



# **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                                |

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|   |                  |                    |
|---|------------------|--------------------|
| 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<br>- 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

## MTIS Programme

### 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                         |
| <b>3 Water Depth Alongside</b> |   |                             |
| 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                |
| <b>4 Limiting Vessel Dimensions</b> |  |                    |
| 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,<br>Depending on nearby E018 occupied<br>10.6 Lenght over all (LOA): Min. No<br>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.<br/>Lenght:29.50 m Breadth 11.00.m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>Lenght 29.50 m Breath 11.00 m</p> <p>Tug V.B. TIRRENO 4,200 HP and 52 MT. Lenght<br/>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<br>No1 8"<br>No2 12"<br>No3 12"<br>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:<br>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 <sup>2</sup> .<br>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.<br>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)<br>Skimming equipment<br>Absorbent materials<br>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<br>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<br>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<br>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:<br>Shore side loading arm: to shore by gravity.<br>Ship's side loading arm: to ship by gravity (residual tank) |
| <b>8 Available Services</b> |   |   |
| 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.<br>(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.<br>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?   | 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 ( $\mu$ ) 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<br>REPSOL BUTANO<br>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.<br/>Lenght:29.50 m Breadth 11.00m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>Lenght 29.50 m Breath 11.00 m</p> <p>Tug V.B. TIRRENO 4,200 HP and 52 MT. Lenght<br/>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<br>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:<br>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 <sup>2</sup> .<br>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)<br>Skimming equipment<br>Absorbent materials<br>Dispersant stocks  |
| 6.13     | Additional comments or information  | NIL  |
| <b>7</b> | <b>Berth Operations</b>   |  |
| 7.1      | What is the primary and backup communication system between ship and terminal during cargo operations?                        | Primary Dedicated VHF CH17<br>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<br>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:<br>Shore side loading arm: to shore by gravity.<br>Ship's side loading arm: to ship by gravity<br>(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.<br>(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 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  | 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 |                   |
| 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                           | 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 ( $\mu$ )

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 |
|-----------------------|---------------|---------------|---------------------|--------------------|---------------------|
|-----------------------|---------------|---------------|---------------------|--------------------|---------------------|

---

|             |       |      |      |      |       |
|-------------|-------|------|------|------|-------|
| 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                         |
| <b>3 Water Depth Alongside</b> |   |                             |
| 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            |
| <b>4 Limiting Vessel Dimensions</b>                     |                                    |                |
| <b>4.1 Summer deadweight</b>                            |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   | Minimum                            | 0.00           |
| 3   | Maximum                            | 0.00           |
| <b>4.2 Berthing displacement</b>                        |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   | Minimum                            | 0.00           |
| 3   | Maximum                            | 0.00           |
| <b>4.3 Alongside displacement</b>                       |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   | Minimum                            | 0.00           |
| 3   | Maximum                            | 0.00           |
| <b>4.4 State any deadweight/displacement exceptions</b> |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   |                                    | NOT APPLICABLE |
| <b>4.5 Cubic capacity (gas carriers)</b>                |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   | Minimum                            | 0.00           |
| 3   | Maximum                            | 0.00           |
| <b>4.6 Length over all (LOA)</b>                        |                                    |                |
| 1   | TPQ NA Selector                    | Applicable     |
| 2   | Minimum                            | 0.00 Metres    |
| 3   | Maximum                            | 160.00 Metres  |
| <b>4.7 Beam</b>   |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   | Minimum                            | 0.00           |
| 3   | Maximum                            | 0.00           |
| <b>4.8 Minimum parallel body length (PBL)</b>           |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   |                                    | 0.00           |
| <b>4.9 Minimum PBL forward of manifold</b>              |                                    |                |
| 1   | TPQ NA Selector                    | Not applicable |
| 2   |                                    | 0.00           |
| <b>4.10 Minimum PBL aft of manifold</b>                 |                                    |                |
| 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<br>considering nearby E015 occupied by another<br>vessel<br>10.6 Lenght over all (LOA): Min. No<br>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.<br/>Lenght:29.50 m Breadth 11.00 m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>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 <sup>2</sup> .<br>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)<br>Skimming equipment<br>Absorbent materials<br>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<br>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<br>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:<br>Shore side hose: to shore by gravity.<br>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   | <b>Berth Low Temperature Impact</b>  |   |
| 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 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 <sup>º</sup> (T) - 237 <sup>º</sup> (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 ( $\mu$ )

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.-<br>Max 18.00 m<br><br>DRAFT RESTRICTIONS.-<br>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:<br>FWD 19.5 m<br>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   |
| <b>5 Mooring and Berthing Information</b> |  |   |
| 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.<br/>Lenght:29.50 m Breadth 11.00.m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. TIRRENO 4,200 HP and 52 MT. Lenght 28.00 m Breadth 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<br>No 1 8" WOODFIELD MK 9<br>No 2 16" WOODFIELD MK 9<br>No 3 16" WOODFIELD MK 9<br>No 4 16" WOODFIELD MK 9<br>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.<br>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.<br>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)<br>Skimming equipment<br>Absorbent materials<br>Dispersant stocks   |
| 6.13     | Additional comments or information   | NIL   |
| <b>7</b> | <b>Berth Operations</b>  |   |
| 7.1      | What is the primary and backup communication system between ship and terminal during cargo operations? | Primary Dedicated VHF CH17<br>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<br>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.<br>(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 ( $\mu$ )

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



# **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.<br>- REPSOL BUTANO, S.A.<br>- BUNGE<br>- ECOCARBURANTES<br>-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 |
|-----|---|------|

|     |   |    |
|-----|---|----|
| 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 | NOT APPLICABLE |
|------|------------------------------------|----------------|

#### 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 |  |
|-----|---------------------------------|--|

|      |  |                    |
|------|--|--------------------|
| 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  |
| <b>5 Mooring and Berthing Information</b> |  |  |
| 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.<br/>Length:29.50 m Breadth 11.00m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Length 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Length 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>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)<br>Skimming equipment<br>Absorbent materials<br>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<br>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<br>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    | <b>Berth Low Temperature Impact</b>   |   |
| 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  | 057 <sup>o</sup> (T) - 237 <sup>o</sup> (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 ( $\mu$ )

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 |
|--|--------------------------|--------------------------|---------------------|--------------------|---------------------|
| 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.



# **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.-<br/>         BERTHING: Max 20 knots<br/>         UNBERTHING: Max 20 knots</p> <p>WIND RESTRICTIONS NIGHT TIME.-<br/>         BERTHING: Max. 10 knots<br/>         UNBERTHING: Max. 20 knots</p> <p>SEA RESTRICTIONS NIGHT TIME.-<br/>         BERTHING: Max. Sea Wave Height 2 m<br/>         UNBERTHING: Max. Sea Wave Height 1 m</p> <p>VISIBILITY RESTRICTIONS.-<br/>         &gt; 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  |
| <b>5 Mooring and Berthing Information</b> |  |   |
| 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 N° 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<br>No1 8"<br>No2 16"<br>No3 16"<br>No4 16"<br>No5 16"<br>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.<br>Max. discharging rate (Crude Oil) 10.500 cm/h<br>Loading Rates (typical, cm/h): Gasoil C 550;<br>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.<br>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)<br>Skimming equipment<br>Absorbent materials<br>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<br>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<br>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<br>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   |
| <b>8</b> | <b>Available Services</b>   |   |
| 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.<br>(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                              |
| <b>9 Berth Low Temperature Impact</b> |   |                                  |
| 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. |
| <b>10 Supplementary Information</b>   |   |                                  |
| 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  | 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 N° 1 (3)                    | -220.00                     | 32.00                       | 3.50       | 100.00       |
| GER N°2 (2)                     | -174.00                     | 32.00                       | 3.50       | 150.00       |
| GER N° 3 (2)                    | -124.00                     | 32.00                       | 3.50       | 150.00       |
| GER N° 7 (2)                    | -11.00                      | 6.00                        | 3.50       | 150.00       |
| GER N° 8 (2)                    | -11.00                      | 3.00                        | 3.50       | 150.00       |
| GER N° 9 (2)                    | 11.00                       | 6.00                        | 3.50       | 150.00       |
| GER N° 10 (2)                   | 11.00                       | 3.00                        | 3.50       | 150.00       |
| GER N° 4 (2)                    | 120.00                      | 32.00                       | 3.50       | 150.00       |
| GER N° 5 (2)                    | 170.00                      | 32.00                       | 3.50       | 150.00       |
| GER N° 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 ( $\mu$ )

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





# **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<br>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.<br/>Lenght:29.50 m Breadth 11.00.m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>Lenght 29.50 m Breath 11.00 m</p> <p>Tug V.B. TIRRENO 4,200 HP and 52 MT. Lenght<br/>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:<br>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 <sup>2</sup> .<br>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.<br>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)<br>Skimming equipment<br>Absorbent materials<br>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<br>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<br>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 (m <sup>2</sup> ) |
|------------------|-----------------------------|--------------------------|------------------|-------------------|---------------------------------------|
| 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 ( $\mu$ )

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<br>Arm ID<br>Number | Max Op<br>Height | Min Op<br>Height | Max<br>Excursion<br>Surge | Max<br>Excursion<br>Sway | Max<br>Excursion<br>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                         |
| <b>3 Water Depth Alongside</b> |   |                             |
| 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            |
| <b>4 Limiting Vessel Dimensions</b> |  |                |
| 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<br>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.<br/>Lenght:29.50 m Breadth 11.00 m</p> <p>Tug V.B. ASDRUBAL 5,263 HP and 57.10 MT.<br/>Lenght 29.50 m Breadth 11.00 m</p> <p>Tug V.B. CARTAGENA 4,162 HP and 46.00 MT.<br/>Lenght 28.00 m Breadth 11.00 m</p> <p>Tug V.B. GLACIAL 5,263 HP and 57.1 MT.<br/>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  |
| <b>6 Berth Equipment and Facilities</b> |   |  |
| 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 <sup>2</sup> .<br>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)<br>Skimming equipment<br>Absorbent materials<br>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<br>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<br>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  |
| <b>8</b> | <b>Available Services</b>  |  |
| 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.<br>(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 ( $\mu$ )

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-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