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# SOP DPS 33

## Fuel transfer from Tanker/Barge to Tank Farm

### Revision List


Revision No.	Description	Written By/ Revised By	Date
0	First issue	E. Borg	04.07.2011
1	<ul style="list-style-type: none"> <li>- Updated Verifiers</li> <li>- Updated Responsibilities, specifically including the duties of the Shipping Officer</li> <li>- Minor changes to Section 5, especially section 5.3 to reflect current operations and procedures</li> </ul>	P. Conti	25.05.2015

Revised By:	Verified By:	Approved by:
<p>P. Conti [signed] Environmental Coordinator</p> <p>F. Cilia [signed] Shipping Officer</p>	<p>R. Briffa [signed] DPS Manager (operations)</p> <p>M. Degabriele [signed] Stores Coordinator</p>	<p>I. D'Amato [signed] DPS Station Manager</p>

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## 1. Aim and Scope


The objective of this SOP is to specify detailed rules, times and responsibilities related to the fuel transfer from tanker to the tank farm at Delimara Power Station.

## 2. References

EN ISO 14001:04, clause 4.4.6

## 3. Terms and Definitions

DPS	Delimara Power Station
SM	Station Manager
OM	Operations Manager
RE	Responsible Engineer - Operations Engineer
GO	Generation Officer
OP	Pumphouse Operator
Surveyor	Third party quantity surveyor
Chemist	Laboratory chemist
UM	Unloading Master
SOP	Standard Operating Procedure
ETA	Estimated Time of Arrival
EAAD	Electronic Administrative Accompanying Document
HFO	Heavy Fuel Oil

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## 4. Responsibilities

### Station Manager (SM) or a person delegated by him (OM)

- Responsible for the planning of fuel requirements and transfers to meet the demand of the station

### Responsible Engineer (RE)

- Responsible for the planning of activities when fuel transfer is scheduled

### Generation Officer (GO)

- Responsible to coordinate and supervise the activities scheduled by the Engineer

### Pumphouse Operators (OPs)

- Act in accordance with this procedure and any other related operating procedures

### Unloading Master (UM)


- Acts as an intermediary between Enemalta personnel and the ship representative.
- Ensures vessel adheres to safety regulations and procedures
- Checks estimate of product delivered
- Manages the fuel transfer operation at un/loading point in coordination with DPS personnel

### Chemist

- Analyses the fuel samples taken from the tanker

### Third Party Surveyor

- Must have a valid accreditation certificate to ISO 17025:2005 for the functions carried out.
- Is responsible to take samples from the tanker and to carry out analysis if required and to take all the necessary measurements and reading of parameters onboard the ship and at the tank farm in order to calculate the amount of fuel consigned and generate a report accordingly.

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### Shipping Officer


- Keeps records of fuel stocks of Electricity Division Installations
- Schedules fuel imports
- Informs authorized fuel suppliers when shipments of fuel are required
- Keeps close contact with authorized fuel suppliers to organize fuel shipments
- Takes the responsibility of clearing the nominated fuel vessels (Confirming that vessels are suitable for Enemalta's berths).
- Coordinates with fuel suppliers regarding the quality of fuel
- Submits a quality certificate to the SM for approval
- Informs installations management when ships are expected to be calling (ETA)
- Coordinates with installations management, local agents, port authorities and stand by gang in the organization of ship un/loading.
- Prepares shipping documents, including local customs documents (Warehousing /Excise duty entries)
- Follows up shipping customs documents (EAAD).
- Liaises with Enemalta demurrage/insurance claims department all supplier's claims

## 5. Operative Rules

### 5.1 *Fuel Transfer Preparation*

The Shipping Officer will forward to the SM the "loading port quality certificate" of the fuel loaded on the tanker which will be delivered to the Station, and a tentative delivery date and quantity. The SM will consult the RE to estimate and ensure the necessary void is available or attainable by the proposed scheduled date of the fuel transfer.

Once the confirmed date and quantity of consignment are received, the RE shall ensure that by the scheduled date, the unloading quay is free of any activities or obstacles that might hinder the transfer operation, and the designated receiving shore tank and its immediate ancillaries are available and healthy. Furthermore, any works on the receiving

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tank and adjacent unloading lines are to be terminated or postponed and any 'Work Permits' retrieved. In the case of the HFO unloading line, the trace heating circuits are checked and switched on 24 hours prior to arrival of tanker to establish the necessary temperatures for smooth fluid flow through all sections of the unloading line.

RE must also ensure that oil-spill response materials for land or sea spills, such as booms, spill kits, absorbent rolls, aggregate and waste disposal containers are readily available and easily accessible in case of any spillages. These are stored inside a lockable container whose key is placed on the main door of the container in a break glass enclosure.


Before arrival of the tanker/barge, the Shipping Officer shall inform the concerned parties namely; Customs, Surveyor and the respective Station Manager of the Estimated Time of Arrival (ETA) of the tanker and establish a time for the measurement and sealing of the tanks being used for the fuel transfer.

The RE shall forward instructions to the GO to prepare the pipeline configuration (Diesel/HFO) in such a way as to ensure that no fuel enters or leaves the Receiving tank/s during the transfer and the transferred fuel enters only in the designated tank/s (diesel consignments are usually transferred into more than one tank simultaneously).

The RE shall ensure the availability of the fire fighting system particularly at the tank farm and the unloading point.

The RE shall ensure maintenance on the diesel unloading line is performed regularly and the anchorage and mechanism of the HFO quick release valve are in order.

Fuel unloading operations at the quayside are performed under the supervision of the UM.

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## 5.2 *Fuel transfer operation*

Some time before the start of the actual fuel transfer, the RE shall endorse and issue a 'Fuel Transfer Form' (referenced in **Annex 1 and 2**) clearly indicating the Receiving Shore tank/s and the required pipeline and tank/s valve status necessary for the forthcoming transfer.

The surveyor shall confirm the correct configuration and seal, tag and record the status of all valves adjacent to receiving tank in the presence of Enemalta representative.


The surveyor shall proceed to sound the shore tank and take samples to establish the initial tank contents, witnessed by Customs and Enemalta personnel. All parties are to endorse the initial conditions recorded in the 'Fuel Transfer Form'.

The OPs shall make a final site inspection to confirm Receiving Tank/s bunds' drains are closed and area is safe. Upon berthing, the Unloading Master shall board the vessel and together with ship's assigned officer, conduct a joint inspection to ensure ship adheres to safety regulations as indicated in 'Ship/shore safety check list'.

Unloading Master shall maintain communications with vessels officer/s as agreed beforehand. If safety conditions are met, Unloading Master shall authorise the connection of the station's unloading flexible hosing to the ship's manifold.

Meanwhile the surveyor shall sound the holding tanks, witnessed by the concerned parties, to evaluate the quantities of product to be transferred, and draw a composite sample for comprehensive testing in their laboratories as requested by Enemalta.

The Unloading Master shall refer the observed quantities to RE and await confirmation of available storage space before authorising the initiation of the transfer. The UM shall record and endorse these notifications in a dedicated section in the 'Fuel Transfer Form'.

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Once the vessel chief confirms that the unloading can start, the Unloading Master will coordinate with the Pumphouse operators to release the padlocks on the unloading line isolation valves and signals the ship's crew to start pumps at a reduced rate and at a slowly incrementing pressure until check valves at unloading point and at the tank inlet are lifted. Once the OP signals the 'all clear' signal, the UM will instruct the ship's officer to reach a pre-established line pressure.

The pump house operators will walk along the unloading line inspecting every valve, seal or joint checking for evidence of any leaks. These visual checks are repeated every 2 hours for the duration of the transfer. Any observed leaks are reported to GO or RE who will ensure they are contained or otherwise set in motion the 'Emergency Plan' accordingly.


In the event of a considerable leak the operator shall contact the PO to stop pumping and shall proceed to isolate the pipeline immediately to contain the spill and call for assistance from the Emergency Response Team.

Petroleum Personnel will stand watch around the clock at the unloading point on the quay ready to close down the transfer immediately if any hazards are detected. The RE shall be informed immediately to take action according to the Emergency Plan. The RE shall follow the transfer progress from the station's Distributed Control System, and Control Room Operators who are constantly monitoring the system alarms shall draw the RE's attention if any Fuel tank level alarm ensues.

The UM shall be responsible to ensure that there are no contaminations to the port waters caused by discharges from the vessel. Such incidents are to be reported to the responsible authorities for remedial action.

Once the fuel transfer operation is complete, the connecting flexible hoses are purged from the vessels manifold towards the shore tank using compressed air and the station's unloading line isolation valve is closed and padlocked.



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The hoses are disconnected from the vessel's manifold and the blanking flange is replaced.

The hoses are lowered down to the quay and coiled properly.

The UM shall ensure that there are no leakages on the hoses, flanges, valves or unloading arm. Any leaks or spills shall be contained or cleaned before leaving the site and reported immediately to the RE.


Any resulting contaminated absorbent material used to contain oil spills shall be disposed of as hazardous waste using EWC code 15 02 02\*.

The consigned fuel is left to settle in the receiving tank/s for at least 24 hours or until the fluid movement is abated and any water content settles to the bottom.

The Surveyor checks for any water content (water is drained to a settling tank where it is left to stand for a long time before discharging to an interceptor) then proceeds to sound the tank/s, witnessed again by Customs and Enemalta representative. The Surveyor also endorses the recorded data in the relevant section in the 'Fuel Transfer Form'.

Fuel samples are drawn from the tank/s to establish the resulting density of the fuel mixture. Samples are also sent to the Chemist to measure the density.

The fuel is released for use when the tank contents have undergone quantity verification and qualitative analysis. The Surveyor shall forward the resulting fuel transfer quantities and quality to the OM for confirmation, who will subsequently forward the results of his checks to the SM who will authorise the use or otherwise of the fuel.

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### 5.3 Reporting

The official third party laboratory “Certificate of Quality report” and the “Shore Tank gauging report” are forwarded to the SM.

The Shipping Officer shall open a file for each fuel shipment. The following documents shall be placed in the file:

- 1) All email of correspondence between Enemalta, respective fuel supplier, Vessel agent, loading and discharging inspector and customs officer
- 2) All shipping documents (Bill of Lading, cargo manifest, quantity certificate, timesheets, ullages)
- 3) Loading Port Quality Certificate
- 4) Composite sample Accredited Quality Certificate
- 5) Surveyors’ Quantity Certificate
- 6) Any insurance & demurrage claims
- 7) Supplier’s invoice and payment documents (Payment instructions & debit advice)

The ‘Fuel Transfer Form’ compiled by the various parties throughout the transfer is to be retained by the Pumphouse operators until the complete process is terminated. It is then forwarded to the OM to be used for checks and then forwarded to the SM for reference and archiving.

## 6. Reference Documents


EP 1 – DPS Emergency plan

SOP DPS 29 - Waste Management Procedure

ISGOTT 5 Checklist (Tanker/Barge Ship/Shore Safety Checklist)

Quality Certificate

Quantity Certificate

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## **Annex 1**

Template DPS 33.1 – Heavy Fuel Oil Transfer Form

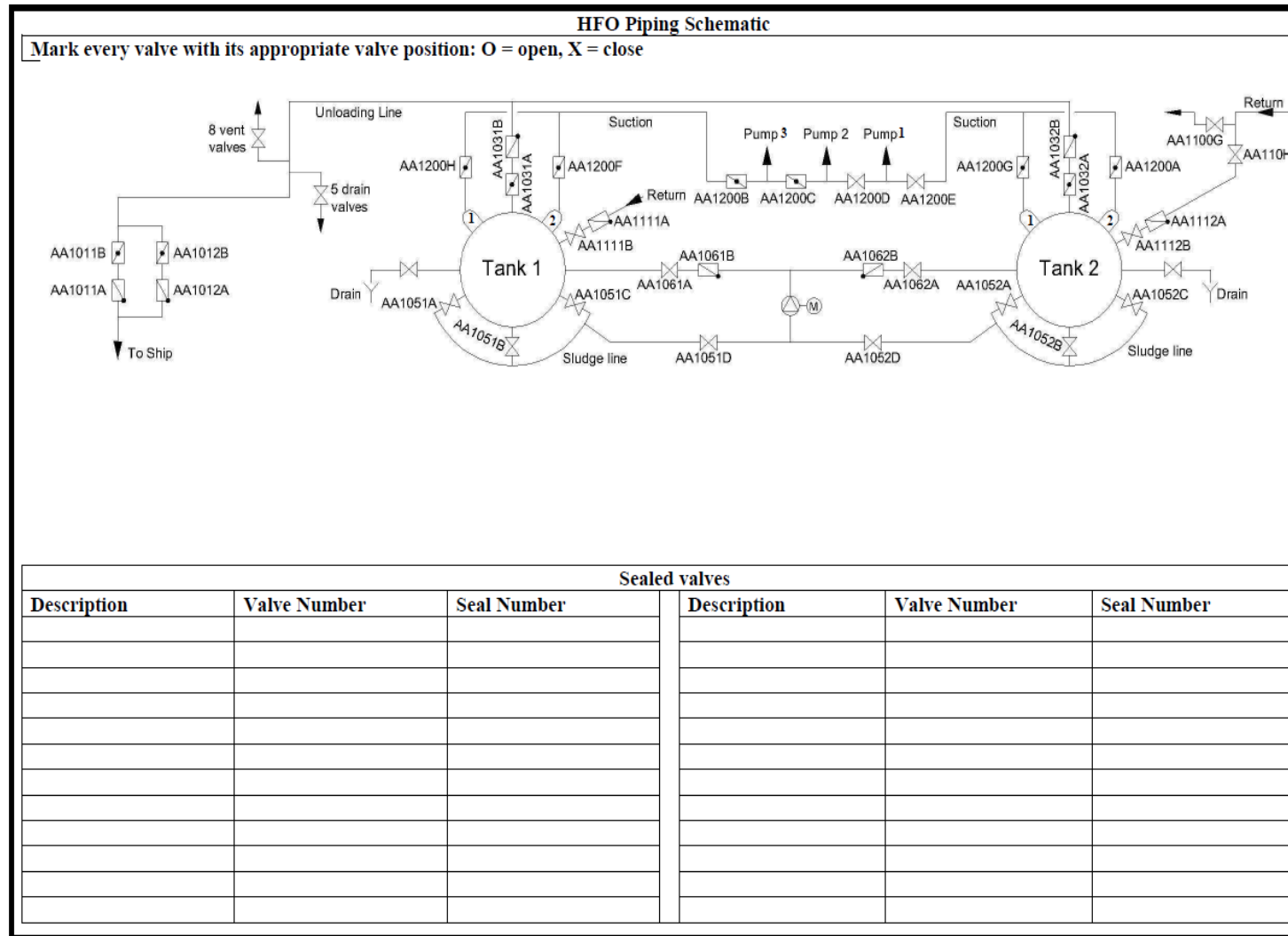



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HEAVY FUEL OIL (HFO) FUEL TRANSFER FORM									
Engineer in charge:		G.O. in charge:		Name of ship / Type of transfer:			Before:		After:
							Date:		
							Time:		
<b>BEFORE TRANSFER</b>	Surveyor Name and Signature:				<b>AFTER TRANSFER</b>	Surveyor Name and Signature:			
	Label:					Label:			
	Level:					Level:			
	Temperature:					Temperature:			
	Contents:					Contents:			
	Dip ruler ref:					Dip ruler ref:			
<ul style="list-style-type: none"> <li>The maximum level of HFO tank is approximately 19.7m, 26,600tonnes at T=50°C, <math>\rho_t=0.98</math></li> </ul>									
Petroleum division officer:				Consignment quantity:			Estimated duration:		
<ul style="list-style-type: none"> <li>Maintain pressure below 6.5bar</li> </ul>							Signature:		
Operator	Date	Time	tank label	Ruler level	Dip Level 1	Dip Level 2	Dip Level 3	Temperature	
<ul style="list-style-type: none"> <li>Dip readings taken with reference to the datum</li> <li>Scale ruler should be well cleaned before the dip reading is taken</li> <li>The dip reading should be confirmed three times</li> </ul>					Operator Before Transfer Signature:		Operator After Transfer Signature:		



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## Annex 2

Template DPS 33.2 – Diesel Oil Fuel Transfer Form



LIGHT FUEL OIL (DIESEL) FUEL TRANSFER FORM									
Engineer in charge:		G.O. in charge:		Name of ship / Type of transfer:			Before:		After:
							Date:		
							Time:		
BEFORE TRANSFER	Surveyor Name and Signature:				AFTER TRANSFER	Surveyor Name and Signature:			
	Label:					Label:			
	Level:					Level:			
	Temperature:					Temperature:			
	Contents:					Contents:			
	Dip ruler ref:					Dip ruler ref:			
<ul style="list-style-type: none"> <li>The maximum level of Diesel Tank 1,2,3 is approximately 11.2m, 6,800tonnes at T=25 °C, <math>\rho_r=0.84</math></li> <li>The maximum level of Diesel Tank 0 is approximately 11m, 6,800tonnes at T=25 °C, <math>\rho_r=0.84</math></li> </ul>									
Petroleum division officer:				Consignment quantity:			Estimated duration:		
<ul style="list-style-type: none"> <li>Maintain pressure below 6.5bar</li> </ul>							Signature:		
Operator	Date	Time	Tank label	Ruler Level	Dip Level 1	Dip Level 2	Dip Level 3	Temperature	
<ul style="list-style-type: none"> <li>Dip readings taken with reference to the datum</li> <li>Scale ruler should be well cleaned before the dip reading is taken</li> <li>The dip reading should be confirmed twice (reading taken three times).</li> </ul>					Operator Before Transfer Signature:		Operator After Transfer Signature:		

