percentage	7.40 Vessel static draft
3	Specify other UKC criterion where applicable	No any
2.11	Absolute maximum draught in berth approaches, if applicable	10.80
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	0.00 Metres
2	State datum used	Chart Datum (CD)
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	NIL
3 Water Depth Alongside		
3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	11.60 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 2012
3.3	Date next survey is due	31 December 2017
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.80 Meters
2	Percentage	7.40 Vessel static draft
3	Specify other UKC criterion where applicable	NIL
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	10.80
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	NOT APPLICABLE
3.11	Additional comments or information	NIL

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
3	Maximum	0.00
4.3	Alongside displacement	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00
3	Maximum	0.00
4.4	State any deadweight/displacement exceptions	
1	TPQ NA Selector	No restrictions
2		NIL
4.5	Cubic capacity (gas carriers)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.6	Length over all (LOA)	
1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	190.00 Metres
4.7	Beam	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00
3	Maximum	0.00
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
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	No restrictions
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	3.20 Metres
3	Maximum	17.00 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Applicable
2	Minimum	0.00
3	Maximum	3.60
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Applicable
2	Minimum	0.60 Metres
3	Maximum	1.20
4	Specify whether height is from the deck or the drip tray	Drip tray.
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.00
3	Maximum	0.00
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	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	10.6 Lenght over all (LOA): Max 190 m, Depending on nearby E018 occupied 10.6 Lenght over all (LOA): Min. No Restrictions

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		Tyre fenders
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>4 Headlines</p> <p>2 Forward Back-Springs</p> <p>4 Sternlines</p> <p>2 After Back-Springs</p>
5.7	Describe any additional mooring requirements	Brakes should have been tested (BHC) to prove they render at a load that is equivalent to 60% of the lines's MBL
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	As ISGOTT
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.	Compulsory at this terminal.
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board. Emergency Release System (remote) is available at mooring hooks.
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		NOT APPLICABLE
1		0.00 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		N/A
5.19	Largest ship handled at berth to date	ENERGY COMMANDER 228 m IMO No. 9275658
5.20	Additional comments or information	Mooring lines of different materials not to be used on the same hook or shore bollard.

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	4 Loading Arms Woodfield MK9 No1 8" No2 12" No3 12" No4 10"
6.2	List grades handled at berth	Crude Oils/Condensates, Black Petroleum Products, Heavy Distillates, Gasoils, Diesels and Kerosenes, Naphtha
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	Usual products handled: Gasoil, HC Residue, Fuel Oil, Vaccum Gasoil, Light or Heavy Crude Oils, Naphtha.
6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharge (all grades) max. pressure allowed is 10 kg/cm ² . Loading Rates (typical, cm/h): Naphtha 1.100; Gasoil 550; Vgo 700.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes

2	Provide details	Insulation flange is located at the loading arm and tested at 6 months basis. Refer. 8.3.9 OCIMF "Design and Construction Specification for Marine Loading Arms"
6.5	State storage type for LPG	Not applicable
6.6	Describe any terminal-specific requirements for vessel manifolds	Manifold Flange Hinges in Top Position if 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)	NOT 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	Manufactured by M.I.B international (Italy) and included at Woodfield loading arm MK9. Automatic (out of range) or manual released. Ball valves closure time is less than 5 sec. No release is available if ball valves are not completely closed. Shore side loading arm is 3 meters raised after disconnection.
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's gangway net rigged
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 Backup by Voice
7.2	Is it required that terminal or shore representatives stay on board during operations?	
1		Yes
2	If 'Yes', state requirements including number of persons and their roles	Logistical Constraints: 1 Cargo Inspector appointed by terminal for COW and Squeezing Operations Control (Crude Oil only)

7.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	No tank cleaning is allowed while at berth. C.O.W. as per Charter Party.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	
1		Yes
2	If 'Yes', state temperature limits	Max. Temperature permitted at the Ship's Manifold: +80°C Min.. Temperature permitted at the Ship's Manifold: -10°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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT

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 handling Cargo.
7.14	Additional comments or information	Draining lines before disconnection as follow: Shore side loading arm: to shore by gravity. Ship's side loading arm: to ship by gravity (residual tank)

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, operated by Port Authority via Agent. (No Operated by REPSOL PETROLEO,S.A.)
8.5	Are slop reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Ex-Pipe (tank cleaning slops) or ex-barge.
3	State capacity of slop reception facilities (if applicable)	9999.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Allowed: Chemicals, Detergents and Cleaning Agents.
8.6	Are dirty ballast reception facilities available?	
1		Yes
2	If 'Yes', state how received	Ex-pipe only in emergency. Repsol Terminal operates SBT tankers only.
3	State capacity of dirty ballast reception facilities	N/A
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: No Operated by REPSOL PETROLEO,S.A.
8.8	Are garbage reception facilities available at the berth.	
1		Yes
2	If 'Yes', provide details	Segregated containers ashore. Barge is also available.

8.9	Additional comments or information	No inerting facilities are available at Repsol Terminal. Terminal Receives any Slop or Dirty Ballast from Ship's Operating at REPSOL Berths.
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9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	2°C to 18°C
9.2	Which months of the year can ice be expected?	Not applicable
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	Not applicable
9.4	State any limitations for cargo operations in sub-zero temperatures	Not applicable
9.5	State the minimum allowable ambient temperature for safe cargo operations	Not applicable
9.6	State the minimum temperature of cargoes handled	NOT APPLICABLE
9.7	State the minimum temperature for the emergency shut-down system to operate safely	Not applicable
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		No
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		No
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		No
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		No
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	
1		No
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	No ice restrictions.

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	140°(T) - 320°(T)

10.5	Width of the channel adjacent to the berth				150.00	
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)	
	1	2.00	149.00	3.00	100.00	
	2	2.00	114.00	3.00	100.00	
	3	2.00	72.00	3.00	100.00	
	4	2.00	26.00	3.00	100.00	
	5	2.00	-23.00	3.00	100.00	
	6	2.00	-72.00	3.00	100.00	
	7	2.00	-140.00	3.00	100.00	
	8	2.00	-171.00	3.00	100.00	
	A	2.00	151.00	3.00	100.00	
	B	2.00	117.00	3.00	100.00	
	C	2.00	76.00	3.00	100.00	
	D	2.00	31.00	3.00	100.00	
	E	2.00	-20.00	3.00	100.00	
	F	2.00	-69.00	3.00	100.00	
	G	2.00	-136.00	3.00	100.00	
	H	2.00	-166.00	3.00	100.00	
10.7	Position of mooring buoys					
	Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)	
	NIL	0.00	0.00	0.00	0.00	
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)
	Cylindrical fenders	152.00	1.50	2.00	1.80	1.80
	Cylindrical fender	112.00	1.50	2.00	1.80	1.80
	Cylindrical fender	79.00	1.50	2.00	1.80	1.80
	Cylindrical fender	43.00	1.50	2.00	1.80	1.80
	Cylindrical fender	27.00	1.50	2.00	1.80	1.80
	Cylindrical fender	-23.00	1.50	2.00	1.80	1.80
	Cylindrical fender	-40.00	1.50	2.00	1.80	1.80
	Cylindrical fender	-77.00	1.50	2.00	1.80	1.80

Cylindrical fender	-114.00	1.50	2.00	1.80	1.80
Cylindrical fender	-150.00	1.50	2.00	1.80	1.80

10.9 Fender Reaction Data

Fender Id Number	Point No.	Compression (metres)	Load (tonnes)
CYLINDRICAL FENDER	1	0.40	250.00
CYLINDRICAL FENDER	2	0.45	300.00
CYLINDRICAL FENDER	3	0.52	325.00
CYLINDRICAL FENDER	4	0.60	340.00

10.10 Fender friction coefficient (μ) 0.40

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
660k-F17/104	-4.50	3.00	4.50	4.60	13.90
660K-F17/101	-1.00	3.00	4.50	4.60	13.90
660K-F17/102	2.00	3.00	4.50	4.60	13.90
660-K-F17/103	5.00	3.00	4.60	4.60	13.90

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
660-K-F17/104	17.00	3.20	4.50	4.60	13.90
660-K-F17/101	17.00	3.20	4.50	4.60	13.90
660-K-F17/102	17.00	3.20	4.50	4.60	13.90
660-K-F17/103	17.00	3.20	4.50	4.60	13.90

10.13 Additional comments or information

16.7 Position of mooring Buoys NOT APPLICABLE



Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E013

ReportName a4305c44-4e13-4d7b-ba7e-1fd59b32c9f3

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E013

13 October 2017

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	0005729 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO REPSOL BUTANO CLH
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	N/A

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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 December 2012
2.6	Date next survey is due	31 December 2017
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	No any
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	0.00 Metres
2	State datum used	Chart Datum (CD)
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	NIL

3 Water Depth Alongside

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 2012
3.3	Date next survey is due	31 December 2017
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.90 Centimeters
2	Percentage	6.80 Vessel static draft
3	Specify other UKC criterion where applicable	No any
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	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

NIL

4 Limiting Vessel Dimensions

4.1 Summer deadweight

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.2 Berthing displacement

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.3 Alongside displacement

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.4 State any deadweight/displacement exceptions

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | | NIL |

4.5 Cubic capacity (gas carriers)

- | | | |
|---|-----------------|-----------------|
| 1 | TPQ NA Selector | No restrictions |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

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 | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.8 Minimum parallel body length (PBL)

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | | 0.00 |

4.9 Minimum PBL forward of manifold

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | | 0.00 |

4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	114.00 Metres
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	3.20 Metres
3	Maximum	17.00 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Applicable
2	Minimum	0.00
3	Maximum	3.60
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Applicable
2	Minimum	0.60
3	Maximum	1.20
4	Specify whether height is from the deck or the drip tray	Drip tray
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.00
3	Maximum	0.00
4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	NIL

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 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	Brakes should have been tested (BHC) to prove they render at a load that is equivalent to 60% of the lines's MBL
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	As ISGOTT
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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
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		NOT APPLICABLE
1		0.00 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 APPLICABLE
5.19	Largest ship handled at berth to date	BERGE SUMMIT 230 m IMO No. 8902371
5.20	Additional comments or information	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	1 Loading Arm 10" ANSI 150 Manufactured by CONNEX 1 Loading Arm 10" ANSI 150 Manufactured by FMC
6.2	List grades handled at berth	Biodiesel/Biosiesel Blends, Commercial LPG, Gasoils, Diesels and Kerosenes, Gasolines and Gasoline Blendstocks, Naphtha
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	Usual products handled: GASOLINES, NAPHTHA, ETBE, GASOIL, BUTANE, PROPANE & JET-A1
6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharge (all grades) max. pressure allowed is 10 kg/cm ² . Loading Rates (typical, cm/h): Naphtha 1.100; GOA 1.100, Gasoil C 550; Jet A-1 600, Gasoline 600.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes

2	Provide details	Located at loading arms. Tested in 6 months basis. Refer. 8.3.9 OCIMF "Design and Construction Specification for Marine Loading Arms"
6.5	State storage type for LPG	Not applicable
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	1 Manufactured by CONNEX & 1 Manufactured by FMC. Ball valves closure and system release time is less than 15 sec. Manual and automatic (out of range) release 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.	Shore or Ship's gangway net rigged. If shore ganway is used, service fees are to be paid.
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 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?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes

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	No allowed at berth by REPSOL Proceedings. No Crude Oil operations are available at this pier.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	
1		No
2	If 'Yes', state temperature limits	
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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
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 handling Cargo

7.14	Additional comments or information	Draining lines before disconnection as follow: Shore side loading arm: to shore by gravity. Ship's side loading arm: to ship by gravity (residual tank)
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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, operated by Port Authority via Agent. (No Operated by REPSOL PETROLEO,S.A.)
8.5	Are slop reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Ex-Pipe (tank cleaning slops)
3	State capacity of slop reception facilities (if applicable)	0.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Allowed: Chemicals, Detergents and Cleaning Agents
8.6	Are dirty ballast reception facilities available?	
1		Yes
2	If 'Yes', state how received	Ex-Pipe only in emergencies. Repsol Terminal operates SBT tankers only.
3	State capacity of dirty ballast reception facilities	0
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: No Operated by REPSOL PETROLEO,S.A.
8.8	Are garbage reception facilities available at the berth.	
1		Yes
2	If 'Yes', provide details	Segregated Containers ashore. Barge is also available.
8.9	Additional comments or information	Terminal Receives any Slop or Dirty Ballast from Ship's Operating at REPSOL Berths

9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	2°C to 18°C
9.2	Which months of the year can ice be expected?	NIL
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	Not Aplicable
9.4	State any limitations for cargo operations in sub-zero temperatures	Not Aplicable
9.5	State the minimum allowable ambient temperature for safe cargo operations	Not Aplicable
9.6	State the minimum temperature of cargoes handled	Not Aplicable
9.7	State the minimum temperature for the emergency shut-down system to operate safely	Not Aplicable
9.8	Does the terminal have its own resources for conducting icebreaker escort	No
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	No
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	No
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?	No
1		
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	No
1		
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	Low temperature restrictions are not applicable at this terminal.

10 Supplementary Information

10.1	Berth transparency	Solid Wharf
10.2	Specify datum used for height and depth measurements in this section	Chart Datum (CD)
1		
2	If 'Other' please specify other	
10.3	Berth height above datum	2.70
10.4	Berth heading	145°(T) / 325°(T)
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	2.70	100.00
B(2)	-115.00	29.00	2.70	100.00
C	-78.00	1.50	2.70	60.00
D	-45.00	1.50	2.70	60.00
E	-13.00	1.50	2.70	60.00
F	18.00	1.50	2.70	60.00
G	56.00	1.50	2.70	60.00
H(2)	56.00	26.00	2.70	60.00
I(4)	135.00	35.00	2.70	60.00
J(4)	173.00	35.00	2.70	100.00

10.7 Position of mooring buoys

Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)
NIL	0.00	0.00	0.00	0.00

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	-1.35	2.30	2.70	6.21
bb	-60.00	-1.35	2.30	2.70	6.21
cc	-45.00	-1.35	2.30	2.70	6.21
dd	-28.00	-1.35	2.30	2.70	6.21
ee	-14.00	-1.35	2.30	2.70	6.21
ff	2.00	-1.35	2.30	2.70	6.21
gg	18.00	-1.35	2.30	2.70	6.21

10.9 Fender Reaction Data

Fender Id Number	Point No.	Compression (metres)	Load (tonnes)
NO DATA	1	0.00	0.00

10.10 Fender friction coefficient (μ)

0.20

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
660-K-3A	4.00	3.00	3.20	6.00	13.90
660-K-F13/2	2.00	3.00	3.20	6.00	13.90

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
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	660-K-3A	17.00	3.20	3.20	6.00	13.90
	660-K-F13/2	17.00	3.20	3.20	6.00	13.90
10.13	Additional comments or information				NIL	



Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E016

ReportName 4a1d668c-1680-4727-a225-20e2f9c53094

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E016

13 October 2017

1 Berth General

1.1	Berth name or number	E016
1.2	Berth type	
1		Wharf or Quay
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373349 North
2	Longitude	0005737 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO,S.A.; ILBOC; MASOL, RYLES.A.
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	NIL

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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	10.60 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 December 2012
2.6	Date next survey is due	31 December 2017
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	0.70 Meters
2	Percentage	7.10 Vessel static draft
3	Specify other UKC criterion where applicable	No any
2.11	Absolute maximum draught in berth approaches, if applicable	9.90
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	0.00 Metres
2	State datum used	Chart Datum (CD)
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	NIL

3 Water Depth Alongside

3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	10.60 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 2012
3.3	Date next survey is due	31 December 2017
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.70 Meters
2	Percentage	7.10 Vessel static draft
3	Specify other UKC criterion where applicable	No any
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	9.90
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	NIL

4 Limiting Vessel Dimensions

4.1	Summer deadweight	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.2	Berthing displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.3	Alongside displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.4	State any deadweight/displacement exceptions	
1	TPQ NA Selector	Not applicable
2		NOT APPLICABLE
4.5	Cubic capacity (gas carriers)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.6	Length over all (LOA)	
1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	160.00 Metres
4.7	Beam	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.8	Minimum parallel body length (PBL)	
1	TPQ NA Selector	Not applicable
2		0.00
4.9	Minimum PBL forward of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable

2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Not applicable
2	Minimum	1.00
3	Maximum	0.00
4	Specify whether height is from the deck or the drip tray	DRIP TRAY
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.00
3	Maximum	0.00
4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	10.6 Lenght over all (LOA): Max. 160.00 m considering nearby E015 occupied by another vessel 10.6 Lenght over all (LOA): Min. No Restrictions

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		Tyre fenders
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>1 Forward Back-Spring</p> <p>2 Sternlines</p> <p>1 After Back-Spring</p>
5.7	Describe any additional mooring requirements	None
5.8	Are there any restrictions using wire mooring ropes?	
1		Yes
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
5.9	Are there any restrictions using synthetic mooring ropes?	
1		Yes
2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	As ISGOTT

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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
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		NOT APPLICABLE
1		Knots
5.16	Is a mooring tension monitor fitted?	No
5.17	Are mooring hook quick release arrangements provided?	No
5.18	Chain stopper requirements	
1	Applicable	No
2		NOT APPLICABLE
5.19	Largest ship handled at berth to date	MAERSK ELLIOT 185.6 m IMO No. 9274678
5.20	Additional comments or information	NIL

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	Hoses 8"/6" ANSI 150.
6.2	List grades handled at berth	Bitumen (including cut-backs), Black Petroleum Products, Gasoils, Diesels and Kerosenes
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	FUEL OIL, VACUUM GASOIL, GASOIL C, BITUMEN (OPERATED BY RYLESA)
6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharging operations Max. Pressure Allowed 10 kg/cm ² . Loading rates (typical, cm/h): Gasoil 550; Fuel Oil 550.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Insulation Flange between Hoses
6.5	State storage type for LPG	Not applicable
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	Emergency Release Coupling are used between Ship's and Shore Flanges.
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's gangway net rigged
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 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?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	Tank cleaning is not allowed at berth by REPSOL Procedures. No Crude Oil operations are available at this pier.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume

7.6	Is there a temperature limit for cargo handled?	
1		No
2	If 'Yes', state temperature limits	
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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
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 handling Cargo
7.14	Additional comments or information	Draining lines before disconnection as follow: Shore side hose: to shore by gravity. Ship's side hose: to ship by gravity (residual tank)

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 No Operated by REPSOL PETROLEO,S.A. Operated by Port Authority via Agent.
8.5	Are slop reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Ex-Pipe
3	State capacity of slop reception facilities (if applicable)	0.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Allowed: Chemicals, Detergents and Cleaning Agents
8.6	Are dirty ballast reception facilities available?	
1		Yes
2	If 'Yes', state how received	Ex-Pipe, only in emergency. Repsol terminal only operates SBT tankers.
3	State capacity of dirty ballast reception facilities	0
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: No Operated by REPSOL PETROLEO,S.A.
8.8	Are garbage reception facilities available at the berth.	
1		Yes
2	If 'Yes', provide details	Segregated containers ashore. Barge is also available.
8.9	Additional comments or information	NIL

9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	2°C to 20°C
9.2	Which months of the year can ice be expected?	NONE
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	Not Aplicable.
9.4	State any limitations for cargo operations in sub-zero temperatures	Not Aplicable.
9.5	State the minimum allowable ambient temperature for safe cargo operations	Not Aplicable.
9.6	State the minimum temperature of cargoes handled	Not Aplicable.
9.7	State the minimum temperature for the emergency shut-down system to operate safely	Not Aplicable.
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		No
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		No

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		No
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		No
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	
1		No
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	NO ICING, MEDITERRANEAN WEATHER.

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	057º(T) - 237º(T)			
10.5	Width of the channel adjacent to the berth	200.00			
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	-85.00	2.50	2.70	
	B	-62.00	2.50	2.70	
	C	-35.00	2.50	2.70	
	D	-12.00	2.50	2.70	
	E	13.00	2.50	2.70	
	F	38.00	2.50	2.70	
	G	54.00	2.50	2.70	
	H	63.00	2.50	2.70	
	I	88.00	2.50	2.70	
10.7	Position of mooring buoys				
	Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)
	NIL	0.00	0.00	0.00	0.00
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)
1	93.00	-1.50	2.00	1.80	1.80
2	81.00	-1.50	2.00	1.80	1.80
3	68.00	-1.50	2.00	1.80	1.80
4	56.00	-1.50	2.00	1.80	1.80
5	43.00	-1.50	2.00	1.80	1.80
6	30.00	-1.50	2.00	1.80	1.80
7	18.00	-1.50	2.00	1.80	1.80
8	6.00	-1.50	2.00	1.80	1.80
9	-7.00	-1.50	2.00	1.80	1.80
10	-18.00	-1.50	2.00	1.80	1.80
11	-34.00	-1.50	2.00	1.80	1.80
12	-56.00	-1.50	2.00	1.80	1.80
13	-84.00	-1.50	2.00	1.80	1.80

10.9 Fender Reaction Data

Fender Id Number	Point No.	Compression (metres)	Load (tonnes)
CYLINDRICAL FENDER	1	0.40	250.00
CYLINDRICAL FENDER	2	0.45	300.00
CYLINDRICAL FENDER	3	0.52	325.00
CYLINDRICAL FENDER	4	0.60	340.00

10.10 Fender friction coefficient (μ)

0.40

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
HOSES	0.00	0.00	0.00	0.00	0.00

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
HOSES	0.00	0.00	0.00	0.00	0.00

10.13 Additional comments or information

NO OPERATIONS ARE CARRIED OUT AT THIS PIER BY REPSOL PETROLEO EXCEPT IN VERY SPECIAL CASES.



Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E018

ReportName 089eed4d-3aef-454e-adaf-298ab2a017a0

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E018

13 October 2017

1 Berth General

1.1	Berth name or number	E018
1.2	Berth type	
1		Jetty - 'T' finger
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373403 North
2	Longitude	0005755 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO,S.A.
1.5	Has a structural survey of the berth been undertaken, including its underwater structure?	
1		Yes
2	If 'Yes', state date of last survey	31 October 2011
1.6	Has an engineering (mooring and fendering) analysis of berth been undertaken?	
1		Yes
2	If 'Yes', state date of last analysis	31 December 2012
1.7	Additional comments or information	NIL

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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	21.00 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 December 2012
2.6	Date next survey is due	31 December 2017
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	DRAFT RESTRICTIONS NIGHT TIME.- Max 18.00 m DRAFT RESTRICTIONS.- SAILING: Max 15.00 m
2.10	Minimum under keel clearance (UKC) in berth approaches	
1	Value	1.50 Meters
2	Percentage	7.70 Vessel static draft
3	Specify other UKC criterion where applicable	No any
2.11	Absolute maximum draught in berth approaches, if applicable	19.50
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	0.00 Metres
2	State datum used	Chart Datum (CD)
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	NIL

3 Water Depth Alongside

3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	21.40 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 2012
3.3	Date next survey is due	31 March 2017
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	1.50 Meters
2	Percentage	7.70 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 Practice
3.6	Type of bottom alongside berth	
1		Mud
2	If 'Other' please specify	
3.7	Absolute maximum draft alongside, if applicable	21.40

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	ABSOLUTE MAXIMUM DRAFT ALONGSIDE ANY SEASON: FWD 19.5 m AFT 21.4 m

4 Limiting Vessel Dimensions

4.1	Summer deadweight	
1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metric Tonnes
3	Maximum	275000.00 Metric Tonnes
4.2	Berthing displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.3	Alongside displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.4	State any deadweight/displacement exceptions	
1	TPQ NA Selector	No restrictions
2		NIL
4.5	Cubic capacity (gas carriers)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.6	Length over all (LOA)	
1	TPQ NA Selector	
2	Minimum	180.00 Metres
3	Maximum	360.00 Metres
4.7	Beam	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.8	Minimum parallel body length (PBL)	
1	TPQ NA Selector	Applicable

2		74.00 Metres
4.9	Minimum PBL forward of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	5.10 Metres
3	Maximum	23.00 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Applicable
2	Minimum	0.60
3	Maximum	1.20
4	Specify whether height is from the deck or the drip tray	DRIP TRAY
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.00
3	Maximum	0.00
4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	

1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	NIL

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 Pilots Instructions
5.3	Type of fenders installed at berth	
1		Wooden Piles or Wooden Panel Fenders
2	If 'Other' please specify	
5.4	State orientation of vessel alongside berth	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>4 Headlines</p> <p>2 Forward Breastlines</p> <p>2 Forward Back-Springs</p> <p>4 Sternlines</p> <p>2 After Breastlines</p> <p>2 After Back-Springs</p>
5.7	Describe any additional mooring requirements	Brakes should have been tested (BHC) to prove they render at a load that is equivalent to 60% of the lines's MBL
5.8	Are there any restrictions using wire mooring ropes?	
1		Yes
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
5.9	Are there any restrictions using synthetic mooring ropes?	
1		Yes

2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	As ISGOTT
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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
5.14	Are berthing aids provided?	
1		Yes
2	If 'Yes', state type of aids	DOCKMASTER Laser Berthing System
5.15	State allowable speed of approach if applicable	
1		Only Parallel Approach to Achieve Berthing Line
1		0.65 Km/h
5.16	Is a mooring tension monitor fitted?	Yes
5.17	Are mooring hook quick release arrangements provided?	Yes
5.18	Chain stopper requirements	
1	Applicable	No
2		NOT APPLICABLE
5.19	Largest ship handled at berth to date	MARAN CARINA 332 m IMO No. 9240512
5.20	Additional comments or information	NIL

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	5 Hard Arms No 1 8" WOODFIELD MK 9 No 2 16" WOODFIELD MK 9 No 3 16" WOODFIELD MK 9 No 4 16" WOODFIELD MK 9 No 5 8" WOODFIELD MK 9
6.2	List grades handled at berth	Black Petroleum Products, Crude Oils/Condensates, Naphtha
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	CRUDE OIL, FUELOIL, VACUUM GASOIL, NAPHTHAS
6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharge (all grades) max. pressure allowed is 10 kg/cm2. Loading Rates (typical, cm/h): Naphtha 1.100; VGO 700;
6.4	Are transfer connections fitted with insulation flanges?	

1		Yes
2	Provide details	Insulation flange is located at the loading arm and tested at 6 months basis. Refer. 8.3.9 OCIMF "Design and Construction Specification for Marine Loading Arms"
6.5	State storage type for LPG	Not applicable
6.6	Describe any terminal-specific requirements for vessel manifolds	Manifold Flange Hinges in Top Position "If any"
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	Manufactured by MIB (ITALY) Ball valves closure and system release time is less than 15 sec. Manual and automatic (out of range) release 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.	Shore Gangway : Hydraulically Operated (Telescopic System) Service fees are to be paid.
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 Backup by Voice
7.2	Is it required that terminal or shore representatives stay on board during operations?	
1		Yes
2	If 'Yes', state requirements including number of persons and their roles	Logistical Constraints: 1 Cargo Inspector for COW and Squeezing Operations Control

7.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	Tank cleaning is not allowed at berth by REPSOL TERMINAL Proceedings. C.O.W. is allowed (Port Captain authorization to be granted)
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	
1		No
2	If 'Yes', state temperature limits	NOT APPLICABLE
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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT

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 handling Cargo
7.14	Additional comments or information	NIL

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, operated by Port Authority via Agent. (No Operated by REPSOL PETROLEO,S.A.)
8.5	Are slop reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Ex-Pipe (tank cleaning slops) or ex-barge.
3	State capacity of slop reception facilities (if applicable)	0.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Allowed: Chemicals, Detergents and Cleaning Agents
8.6	Are dirty ballast reception facilities available?	
1		Yes
2	If 'Yes', state how received	Ex-pipe only in emergency. Repsol Terminal operates SBT tankers only.
3	State capacity of dirty ballast reception facilities	0
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: No Operated by REPSOL PETROLEO,S.A.
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	NIL

9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	-2 TO 20°C
9.2	Which months of the year can ice be expected?	NONE
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	NOT APPLICABLE
9.4	State any limitations for cargo operations in sub-zero temperatures	NOT APPLICABLE
9.5	State the minimum allowable ambient temperature for safe cargo operations	NOT APPLICABLE
9.6	State the minimum temperature of cargoes handled	NOT APPLICABLE
9.7	State the minimum temperature for the emergency shut-down system to operate safely	NOT APPLICABLE
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		No
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		No
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		No
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		No
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	
1		No
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	NO ICING, MEDITERRANEAN WEATHER.

10 Supplementary Information

10.1	Berth transparency	Piled Jetty -Inside Inner Harbor-
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	140°(T) - 320°(T)
10.5	Width of the channel adjacent to the berth	320.00
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)	-192.00	33.00	2.70	100.00
B(2)	-142.00	33.00	2.70	100.00
C(2)	-101.00	33.00	2.70	100.00
D(2)	-63.00	2.00	6.50	100.00
E(2)	-30.00	2.00	5.00	100.00
F(2)	35.00	2.00	5.00	100.00
G(2)	65.00	2.00	6.50	100.00
H(2)	105.00	33.00	2.70	100.00
I(2)	180.00	33.00	2.70	100.00
J(2)	234.00	27.00	2.70	100.00

10.7 Position of mooring buoys

Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)
NIL	0.00	0.00	0.00	0.00

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	-60.00	0.55	5.00	6.50	32.50
bb	-30.00	-0.20	3.50	5.00	17.50
cc	35.00	-0.20	3.50	5.00	17.50
dd	65.00	0.55	5.00	6.50	32.50

10.9 Fender Reaction Data

Fender Id Number	Point No.	Compression (metres)	Load (tonnes)
NO DATA	0	0.00	0.00

10.10 Fender friction coefficient (μ)

0.40

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
660K-F18/201	6.00	3.00	4.60	4.60	12.80
660K-F18/202	3.00	3.00	4.60	4.60	12.80
660K-F18/203	0.00	3.00	4.60	4.60	12.80
660K-F18/204	-3.00	3.00	4.60	4.60	12.80
660K-F18/205	-6.00	3.00	4.60	4.60	12.80

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
660-K-F18/205	23.00	5.10	4.60	4.60	12.80
660-K-F18/204	23.00	5.10	4.60	4.60	12.80
660-K-F18/203	23.00	5.10	4.60	4.60	12.80
660-K-F18/202	23.00	5.10	4.60	4.60	12.80
660-K-F18/201	23.00	5.10	4.60	4.60	12.80

10.13	Additional comments or information	NIL
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Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E012

ReportName 565c6e26-a89f-4ba7-8cb0-2a46826c1cc2

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E012

13 October 2017

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	373356 North
2	Longitude	0005724 West
1.4	Berth users for liquid and gas cargoes	- REPSOL PETROLEO,S.A. - REPSOL BUTANO, S.A. - BUNGE - ECOCARBURANTES -LBC
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	Berth used for LPG cargoes.

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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	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	Chart Datum (CD)
3	If 'Other' please specify datum	
2.5	Date of latest survey from which transit depth has been determined	31 March 2012
2.6	Date next survey is due	31 December 2017
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 any
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	0.00 Metres
2	State datum used	Chart Datum (CD)
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	8.12 Vertical Clearance of any Bridges/Power Cables/Vertical Obstructions NOT APPLICABLE

3 Water Depth Alongside

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 2012
3.3	Date next survey is due	31 December 2017
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
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3.9	Are 'over-the-tide' cargo handling operations permitted at the berth?	No
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3.10	Does the berth location experience water-level anomalies?	No
1		
2	Provide details	

3.11	Additional comments or information	NOT APPLICABLE
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4 Limiting Vessel Dimensions

4.1	Summer deadweight	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

4.2	Berthing displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

4.3	Alongside displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00 Metric Tonnes
3	Maximum	0.00 Metric Tonnes

4.4	State any deadweight/displacement exceptions	
1	TPQ NA Selector	Not applicable
2		Not Applicable

4.5	Cubic capacity (gas carriers)	
1	TPQ NA Selector	Not applicable
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	Not applicable
2	Minimum	0.00
3	Maximum	0.00

4.8	Minimum parallel body length (PBL)	
1	TPQ NA Selector	Not applicable
2		0.00

4.9	Minimum PBL forward of manifold	
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1	TPQ NA Selector	Not applicable
2		0.00
4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	2.50
3	Maximum	7.90
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Applicable
2	Minimum	0.00
3	Maximum	0.00
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Not applicable
2	Minimum	1.00
3	Maximum	4.00
4	Specify whether height is from the deck or the drip tray	DRIP TRAY
4.17	Manifold spacing	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00 Metres
3	Maximum	0.00 Metres
4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes

4.20 Additional comments or information

ITEM 10.6 Length over all (LOA): Minimum
Not Applicable

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. Length:29.50 m Breadth 11.00 m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT. Length 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT. Length 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT. Length 29.50 m Breadth 11.00 m</p> <p>Tug V.B. TIRRENO 5,000 HP and 52 MT. Length 28.00 m Breadth 11.00 m</p> <p>4 MOORING CRAFTS AVAILABLE</p> <p>AMARRE 2: 160 HP and Length 8.5 m</p> <p>AMARRE 3: 90 HP and Length 8.5 m</p> <p>AMARRE 5: 210 HP and Length 9.0 m</p> <p>AMARRE 6: 210HP and Length 9.0 m</p>
5.2	Are ship's or tug's lines used?	
1	Ship/Tug	Tug's Lines
2	Comments	Follow 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	
5.6	Minimum mooring arrangement	<p>2 Headlines</p> <p>1 Forward Back-Spring</p> <p>2 Sternlines</p> <p>1 After Back-Spring</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	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	As ISGOTT
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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
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		NOT APPLICABLE
1		Km/h
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 APPLICABLE
5.19	Largest ship handled at berth to date	STRILEN 149.61 m IMO No. 9391139
5.20	Additional comments or information	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	1 Loading Arm 8" .
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).	Propane & Butane.
6.3	State transfer rate restrictions and back pressure for each cargo grade	Max Pressure Requested 11 kg/cm2
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Insulation Flange at the loading arm.
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	Not Applicable
3	State cargo types for which it is required to use vapour connection (if applicable)	Not 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	2 ball valves and collar, less than 5 sec closing interval.
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's gangway net rigged
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 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?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	Tank Cleaning is not allowed while at berth according REPSOL TERMINAL Policy. No Crude Oil is operated at this pier.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	

1		No
2	If 'Yes', state temperature limits	
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	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
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 handling Cargo
7.14	Additional comments or information	Draining Line After Load/Discharge blowing ashore with hot gas.

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		No
2	If 'Yes', state how delivered (e.g. Ex-Pipe, barge, truck)	
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 No Operated by REPSOL PETROLEO,S.A.

8.5	Are slop reception facilities available?	
1		No
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Only by barge, Marpol Company.
3	State capacity of slop reception facilities (if applicable)	300.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Chemicals, Detergents, cleaning agents allowed
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: No Operated by REPSOL PETROLEO,S.A.
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	Pier operated by Repsol Butano S.A.

9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	-2 to 20
9.2	Which months of the year can ice be expected?	Not applicable
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	NIL
9.4	State any limitations for cargo operations in sub-zero temperatures	N/A
9.5	State the minimum allowable ambient temperature for safe cargo operations	N/A
9.6	State the minimum temperature of cargoes handled	N/A
9.7	State the minimum temperature for the emergency shut-down system to operate safely	-10 °C
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		No
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		No
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		No
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		No
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	
1		No
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	No icing expeted, Mediterranean wheather.

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				057º(T) - 237º(T)		
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)	3.50	-95.00	2.70	100.00	
		B	3.50	-65.00	2.70	100.00	
		C	3.50	-40.00	2.70	100.00	
		D	3.50	-6.00	2.70	100.00	
		E	3.50	18.00	2.70	100.00	
		F	3.50	40.00	2.70	100.00	
		G	3.50	65.00	2.70	100.00	
		H(2)	3.50	95.00	2.70	100.00	
10.7	Position of mooring buoys						
		Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)	
		NIL	0.00	0.00	0.00	0.00	
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	-1.35	2.00	2.70	5.40
		bb	-75.00	-1.35	2.00	2.70	5.40
		cc	-51.00	-1.35	2.00	2.70	5.40
		dd	-31.00	-1.35	2.00	2.70	5.40
		ee	-11.00	-1.35	2.00	2.70	5.40
		ff	9.00	-1.35	2.00	2.70	5.40
		gg	27.00	-1.35	2.00	2.70	5.40

	hh	47.00	-1.35	2.00	2.70	5.40
	ii	68.00	-1.35	2.00	2.70	5.40

10.9	Fender Reaction Data					
	Fender Id Number	Point No.		Compression (metres)	Load (tonnes)	
	CELL FENDER	1		0.40	250.00	
	CELL FENDER	2		0.45	300.00	
	CELL FENDER	3		0.52	325.00	
	CELL FENDER	4		0.60	340.00	

10.10	Fender friction coefficient (μ)	0.40				
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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
	Nº1	0.00	2.00	2.50	2.60	5.40

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
	Nº1	7.90	2.50	2.50	2.60	5.40

10.13	Additional comments or information					At this pier REPSOL PETROLEO S.A ship's are operated by REPSOL BUTANO S.A. personnel and instalations.
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Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E020

ReportName 3a0162b5-b69f-4e46-b4a6-93bc937b73b8

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E020

13 October 2017

1 Berth General

1.1	Berth name or number	E020
1.2	Berth type	
1		Jetty - Finger Jetty
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373406 North
2	Longitude	0005814 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO,S.A.
1.5	Has a structural survey of the berth been undertaken, including its underwater structure?	
1		Yes
2	If 'Yes', state date of last survey	31 December 2008
1.6	Has an engineering (mooring and fendering) analysis of berth been undertaken?	
1		Yes
2	If 'Yes', state date of last analysis	31 December 2008
1.7	Additional comments or information	E020 New Construction dated 2008

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
2.2	State distance from pilot station(s) to berth	Approx. 1 Mile
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	26.20 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 December 2012
2.6	Date next survey is due	31 December 2017
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	<p>WIND RESTRICTIONS DAY TIME.- BERTHING: Max 20 knots UNBERTHING: Max 20 knots</p> <p>WIND RESTRICTIONS NIGHT TIME.- BERTHING: Max. 10 knots UNBERTHING: Max. 20 knots</p> <p>SEA RESTRICTIONS NIGHT TIME.- BERTHING: Max. Sea Wave Height 2 m UNBERTHING: Max. Sea Wave Height 1 m</p> <p>VISIBILITY RESTRICTIONS.- > 1,000 m</p>
2.10	Minimum under keel clearance (UKC) in berth approaches	
1	Value	2.20 Meters
2	Percentage	9.20 Vessel static draft
3	Specify other UKC criterion where applicable	No any
2.11	Absolute maximum draught in berth approaches, if applicable	24.00
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	0.00 Metres
2	State datum used	Chart Datum (CD)
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	NIL

3 Water Depth Alongside

3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	26.20 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 2012
3.3	Date next survey is due	31 December 2017
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	2.21 Meters
2	Percentage	9.20 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 Practice
3.6	Type of bottom alongside berth	
1		Mud
2	If 'Other' please specify	
3.7	Absolute maximum draft alongside, if applicable	24.00
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	NIL

4 Limiting Vessel Dimensions

4.1	Summer deadweight	
1	TPQ NA Selector	Applicable
2	Minimum	60000.00 Metric Tonnes
3	Maximum	315000.00 Metric Tonnes
4.2	Berthing displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.3	Alongside displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.4	State any deadweight/displacement exceptions	
1	TPQ NA Selector	Not applicable
2		NOT APPLICABLE
4.5	Cubic capacity (gas carriers)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.6	Length over all (LOA)	
1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	340.00 Metres
4.7	Beam	
1	TPQ NA Selector	Not applicable

2	Minimum	0.00
3	Maximum	0.00
4.8	Minimum parallel body length (PBL)	
1	TPQ NA Selector	Not applicable
2		0.00
4.9	Minimum PBL forward of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	6.00 Metres
3	Maximum	27.10 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Applicable
2	Minimum	0.60
3	Maximum	1.20
4	Specify whether height is from the deck or the drip tray	DRIP TRAY
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.50
3	Maximum	3.50

4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	Min. Distance Bridge Front To Center Manifold: 76.00 m

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	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>4 Headlines</p> <p>2 Forward Breastlines</p> <p>2 Forward Back-Springs</p> <p>4 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		Yes
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard

5.9	Are there any restrictions using synthetic mooring ropes?	
1		Yes
2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	As ISGOTT
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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
5.14	Are berthing aids provided?	
1		Yes
2	If 'Yes', state type of aids	MARIMATECH Laser Berthing System
5.15	State allowable speed of approach if applicable	
1		Only Parallel Approach to Achieve Berthing Line
1		0.65 Km/h
5.16	Is a mooring tension monitor fitted?	Yes
5.17	Are mooring hook quick release arrangements provided?	Yes
5.18	Chain stopper requirements	
1	Applicable	No
2		NOT APPLICABLE
5.19	Largest ship handled at berth to date	DS CROWN, IMO Nº 9179646, LOA 334,45 m.
5.20	Additional comments or information	NIL

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	6 Hard Arms No1 8" No2 16" No3 16" No4 16" No5 16" No6 8"
6.2	List grades handled at berth	Crude Oils/Condensates, Black Petroleum Products
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	CRUDE OIL, FUELOIL, GASOIL

6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharge (all grades) max. pressure allowed is 10 kg/cm2. Max. discharging rate (Crude Oil) 10.500 cm/h Loading Rates (typical, cm/h): Gasoil C 550; Fuel Oil 550.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Insulation flange is located at the loading arm and tested at 6 months basis. Refer. 8.3.9 OCIMF "Design and Construction Specification for Marine Loading Arms"
6.5	State storage type for LPG	Not applicable
6.6	Describe any terminal-specific requirements for vessel manifolds	Manifold Flange Hinges in Top Position "If any"
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	Manufactured by MIB (Italy). Ball valves closure and system release time is less than 15 sec. Manual and automatic (out of range) release 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.	- Shore Gangway : Hydraulically Operated (Telescopic System)
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 Backup by Voice
7.2	Is it required that terminal or shore representatives stay on board during operations?	

1		Yes
2	If 'Yes', state requirements including number of persons and their roles	Logistical Constraints: 1 Cargo Inspector for COW and Squeezing Operations Control
7.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	Tank cleaning is not allowed at berth by REPSOL TERMINAL Proceedings. C.O.W. is allowed (Port Captain authorization to be granted).
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	
1		Yes
2	If 'Yes', state temperature limits	Max. Temperature permitted at the Ship's Manifold: +60°C Min. Temperature permitted at the Ship's Manifold: -10°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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT

7.12 Are there any restrictions regarding Mercaptan content in Cargo Tanks?

- | | | |
|---|-----------------------------|------------------|
| 1 | | Yes |
| 2 | If 'Yes', state restriction | Reference ISGOTT |

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 handling Cargo |

7.14 Additional comments or information

NIL

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, operated by Port Authority via Agent.
(No Operated by REPSOL PETROLEO,S.A.) |

8.5 Are slop reception facilities available?

- | | | |
|---|---|---|
| 1 | | Yes |
| 2 | If 'Yes', state how received (e.g. Ex-Pipe, barge, truck) | Ex-pipe |
| 3 | State capacity of slop reception facilities (if applicable) | 0.00 Cubic metres |
| 4 | State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents) | No Allowed: Chemicals, Detergents and Cleaning Agents |

8.6 Are dirty ballast reception facilities available?

- | | | |
|---|--|---|
| 1 | | Yes |
| 2 | If 'Yes', state how received | Ex-pipe only in emergency. Repsol Terminal operates SBT tankers only. |
| 3 | State capacity of dirty ballast reception facilities | 0 |

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: No Operated by REPSOL PETROLEO,S.A. |

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	NIL
9 Berth Low Temperature Impact		
9.1	What is the typical range of temperatures the terminal operates in during a winter season?	-2 TO 20 °C
9.2	Which months of the year can ice be expected?	NONE
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	NOT APPLICABLE
9.4	State any limitations for cargo operations in sub-zero temperatures	NOT APPLICABLE
9.5	State the minimum allowable ambient temperature for safe cargo operations	NOT APPLICABLE
9.6	State the minimum temperature of cargoes handled	NOT APPLICABLE
9.7	State the minimum temperature for the emergency shut-down system to operate safely	NOT APPLICABLE
9.8	Does the terminal have its own resources for conducting icebreaker escort	No
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	No
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	No
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?	No
1		
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	No
1		
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	NO ICING. MEDITERRANEAN WEATHER.
10 Supplementary Information		
10.1	Berth transparency	Solid Wharf
10.2	Specify datum used for height and depth measurements in this section	Chart Datum (CD)
1		
2	If 'Other' please specify other	
10.3	Berth height above datum	3.50
10.4	Berth heading	090°(T) - 270°(T)
10.5	Width of the channel adjacent to the berth	450.00

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)
GER Nº 1 (3)	-220.00	32.00	3.50	100.00
GER Nº2 (2)	-174.00	32.00	3.50	150.00
GER Nº 3 (2)	-124.00	32.00	3.50	150.00
GER Nº 7 (2)	-11.00	6.00	3.50	150.00
GER Nº 8 (2)	-11.00	3.00	3.50	150.00
GER Nº 9 (2)	11.00	6.00	3.50	150.00
GER Nº 10 (2)	11.00	3.00	3.50	150.00
GER Nº 4 (2)	120.00	32.00	3.50	150.00
GER Nº 5 (2)	170.00	32.00	3.50	150.00
GER Nº 6 (3)	216.00	32.00	3.50	100.00

10.7 Position of mooring buoys

Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)
NIL	0.00	0.00	0.00	0.00

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	-68.00	-1.50	4.00	4.00	16.00
bb	-21.00	-1.50	4.00	4.00	16.00
cc	0.00	-1.50	4.00	4.00	16.00
dd	21.00	-1.50	4.00	4.00	16.00
ff	68.00	-1.50	4.00	4.00	16.00

10.9 Fender Reaction Data

Fender Id Number	Point No.	Compression (metres)	Load (tonnes)
NO DATA	0	0.00	0.00

10.10 Fender friction coefficient (μ)

0.40

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
660-K-F20/1	7.75	4.00	4.60	4.60	12.80
660-K-F20/2	4.75	4.00	4.60	4.60	12.80
660-K-F20/3	1.75	4.00	4.60	4.60	12.80
660-K-F20/4	-1.75	4.00	4.60	4.60	12.80
660-K-F20/5	-4.75	4.00	4.60	4.60	12.80
660-K-F20/6	-7.75	4.00	4.60	4.60	12.80

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
660-K-F20/1	27.10	6.00	4.60	4.60	12.80
660-K-F20/2	27.10	6.00	4.60	4.60	12.80
660-K-F20/3	27.10	6.00	4.60	4.60	12.80
660-K-F20/4	27.10	6.00	4.60	4.60	12.80
660-K-F20/5	27.10	6.00	4.60	4.60	12.80
660-K-F20/6	27.10	6.00	4.60	4.60	12.80

10.13	Additional comments or information	NIL
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Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E014

ReportName 4b7e853b-d71d-4f83-a62a-ca5af441968c

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E014

13 October 2017

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	NIL

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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	11.10 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 December 2012
2.6	Date next survey is due	31 December 2017
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	No any
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	0.00 Metres
2	State datum used	Chart Datum (CD)
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	8.12 Vertical Clearance of any Bridges/Power Cables/Vertical Obstructions NOT APPLICABLE

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 2012
3.3	Date next survey is due	31 December 2017
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	No any
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	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 |
| 2 | Provide details | |

3.11 Additional comments or information

NIL

4 Limiting Vessel Dimensions

4.1 Summer deadweight

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.2 Berthing displacement

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.3 Alongside displacement

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.4 State any deadweight/displacement exceptions

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | | NIL |

4.5 Cubic capacity (gas carriers)

- | | | |
|---|-----------------|-----------------|
| 1 | TPQ NA Selector | No restrictions |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

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 | Not applicable |
| 2 | Minimum | 0.00 |
| 3 | Maximum | 0.00 |

4.8 Minimum parallel body length (PBL)

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | | 0.00 |

4.9 Minimum PBL forward of manifold

- | | | |
|---|-----------------|----------------|
| 1 | TPQ NA Selector | Not applicable |
| 2 | | 0.00 |

4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	2.21 Metres
3	Maximum	17.00 Metres
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Applicable
2	Minimum	0.60
3	Maximum	1.20
4	Specify whether height is from the deck or the drip tray	DRIP TRAY
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.00
3	Maximum	0.00
4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	NIL

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 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	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	As ISGOTT
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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
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		NOT APPLICABLE
1		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 APPLICABLE
5.19	Largest ship handled at berth to date	YUHSO 230 m IMO No. 9172739
5.20	Additional comments or information	NIL

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	3 Loading Arms 10" ANSI 150 manufactured by CONNEX.
6.2	List grades handled at berth	Base Oils and Finished Lubricants, Biodiesel/Biosiesel Blends, Black Petroleum Products, Commercial LPG, Gasoils, Diesels and Kerosenes, Gasolines and Gasoline Blendstocks, Naphtha, Vegetable Oils
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	Usual products handled: GASOLINES, NAPHTHA, ETBE, GASOIL 10 PPM; GO C; LUBES, JET A-1, VACUUM GASOIL; FUEL OILS & VEGETABLE OIL.
6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharge (all grades) max. pressure allowed is 10 kg/cm ² . Loading Rates (typical, cm/h): Naphtha 1.100; GOA 1.100, Gasoil C 550; Jet A-1 600, Gasoline 600. VGO 550.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Insulation flange is located at the loading arm and tested at 6 months basis. Refer. 8.3.9 OCIMF "Design and Construction Specification for Marine Loading Arms"

6.5	State storage type for LPG	Not applicable
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	1 Manufactured by CONNEX. Ball valves closure and system release time is less than 15 sec. Manual and automatic (out of range) release 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.	Shore or Ship's gangway net rigged. If shore ganway is used, service fees are to be paid.
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 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?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	No allowed at berth by REPSOL Proceedings. No Crude Oil operations are available at this pier.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes
2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	
1		No
2	If 'Yes', state temperature limits	
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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
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 handling Cargo
7.14	Additional comments or information	NIL

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 Barge No Operated by REPSOL PETROLEO,S.A.
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, operated by Port Authority via Agent. (No Operated by REPSOL PETROLEO,S.A.)
8.5	Are slop reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Ex-Pipe (tank cleaning slops) or ex-barge.
3	State capacity of slop reception facilities (if applicable)	9999.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Allowed: Chemicals, Detergents and Cleaning Agents
8.6	Are dirty ballast reception facilities available?	
1		No
2	If 'Yes', state how received	Ex-pipe only in emergency. Repsol Terminal operates SBT tankers only.
3	State capacity of dirty ballast reception facilities	999999
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: No Operated by REPSOL PETROLEO,S.A.
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	NIL

9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	-2 TO 20 °C
9.2	Which months of the year can ice be expected?	NIL
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	NIL
9.4	State any limitations for cargo operations in sub-zero temperatures	NIL
9.5	State the minimum allowable ambient temperature for safe cargo operations	NIL

9.6	State the minimum temperature of cargoes handled	NIL
9.7	State the minimum temperature for the emergency shut-down system to operate safely	NIL
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		No
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		No
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		No
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		No
2	If 'Yes', provide details	
9.12	Does the terminal provide its own ice navigator/advisor?	
1		No
2	If 'Yes', provide details of how the service may be requested	
9.13	Additional comments or information	NO ICING, MEDITERRANEAN WEATHER.

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°(T) / - 325°(T)
10.5	Width of the channel adjacent to the berth	400.00
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(4)	-188.00	21.00	2.70	100.00
B(4)	-148.00	21.00	2.70	60.00
C	-68.00	1.50	2.70	60.00
D(2)	-68.00	12.00	2.70	60.00
E	-30.00	1.50	2.70	60.00
F	-10.00	1.50	2.70	60.00
G	30.00	1.50	2.70	60.00
H	47.00	1.50	2.70	60.00
I	65.00	1.50	2.70	60.00
J(2)	100.00	14.00	2.70	100.00
K(2)	135.00	8.00	2.70	100.00

10.7 Position of mooring buoys

Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)
NIL	0.00	0.00	0.00	0.00

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	-1.35	2.30	2.70	6.21
bb	-12.00	-1.35	2.30	2.70	6.21
cc	1.00	-1.35	2.30	2.70	6.21
dd	16.00	-1.35	2.30	2.70	6.21
ee	31.00	-1.35	2.30	2.70	6.21
ff	46.00	-1.35	2.30	2.70	6.21
gg	65.00	-1.35	2.30	2.70	6.21

10.9 Fender Reaction Data

Fender Id Number	Point No.	Compression (metres)	Load (tonnes)
NO DATA	1	0.00	0.00

10.10 Fender friction coefficient (μ)

0.20

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
660-K-2A	-3.00	6.00	3.20	6.00	13.90
660-K-2B	0.00	6.00	3.20	6.00	13.90
660-K-2C	3.00	6.00	3.20	6.00	13.90

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
		660-K-2A	17.00	2.20	3.20	6.00	13.90
		660-K-2B	17.00	2.20	3.20	6.00	13.90
		660-K-2C	17.00	2.20	3.20	6.00	13.90
10.13	Additional comments or information					NIL	



Oil Companies International Marine Forum

MTIS Programme

Berth TPQ

Berth TPQ: E015

ReportName 165e912d-2e32-4b23-9948-ef0b2683f9c5

Terminal Name: REPSOL PETROLEO, S.A. - CARTAGENA

Terminal Port: PUERTO DE CARTAGENA

Terminal Port Authority: Autoridad Portuaria de Cartagena

Country: Spain

Berth Name: E015

13 October 2017

1 Berth General

1.1	Berth name or number	E015
1.2	Berth type	
1		Wharf or Quay
2	If 'Other' please specify	
1.3	Terrestrial co-ordinates of manifold centreline	
1	Latitude	373352 North
2	Longitude	0005731 West
1.4	Berth users for liquid and gas cargoes	REPSOL PETROLEO,S.A.
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	NIL

2 Berth Approaches

2.1	Is pilotage compulsory?	
1		Yes
2	If 'Yes', state if any vessels are exempted	No vessels exempted
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	10.60 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 December 2012
2.6	Date next survey is due	31 December 2017
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	0.70 Meters
2	Percentage	7.10 Vessel static draft
3	Specify other UKC criterion where applicable	No any
2.11	Absolute maximum draught in berth approaches, if applicable	9.90
2.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	
1	Vertical clearance	0.00 Metres
2	State datum used	Chart Datum (CD)
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	NIL

3 Water Depth Alongside

3.1	Minimum controlled water depth alongside berth at chart datum	
1	Water depth	10.60 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 2012
3.3	Date next survey is due	31 March 2017
3.4	Minimum static under keel clearance (UKC) alongside berth	
1	Value	0.70 Meters
2	Percentage	7.10 Vessel static draft
3	Specify other UKC criterion where applicable	No any
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	9.90
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	NIL

4 Limiting Vessel Dimensions

4.1	Summer deadweight	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.2	Berthing displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.3	Alongside displacement	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.4	State any deadweight/displacement exceptions	
1	TPQ NA Selector	Not applicable
2		NIL
4.5	Cubic capacity (gas carriers)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.6	Length over all (LOA)	
1	TPQ NA Selector	Applicable
2	Minimum	0.00 Metres
3	Maximum	160.00 Metres
4.7	Beam	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.8	Minimum parallel body length (PBL)	
1	TPQ NA Selector	Not applicable
2		0.00
4.9	Minimum PBL forward of manifold	
1	TPQ NA Selector	Not applicable
2		0.00
4.10	Minimum PBL aft of manifold	
1	TPQ NA Selector	Not applicable

2		0.00
4.11	Bow to centre of manifold (BCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.12	Stern to centre of manifold (SCM)	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.13	Freeboard	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.14	Manifold height above water	
1	TPQ NA Selector	Applicable
2	Minimum	2.00
3	Maximum	13.00
4.15	Manifold to shipside rail distance	
1	TPQ NA Selector	Not applicable
2	Minimum	0.00
3	Maximum	0.00
4.16	Height of manifold above deck or drip tray	
1	TPQ NA Selector	Applicable
2	Minimum	0.60
3	Maximum	1.20
4	Specify whether height is from the deck or the drip tray	DRIP TRAY
4.17	Manifold spacing	
1	TPQ NA Selector	Applicable
2	Minimum	1.00
3	Maximum	0.00
4.18	Maximum air draft alongside	
1	TPQ NA Selector	Not applicable
2		0.00
4.19	Vessel's minimum derrick/crane Safe Working Load (SWL)	
1	TPQ NA Selector	Applicable
2		1.50 Metric Tonnes
4.20	Additional comments or information	10.6 Lenght over all (LOA): Max. 160.00 m considering nearby E015 occupied by another vessel 10.6 Lenght over all (LOA): Min. No Restrictions

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		Tyre fenders
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>1 Forward Back-Spring</p> <p>2 Sternlines</p> <p>1 After Back-Spring</p>
5.7	Describe any additional mooring requirements	None
5.8	Are there any restrictions using wire mooring ropes?	
1		Yes
2	If 'yes', provide details of restrictions in wire moorings as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
5.9	Are there any restrictions using synthetic mooring ropes?	
1		Yes
2	If 'yes'; provide details of restrictions in synthetic mooring ropes as part of the mooring pattern	Mooring Lines of different materials not to be used on the same Hook or Shore Bollard
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	As ISGOTT

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.	Compulsory
5.13	Details of any shore-provided mooring equipment	No shore mooring ropes or swamped moorings are to be secured on board
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		NOT APPLICABLE
1		Knots
5.16	Is a mooring tension monitor fitted?	No
5.17	Are mooring hook quick release arrangements provided?	No
5.18	Chain stopper requirements	
1	Applicable	No
2		NOT APPLICABLE
5.19	Largest ship handled at berth to date	EBERHARDT ARCTIC; IMO 9251676, 185 m.
5.20	Additional comments or information	NIL

6 Berth Equipment and Facilities

6.1	Number, type and size of cargo transfer connections	2 Loading Arms 8" ANSI 150 (Manufactured by WOODFIELD)
6.2	List grades handled at berth	Base Oils and Finished Lubricants, Gasoils, Diesels and Kerosenes, Gasolines and Gasoline Blendstocks, Naphtha
2	State specific grades handled at berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1).	BASE OIL SN-80, 100, 150, 500, BS, MES, GASOLINE, NAFTA, GOC, JET A-1, ETBE.
6.3	State transfer rate restrictions and back pressure for each cargo grade	For discharge (all grades) max. pressure allowed is 10 kg/cm ² . Loading Rates (typical, cm/h): Naphtha 1.100; GOA 1.100, Gasoil C 550; Jet A-1 600, Gasoline 600.
6.4	Are transfer connections fitted with insulation flanges?	
1		Yes
2	Provide details	Insulation flange is located at the loading arm and tested at 6 months basis.
6.5	State storage type for LPG	Not applicable
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	Manufactured by WOODFIELD. Ball valves closure and system release time is less than 15 sec. Manual and automatic (out of range) release 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's gangway net rigged
6.12	Does the berth have pollution response equipment?	
1		Yes
2	If 'yes' provide details	Containment boom(s) Skimming equipment Absorbent materials Dispersant stocks
6.13	Additional comments or information	NIL

7 Berth Operations

7.1	What is the primary and backup communication system between ship and terminal during cargo operations?	Primary Dedicated VHF CH17 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?	STOPPING CARGO: Wind 30 Knots for continuous periods of at least 10 minutes DISCONNECTING HARD ARMS: Wind 35 Knots for continuous periods of at least 10 minutes
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	No allowed at berth by REPSOL Proceedings. No Crude Oil operations are available at this pier.
7.5	Are there any berth specific requirements regarding tanker inerting procedures?	
1		Yes

2	If 'Yes', state requirements	All cargo tanks atmospheres of vessels operating at this terminal should be gas free or inert at positive pressure with oxygen content of 8% or less by volume. For vessels loading volatile cargo, tanks to be loaded should be under inert gas, at positive pressure with oxygen content of 8% or less by volume
7.6	Is there a temperature limit for cargo handled?	
1		No
2	If 'Yes', state temperature limits	
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		Yes
2	Provide details	Depending on Products and Under Customs Clearance
7.10	State details regarding any environmental restrictions applicable at the berth	Boiler soot blowing, Black Smoke and Sparks emitting from Funnel Stack Not Allowed
7.11	Are there any restrictions regarding Hydrogen Sulphide content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
7.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	
1		Yes
2	If 'Yes', state restriction	Reference ISGOTT
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 handling Cargo
7.14	Additional comments or information	NIL

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, operated by Port Authority via Agent. (No Operated by REPSOL PETROLEO,S.A.)
8.5	Are slop reception facilities available?	
1		Yes
2	If 'Yes', state how received (e.g. Ex-Pipe, barge, truck)	Ex-Pipe (tank cleaning slops) or ex-barge
3	State capacity of slop reception facilities (if applicable)	0.00 Cubic metres
4	State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)	No Allowed: Chemicals, Detergents and Cleaning Agents
8.6	Are dirty ballast reception facilities available?	
1		Yes
2	If 'Yes', state how received	Ex-pipe only in emergency. Repsol Terminal operates SBT tankers only.
3	State capacity of dirty ballast reception facilities	0
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: No Operated by REPSOL PETROLEO,S.A.
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	NIL

9 Berth Low Temperature Impact

9.1	What is the typical range of temperatures the terminal operates in during a winter season?	-2 TO 20
9.2	Which months of the year can ice be expected?	NO ONE
9.3	Specify any terminal requirements for vessel Ice Class notation and winterisation capabilities	NOT APPLICABLE
9.4	State any limitations for cargo operations in sub-zero temperatures	NOT APPLICABLE
9.5	State the minimum allowable ambient temperature for safe cargo operations	NOT APPLICABLE
9.6	State the minimum temperature of cargoes handled	NOT APPLICABLE
9.7	State the minimum temperature for the emergency shut-down system to operate safely	NOT APPLICABLE
9.8	Does the terminal have its own resources for conducting icebreaker escort	
1		No
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 No

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 No

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 No

2 If 'Yes', provide details

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

1 No

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

9.13 Additional comments or information

NO ICING, MEDITERRANEAN WEATHER.

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

057°(T) - 237°(T)

10.5 Width of the channel adjacent to the berth

200.00

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	-94.00	2.50	2.70	
B	-69.00	2.50	2.70	
C	44.00	2.50	2.70	
D	19.00	2.50	2.70	
E	6.00	2.50	2.70	
F	31.00	2.50	2.70	
G	56.00	2.50	2.70	
H	81.00	2.50	2.70	

10.7 Position of mooring buoys

Mooring Buoy ID Number	'x' Distance to Target Line F & A (m)	'y' Distance to Target Line athwart (m)	Height (m)	Max. Allow Load (tonnes)
NIL	0.00	0.00	0.00	0.00

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)
	1	85.00	-1.50	2.00	1.80	1.80
	2	60.00	-1.50	2.00	1.80	1.80
	3	48.00	-1.50	2.00	1.80	1.80
	4	37.00	-1.50	2.00	1.80	1.80
	5	24.00	-1.50	2.00	1.80	1.80
	6	10.00	-1.50	2.00	1.80	1.80
	7	-2.00	-1.50	2.00	1.80	1.80
	8	-14.00	-1.50	2.00	1.80	1.80
	9	-28.00	-1.50	2.00	1.80	1.80
	10	-40.00	-1.50	2.00	1.80	1.80
	11	-52.00	-1.50	2.00	1.80	1.80
	12	-65.00	-1.50	2.00	1.80	1.80
	13	-77.00	-1.50	2.00	1.80	1.80

10.9	Fender Reaction Data					
	Fender Id Number	Point No.		Compression (metres)	Load (tonnes)	
	CYLINDRICAL FENDER	1		0.40	250.00	
	CYLINDRICAL FENDER	2		0.45	300.00	
	CYLINDRICAL FENDER	3		0.52	325.00	
	CYLINDRICAL FENDER	4		0.60	340.00	

10.10	Fender friction coefficient (μ)				0.40	
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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
	660-K-F15/A	-1.75	4.50	4.50	4.60	13.90
	660-K-F15/B	1.75	4.50	4.50	4.60	13.90

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
	660-K-F15/A	13.00	2.00	4.50	4.60	13.90
	660-K-F15/B	13.00	2.00	4.50	4.60	13.90

10.13	Additional comments or information				NIL	
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