

Programme: 100m LNG Dual-fuel Ro-Ro Passenger Ferry

Review Period: September 2022

<u>Name</u>	<u>Job Title</u>	
[Redacted]	[Redacted]	
[Redacted]	[Redacted]	
[Redacted]	[Redacted]	

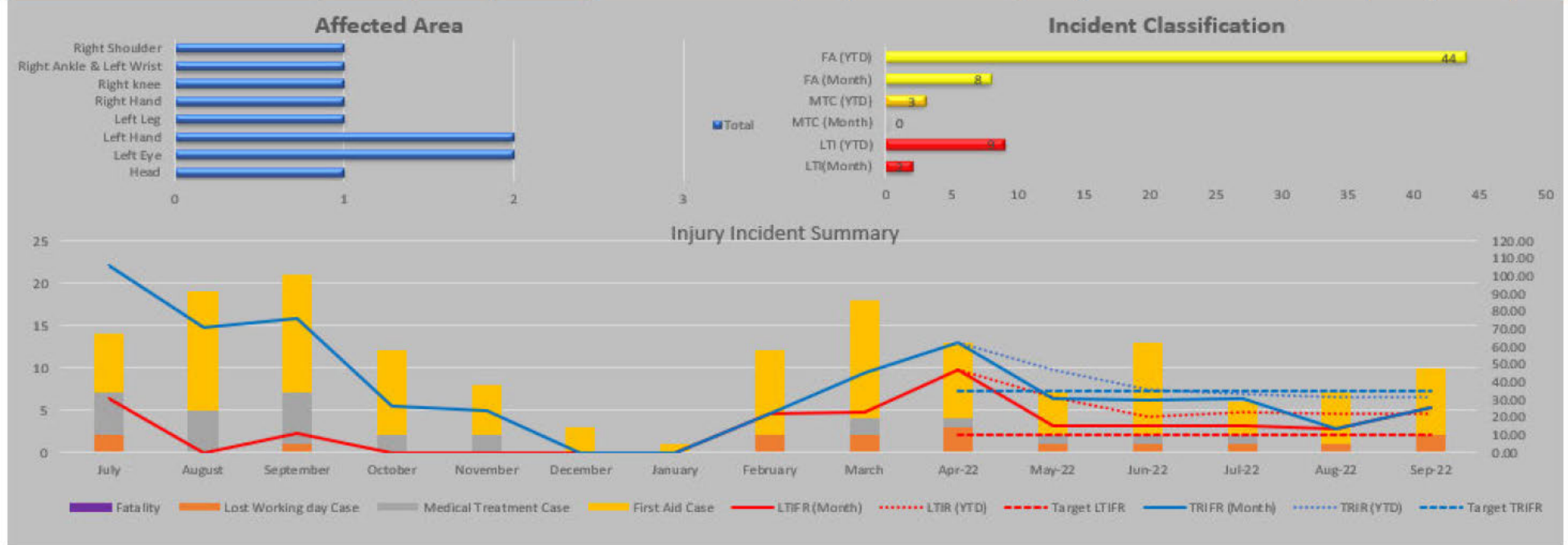


- **Minutes from previous meeting**
- **HSE**
- **Programme**
- **Production**
- **Engineering**
- **Commissioning**
- **Quality**
- **OOR's**
- **Risk Register comments (circulated for review)**
- **Variations to Contract**
- **CMAL Comments**
- **AOB**

HSE Dashboard

* Per 1,000,000 working hours
 † Estimated no. of hours worked

Incident Statistics	Target	Actual		Fatal	0	Fire	0	Proactive Statistics	Target		Actual	
	2022	Month	YTD						Month	2022	Month	YTD
Number of Hours Worked**	870,000	78296	413144	RIDDOR	0	Damage	0	Number of YSYD Cards	>50	>600	66	239
Number of Lost Time Incidents (> 3 Days)	< 9	2	9	LTI (> 3days)	2	Environmental	0	Toolbox Talks Issued	2	24	2	10
Lost Time Incident Freq Rate*	< 10.14	25.54	21.78	Medical Treatment (MTC)	0	Serious Near Miss	0	Housekeeping Inspections	4	48	4	17
Number of Recordable Injury Incidents	< 30	2	13	First Aid	8	YSYD	66	Emergency Drills Completed	>4	>48	2	13
Total Recordable Injury Incident Rate*	< 35.0	25.54	31.47	Total Injuries	10	TOTAL Incidents	10	Vessel Compliance Checks	30	420	30	130



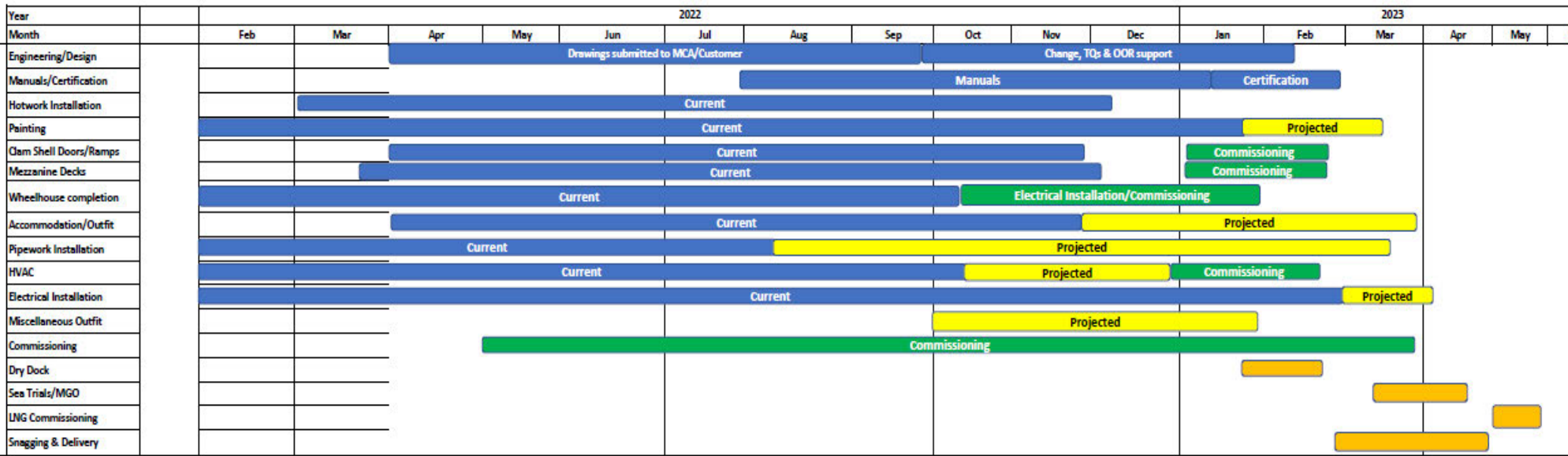
Progress Update:

- Two further LTIS this month, not severe injuries but caused by carelessness and poor work practices again. There requires a focus from all on these poor work methods to prevent further injuries.
- JH143 survey completed by FMPG insurers, a few recommendations for improvement were made and these will be actioned imminently however they are satisfied to continue insurance cover.
- Further operational reviews and focus on risk assessments will continue with multiple document reviews underway.
- Weekly HSE Walk rounds have been positive so far with both positive observations and areas required to improve.
- Vessel Daily HSE inspections continue to be valuable on both vessels.

801 Level 0 Programme



Level 0 - Programme



801



Critical Path



ID	Phase	Task Name	Start	Finish	RAG	% Work Complete	Comments	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23
1	Phase 1	Hotwork Completion	Mon 12/09/22	Wed 30/11/22	Green	90%	178 Workpacks Remaining.									
2	Confidence level - 75%	Switchboards / MCC's & UPS's	Mon 12/09/22	Tue 11/10/22	Green	0%	Redacted to input									
3		Emergency Generator Load Test	Tue 18/10/22	Thu 20/10/22	Green	0%	Trial run complete. Generator operation load test awaiting.									
4		HT/LT System	Mon 03/10/22	Fri 04/11/22	Green	99%	System filled for 10th Oct. Operationally available.									
5		Harbour Generator	Tue 18/10/22	Fri 21/10/22	Green	0%	First run 18th Oct									
6		Auxiliary Generators	Mon 14/11/22	Wed 23/11/22	Green	0%	On track, pipe systems to complete.									
7		Main Engines	Wed 23/11/22	Mon 12/12/22	Green	0%	On track, pipe systems to complete.									
8		Gearbox & Propulsion Commissioning	Wed 23/11/22	Mon 12/12/22	Green	0%	On track, pipework and flushing to complete.									
9		Preliminary Inclining Test	Fri 25/11/22	Fri 25/11/22	Green	0%	On track.									
10	Phase 2	Generator Load Test	Tue 13/12/22	Fri 23/12/22	Green	0%	On track, awaiting aux and main engines to complete.									
11	Confidence level - 80%	PMS Set Up	Thu 05/01/23	Sun 22/01/23	Green	0%	Redacted to comment.									
12		Fwd & Aft Thrusters	Mon 23/01/23	Wed 01/02/23	Green	0%	On track. Awaiting Redacted plan.									
13		Steering Gear	Sun 22/01/23	Sat 11/02/23	Green	0%	Awaiting Redacted for commissioning.									
14		Stabilisers	Sat 11/02/23	Thu 23/02/23	Green	0%	On track.									
15		Bilge / Ballast System	Sun 22/01/23	Wed 01/02/23	Yellow	85%	Pipe to comment.									
16		Fuel Oil System & Purifiers	Mon 10/10/22	Sun 19/02/23	Yellow	98%	Testing and flushing required, awaiting date.									
17		Lub Oil System & Purifiers	Mon 17/10/22	Sun 19/02/23	Yellow	100%	Testing and flushing required, awaiting date.									
18		Domestic Fresh Water	Wed 01/02/23	Mon 06/02/23	Yellow	84%	Pipework to complete, chlorification required.									
19		Black Water System	Mon 06/02/23	Sat 11/02/23	Yellow	77%	On track.									
20		Accommodation Outfit	Mon 03/10/22	Tue 07/03/23	Green	70%	On track.									
21	Phase 3	Galley, Servery & Bar	Mon 07/11/22	Wed 01/02/23	Green	0%	Outfit to comment.									
22	Confidence level - 90%	Navigation Systems & External Comms	Mon 28/11/22	Tue 14/03/23	Green	0%	Redacted to comment.									
23		Internal Comms & Entertainment Systems	Mon 05/12/22	Tue 21/03/23	Green	0%	Redacted to comment.									

801 - Critical Path - Level 1
Issue : 18 September 2022

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
Summary		Inactive Task		Duration-only		Finish-only			

Critical Path

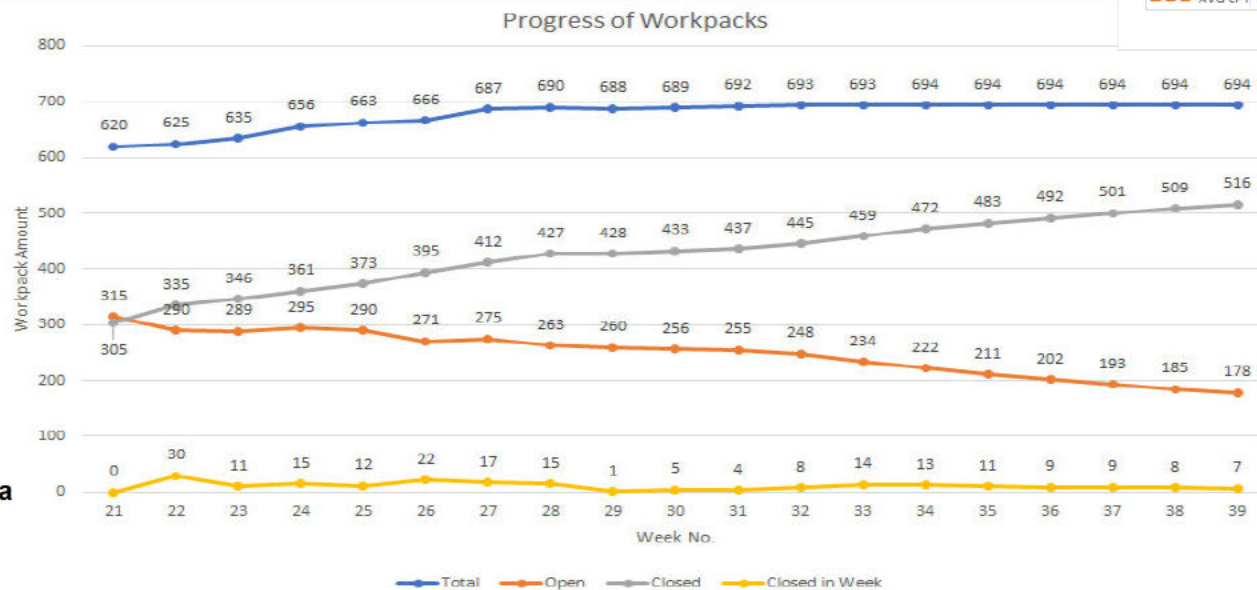
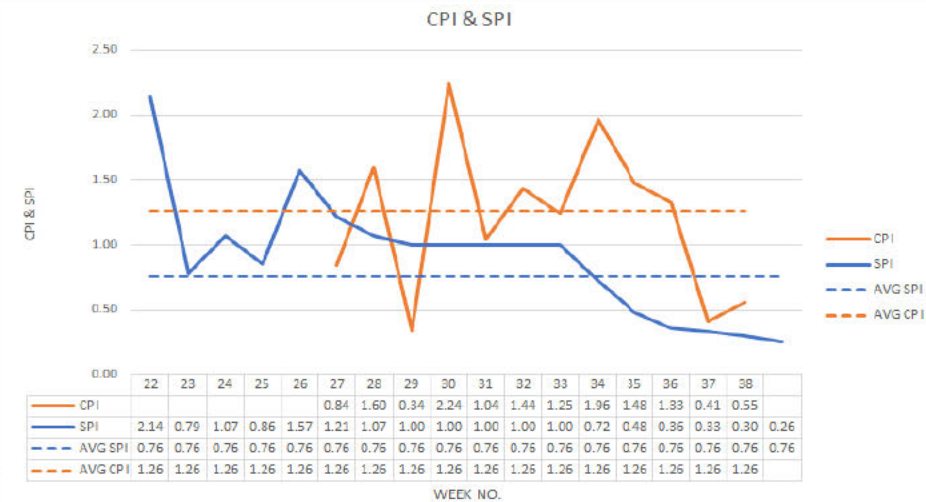
ID	Phase	Task Name	Start	Finish	RAG	% Work Complete	Comments	Timeline (Sep '22 to May '23)											
24		HVAC & Cold Stores	Mon 12/12/22	Sun 26/02/23		68%	[Redacted] comment.	[Gantt bar from Dec 12 to Feb 26]											
25		Safety Systems	Mon 14/11/22	Tue 24/01/23	Yellow	0%	On track. Pending [Redacted] plan.	[Gantt bar from Nov 14 to Jan 24]											
26		Passenger & Crew Lifts	Mon 14/11/22	Sun 19/02/23		0%	Structural and outfit to comment	[Gantt bar from Nov 14 to Feb 19]											
27		Fire Fighting & Detection	Mon 16/01/23	Tue 14/02/23		78%	On track. Pending [Redacted] plan.	[Gantt bar from Jan 16 to Feb 14]											
28		Shell Side Doors	Mon 05/12/22	Thu 02/02/23	Green	0%	On track.	[Gantt bar from Dec 05 to Feb 02]											
29		Clam Shell Doors	Mon 14/11/22	Tue 07/02/23	Yellow	40%	Structural to comment.	[Gantt bar from Nov 14 to Feb 07]											
30	Phase 4	Ramps (Fwd & Aft)	Wed 30/11/22	Thu 16/02/23	Yellow	0%	Aft ramp awaiting pipework completion, forward ramp to inst	[Gantt bar from Nov 30 to Feb 16]											
31	Confidence level - 100%	Deck Machinery (Windlars & Bollards)	Mon 06/02/23	Wed 15/02/23		0%	On track. Pending [Redacted] plan.	[Gantt bar from Feb 06 to Feb 15]											
32		Inclining Test	Fri 17/02/23	Fri 17/02/23	Green	0%	On track.	[Gantt bar from Feb 17 to Feb 17]											
33		Basin Trials (Propulsion)	Mon 20/02/23	Wed 01/03/23		0%	[Redacted] comment, complete after drydock.	[Gantt bar from Feb 20 to Mar 01]											
34		Drydock	Mon 20/02/23	Thu 02/03/23		0%	[Redacted] comment, dates clash with drydock.	[Gantt bar from Feb 20 to Mar 02]											
35		MES Deployment	Mon 06/03/23	Mon 06/03/23	Yellow	0%	Installation to be finished, on track.	[Gantt bar from Mar 06 to Mar 06]											
36		Mezz Deck Load Test	Mon 13/03/23	Fri 17/03/23		0%	Awaiting installation.	[Gantt bar from Mar 13 to Mar 17]											
37		Dock Trial (Pre-Sea Trial)	Tue 04/04/23	Tue 04/04/23		0%	Dependant on drydock and basin trials.	[Gantt bar from Apr 04 to Apr 04]											
38		Builder Sea Trials	Tue 11/04/23	Fri 14/04/23		0%	Dependant on plan.	[Gantt bar from Apr 11 to Apr 14]											
39		Owners Sea Trials	Tue 18/04/23	Thu 20/04/23		0%	Dependant on builders sea trials.	[Gantt bar from Apr 18 to Apr 20]											
40		LNG Bunkering & Commissioning	Tue 25/04/23	Mon 15/05/23		0%	Pipe to comment	[Gantt bar from Apr 25 to May 15]											
41		LNG Dock Trial	Tue 16/05/23	Tue 16/05/23		0%	Pipe to comment	[Gantt bar from May 16 to May 16]											
42		LNG Sea Trials	Wed 17/05/23	Sat 20/05/23		0%	Pipe to comment	[Gantt bar from May 17 to May 20]											

801 - Critical Path - Level 1
Issue : 18 September 2022

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Mile stone		External Milestone		Manual Task		Start-only		Manual Progress	
Summary		Inactive Task		Duration-only		Finish-only			

801 Hotwork Work Packs

- Currently 178 remaining to completion.
- Composite team now in place to support the enablement of remaining work packs.
- Mini plan in place for completion of hotwork in Bow Door area, scaffold continues to be an issue. Support currently being arranged through subcontractor.
- Welders/Fabricators now working days/nights to drive completion dates.



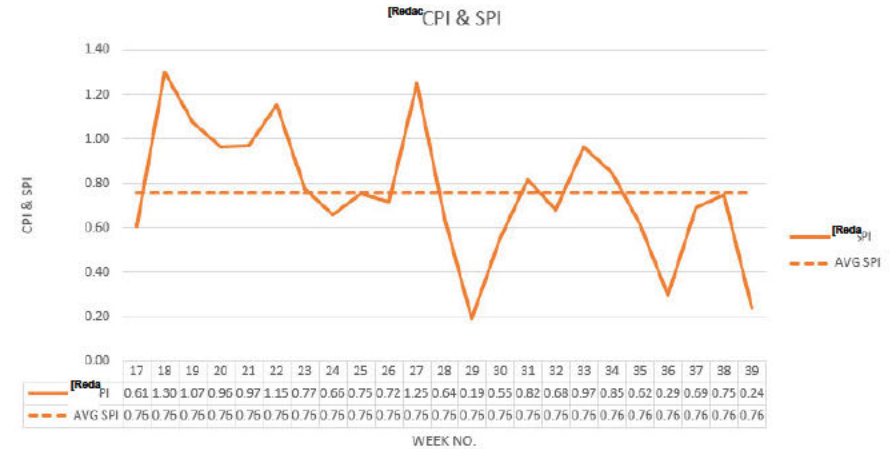
SPI week 39: 0.26
Average SPI: 0.76

CPI week 39: 0.55
Average CPI: 1.26

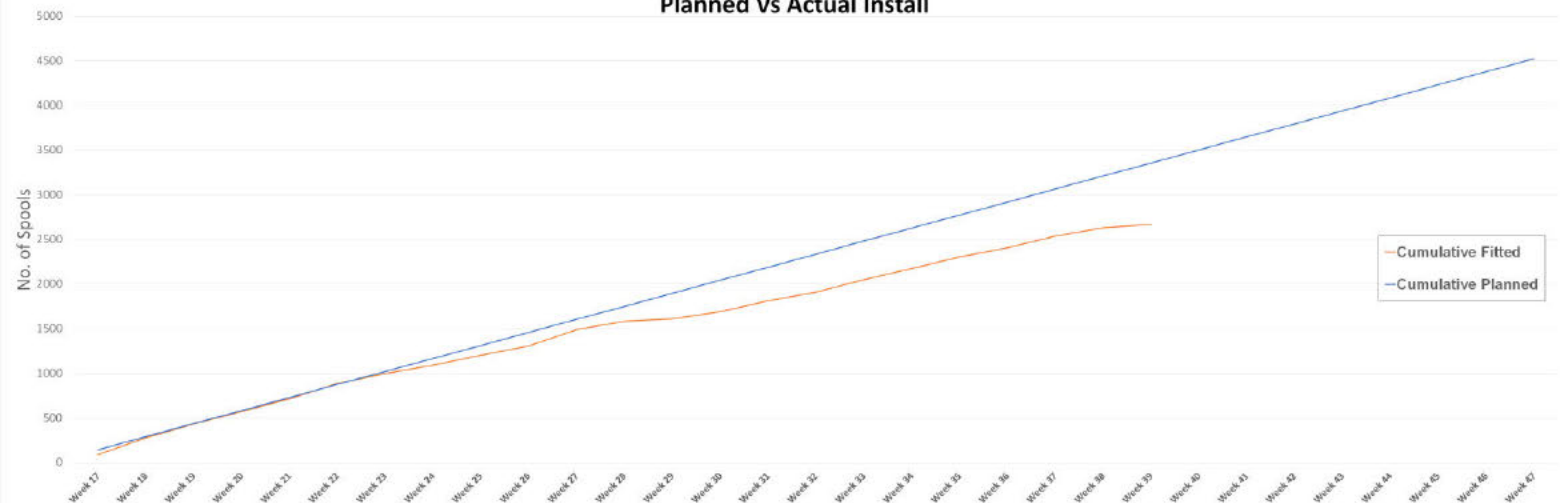
Pipework Installation

[Redacted] :

- [Redacted] currently modifying various systems including fuel oil system, HTLT System, scupper drain system, black water system leading to reduced number of spools being claimed compared to previous months.
- Fuel system modification progressing well.
- HTLT planned to be completed and tested by end of week 42- On track
- [Redacted] encountered sequencing issues potentially leading to rework. Integration of plans by planning to address this issue.
- [Redacted] raised issues with lack of material due to procurement process lead time. Integration of plans should also address this as material can be ordered to time delivery with [Redacted] use of material on site.



Planned Vs Actual Install



Total spools to install: 4526

Week 39:
 Cumulative planned: 3358 (74%)
 Cumulative installed: 2669 (59%)

SPI for week 39: 0.24
 Average SPI: 0.76

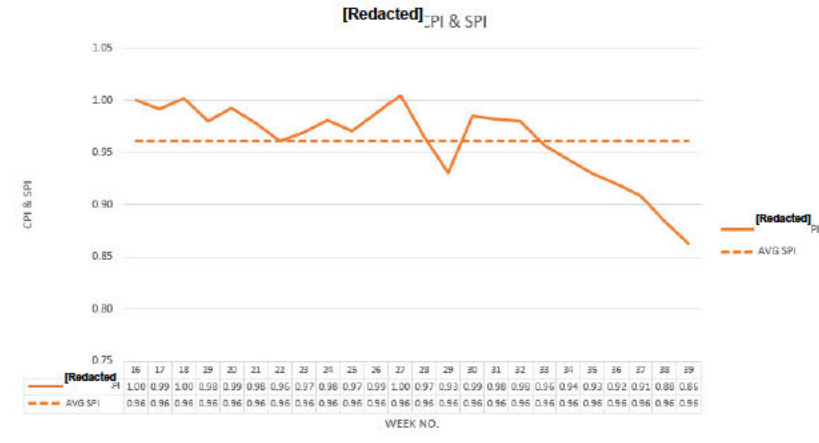
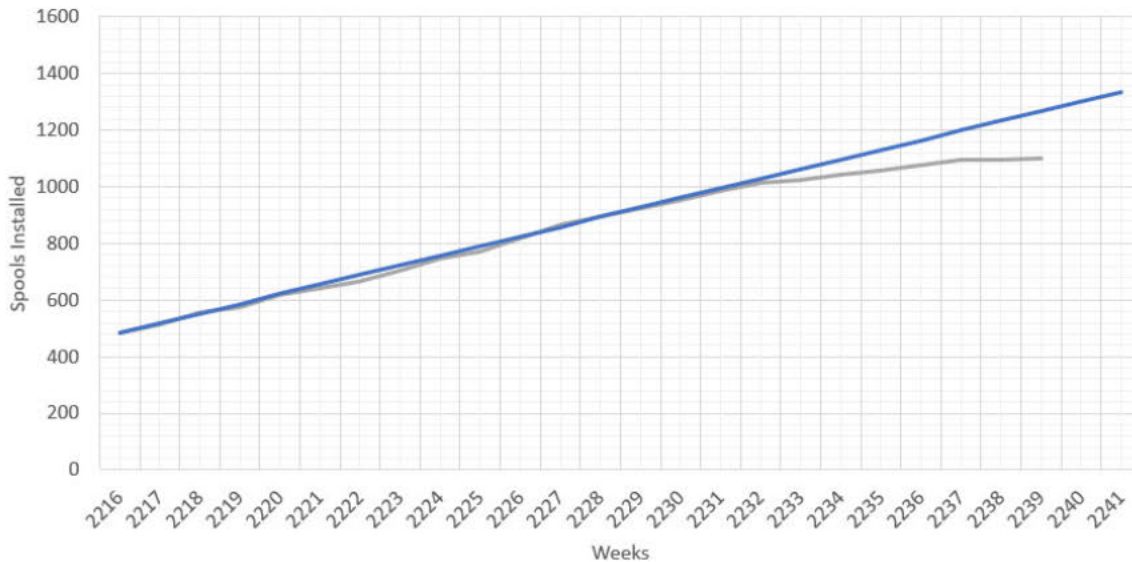
Collating data on CPI.

Pipework Installation

[Redacted]

- Currently progressing well with Fwd and Stern doors Hydraulic piping.
- Issue in forward ramp area highlighted, resolution now in place with areas switching from Carbon steel piping to Stainless steel.
- Reduced team onsite contributing to reduced install rate, team now back to full complement to assist drive to completion

[Redacted] install S-curve



Total planned spools to completion: 1346

Week 39:

Cumulative planned 1267 (95%)
Cumulative installed 1846 (83%)

SPI week 39: 0.86
Average SPI: 0.96

Pipework Installation

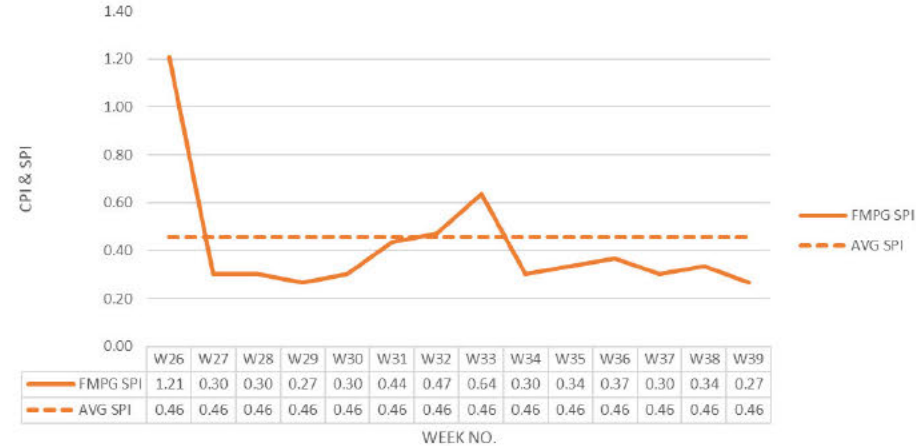
FMPG

FMPG team have been providing support to commissioning team and carrying out modifications hence to drop off in overall install.

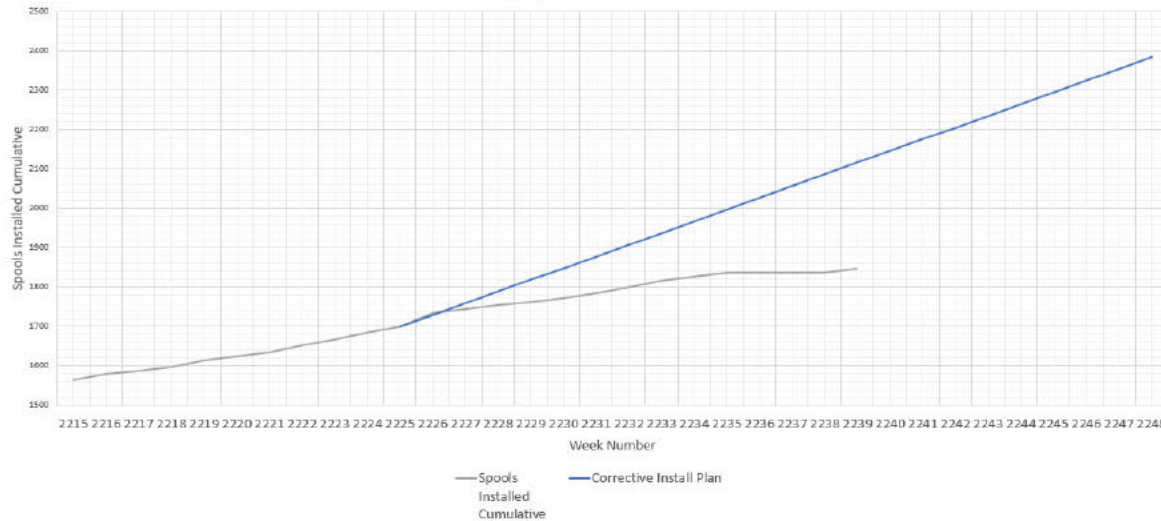
Currently sourcing manpower to support install to completion,

- Full completion achieved as planned on FW and HT systems in zones 3 & 7, ^{Redacted} now testing before commissioning.
- Pipework in way of port silencer now complete, allowing silencer to be re-installed.

FMPG CPI & SPI



FMPG Spools Installed by Week



Total planned spools: 2384

Week 39:

Cumulative planned 2116 (89%)

Cumulative installed 1846 (77%)

801 [Redacted]-Cable Install

- [Redacted] now working to recovery plan.
- Additional manpower now in place to support recovery plan with slight improvements in install rate.
- [Redacted] have been instructed to provide S Curves for Glanding/Terminating and Testing to give complete picture.
- Progress being closely monitored through POTD and fortnightly meetings with [Redacted] senior team onsite.
- SPI to be provided on next report against revised plan.

Install to week 39:

Total cable to install: 246,093 metre
 Cumulative planned week 39: 121,593 metre (49.4%)
 Cumulative actual week 39: 126,158 metre (51.3%)

[Redacted] Ship 801 Cable Pulling

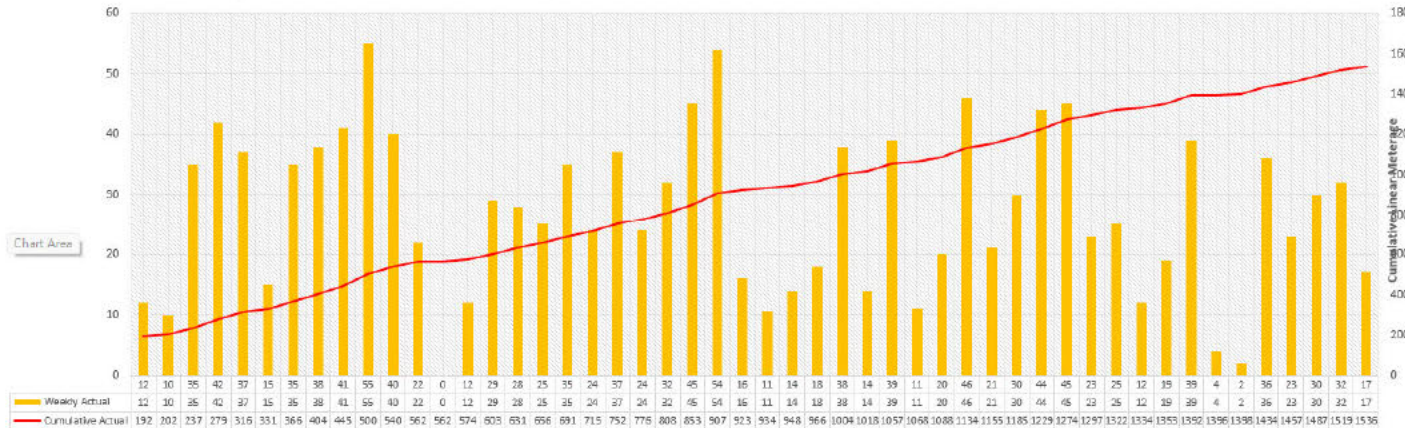


HVAC Install

- First fix of the passenger and crew accommodation duct installation complete.
- Supply duct installation in galley now being progressed.
- [Redacted] have been affected by the large volume of change across 801 however the design is in progress to be finalised which should address this.

Zone	Total Metreage	Installed Metreage	%age Complete
1	32	23	71.9%
2	35	26	74.3%
3	113	63	55.8%
4	94	60	63.8%
5	14	0	0.0%
6	378	69	18.3%
7	0	0	#DIV/0!
8	280	234	83.6%
9	1096	803	73.2%
10	198	175	88.4%
11	115	115	100.0%
Totals	2355	1568	66.6%

HVAC Installation Progress 'S' Curve



Engineering & Steelwork [Redacted] Scope

- New supervision and team onto clamshell doors which has accelerated progress in this area
- Scaffolding being reviewed to support last items for completion such as seals and breasthooks
- Stainless steel work now being progressed in the area

Steelwork

- Nightshift and weekend teams now facilitating dayshift
- Final items in Steering Gear (102) being agreed between Production and CMAL for zone completion
- Recesses/inserts on Car & Mezzanine Decks progressed now equipment has been shipped in
- Hotwork IWO silencer complete and ready for shipping
- 7 deck lights and goosenecks been agreed and installed; pushing towards full hotwork completion in this area
- Bonded windows structure completed successfully for install by sub-contractor

Specialist Subcontractors

- Specialist sub-contractors [Redacted] & [Redacted] returned to site To reengage on LNG install.
- [Redacted] planned onsite mid November to support Clam Shell doors & Mezzanine decks.

Electrical

- [Redacted] recovery plan now in place.
- Additional manpower now showing improved install rates for cable.
- Ongoing work glanding terminating and testing in ECR.
- Cable install ongoing in Aux Machine Space.
- Scaffolding issues in ECR- now resolved.
- Nightshift continuing to pull cables below 3 deck.
- Commissioning plan still being made priority.

Pipework

- Fuel oil mod near completion.
- Installation of boiler pipework currently at 60%.
- Crankcase modifications spools fabricated and now installed.
- Pipework Pressure Testing Scope Ramped Up With Further Planned Up-man to Increase Test Paths Completion.

801 Issues, Challenges & Successes

- Issues

- Turbo chargers to refurbish prior to running (circa 9 weeks for parts).
- Main propulsion OD boxes to be returned to [Redacted] for refurb.

- Challenges

- Clam shell door external scaffold to be deigned.
- Fire main and accommodation to resolve.
- Level of change being managed.
- Material availability.
- Driving OORs to closure.
- Cable installation & termination.
- Production drawings closeout – design freeze.

- Successes

- Bonded windows now fitted.
- Ran main air compressors.
- Charged starting air bottles to 30 bar.
- Solution in place for Fuel oil mod.

802 Level 0 Programme



Level 0 - Programme		Ship Construction																								Ship Delivery into Service									
Year	2022												2023												2024										
Month	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May								
Engineering/Design (ICE)				█																															
Structure (Unit Construction)	█			█																															
Structure (Unit Erection)	█																																		
Structure (Unit Consolodation)	█																																		
Hotwork Installation	█								█																										
Clam Shell Doors/Ramps (TTS/FM)								█																											
Mezzanine Decks												█																							
Pipe Manufacture							█																												
Pipework Installation								█																											
HVAC									█																										
Electrical Installation									█																										
Outfit											█																								
Launch Prep & Launch				█																															
Commissioning																█																			
Dry Dock																																			
Sea Trial																																			
Snagging/ Delivery/ In Service																																			

Manufacturing Sheds

Manufacturing of 6 and 7 deck aluminum units ongoing: A6/6, A7/6, A8/6, A9/6, A10/6, A11/6, A4/7.

Erection and Consolidation

Steel units 89 and 90 have been fully erected on to ship. Unit A11/5 has been lifted on to the ship. Consolidation to follow.

Consolidation of 5 deck underway.

- Consolidation of several units in progress: A7/5, A8/5, A9/5, A10/5, A5/6, U85, U86.

Outfitting

This month the main focus is structural hotwork in the lift shafts. Manholes, lashing pots, embarkation doors and pilot doors are also in progress. Various work packs are on hold due to the ongoing design review by [Redacted] on 802.

Pipework Installation

[Redacted] sign off of over boards is in progress, penetrations still being burned and fitted. Pipe fitting will commence after [Redacted] sign off.

- Total amount of spools ship wide: 12021.
- Total amount of spools manufactured/procured: 3905.
- Total amount of spools installed on ship: 302.

Launch

Meeting in diary for Tuesday 11th of Oct.

Electrical

- Contract to be re-tendered.

HVAC

- Commencing September.

Specialist Contractors

- Currently reviewing opportunities and finalizing plan with specialist contractors.

802 Issues, Challenges & Successes

Issues

- Unit outfit in manufacturing sheds is minimal due to the lack of clean drawings.
- Purchase requisition process for material/required services proving to be time consuming.
- Unit A11/5 bonded window openings were cut to wrong size. Panels were re-ordered and preparation to re-cut ongoing.
- Scaffolding Support

Key Challenges

Key known challenges for Hull 802 to meet the programme:

- Manpower support. Lack of manpower available on 802.
- Change management. Changes made by ^[Redacted] are not reaching production in an effective manner.
- Material availability. A Min/Max process is in progress of being implemented which will reduce bottlenecking of work due to unavailable material.
- Delivery and completion of production drawings and accuracy of production drawings.
- Caulker shortage – only one available caulker business wide for survey mark ups. Bottlenecking work progress. More general caulkers available, however, cannot complete survey markup work.

Successes

- Effective workforce – good progress for the limited manpower available.
- Fabrication and erection of units on to ship is on schedule with limited workforce.
- 0701 & 0702 spool manufacturing ongoing, installation will be completed while unit is in the manufacturing shed.

Weight & Stability

- **Stability**

- Cross flooding pipe now incorporated in model and stability model. Operations to execute when planned.
- semi-WT door solution for the aft lifts (P&S) doors to comply with Water on Deck (WoD) regulations. Work with alternative vendors being discussed also option of WT buffer agreed in principle with [Redacted]. Discussions ongoing with [Redacted].
- Operating profile received from CMAL on 07Sep22 to incorporate finer details in the stability model.

- **Weight**

- From mid-March a new weight study started. Overall **[Redacted]** weights extracted from the 3D model.
 - This study has never been performed at any stage of initial or detail design. Model based study provided a better estimation covering the previous margin assumptions.
 - **All** 3D model items extracted for weight details and these items have provided a better reference for Centre of Gravity (CoG) values.
 - Current weight estimate is 3549.67t and 3.68t remained as margin. Targeted Lightweight is 3553.35t
 - Discussion with I^[Redacted] to support with cross check and verification of weigh list against Aveva model ongoing
- Interim inclining experiment Prior to Drydock confirmed actual light ship at Currently, 3267.25t is available onboard including scaffoldings etc. Next Inclining test is planned for 25th November

Other docs to deliver

- CMAL & FMPG have agreed (13/05/22) that FMEA is not required as a final deliverable document however a test pack will be created to show how the system recovers after failures. FMPG to propose a test pack format to CMAL.
- Machinery list (including serial numbers) is WIP. The commissioning team are producing and will also record last maintenance date where appropriate. This shall also cover the requirements for producing tallies. PO currently being raised.
- Operations Manual – This will be reviewed on an ongoing basis during commissioning and training of equipment.
- As built drawings for P&IDs and technical compartment arrangements have been agreed with CMAL. Other as built drawings to be agreed with CMAL
- [Redacted] Manuals etc will be shared on FMPG-CMAL SharePoint site to allow CMAL-CALMAC access for crew training/familiarization prior to delivery of document pack.

[Redacted] and [Redacted] plan approval update

[Redacted]

Under Review with [Redacted]	Date sent to [Redacted]	Note
Anti Fouling Plan	15/09/2021	Part of the Eco notation, Shall be approved for ship completion hand over date as part of larger pack
Cargo Securing Manual	01/02/2022	[Redacted] comments received, continue to work on this alongside CMAL and other priority tasks. Ready by 14Oct
Damage Control Plan	20/04/2022	Part of Stability book. To be released after stability book approval

[Redacted]

Under Review with [Redacted]	Date sent to [Redacted]	Note
Emergency Towing Booklet	11/04/2022	Only for information but copy to be kept on board. (Not [Redacted] scope) [Redacted] examined the booklet on 04/07/2022. CMAL operator comments are to be incorporated and ongoing. (These comments are just operational comments and does not require any material or hardware changes.)
Accommodation Layouts	15/02/2022	
Accommodation Handrailing	31/01/2022	Will be finalized after Escape route approval
Crew Accommodation Plan	15/02/2022	
Fire Control Plan	20/04/2022	Updated in line with Structural Fire protection Plan, resubmitted on 29/06/2022. Approval status asked to [Redacted]
Structural Fire Protection Plan	20/04/2022	As of 26/06/22, bulkheads conditionally approved, deckheads technical clarification received and will be implemented, [Redacted] meeting held on 14Sep, latest comments to be incorporated and sent by 10Oct.
Fixed Fire Extinguishing Syst. ECR & Pipes, Cables Transformer Room	04/11/2021	Provisionally agreed require new Type Approval Certificate from [Redacted] for system as current cert is out of date.

To Be submitted to [Redacted] (in Work)	Responsible	Note
Stability book	FMPG	Finalise after incline, Draft End Q4 2022
CALMAC Muster Lists (Mode 1-4)	CMAL	
CALMAC SAR Plan	CMAL	
801&802-LNGPac Operating & Maintenance Manual LNGPac-H149-D9	[Redacted]	[Redacted] Updating, Adam to confirm requirement
Emergency Low level lighting	FMPG	Submit after escape routes update (part of MSF 1261 application to [Redacted])
Fire & Deck Wash System	FMPG	Updating due to removal of hose reels and replacement of Hydrants in Accommodation areas.

CMAL Drawing Approval update

- NO CHANGE due to other priorities as these drawings will be covered when as built drawings are produced for the final sign off.
- CMAL Outfit Drawing Approval update - List now provided to CMAL and reviews undertaken on weekly basis
- P&IDs
 - 9 Systems Approved (P&IDs)
 - 23 Systems (P&IDs) to be approved by CMAL, currently these are being reviewed separately and then both parties. Details of the 4 Systems to be resubmitted to **[Redacted]** provided separately to this meeting.

Contract Specification

- There are various updates within the document which require to be internally reviewed and then presented to CMAL for agreement.

Crew Training

Training schedule (only soft booked)

1st vessel in Q1/2023

-
- **Weeks 9-10: 27th February until 10th March 2023 (Engines at [Redacted])**
- **Week 11: 13th until 17th March 2023 (Engine Control at [Redacted])**
- **Week 12: 20th until 24th March 2023 (LNGPac at [Redacted])**
- **Week 13: 27th until 31st March 2023 (Propulsion at [Redacted] or on board)**

2nd vessel in Q1/2024

- **Week 8: 19th until 23rd February 2024 (Propulsion at [Redacted] or on board)**
- **Weeks 9-10: 26th February until 8th March 2024 (Engines at [Redacted])**
- **Week 11: 11th until 15th March 2024 (Engine Control at [Redacted])**
- **Week 12: 18th until 22nd March 2024 (LNGPac at [Redacted])**

Still to confirm

PMS and Alarm and Monitoring system Under discussion to arrange with [Redacted]

118 TECHNICAL TRAINING FOR CREW

The Builder will provide on board training in machinery and equipment for key staff. The Builder will also provide training as detailed in the Requirement Specification and Technical Schedule, and will include:

LNG Systems	Up to 10 people (3 courses)
Navigation and Communication Systems	6 people
Communications Systems	6 people
Generators & Prime Movers	Up to 10 people (3 courses)
Propeller Units	Up to 10 people (CPP)
Power Management System	6 people
Alarm, Monitoring & Control Systems,	6 people
Lifesaving Equipment	6 people

This will be done separately from the commissioning process.

The training is to be in English and held by specialist commissioning engineers from the Builder, or representatives from sub-contractors, prior to delivery and signed off by Buyers.

Specialist LNG training (approx. 1 week per ship) will be provided to ship's crew.

Training will also include Ship Specific ECDIS training for Deck Officers.

The following has been achieved since the previous meeting.

- Starting air has been blown through to engines.
- 3 Sea Water Cooling Pumps have been ran through coolers and overboard.
- ICMAS/PRAXIS software has been updated.
- EMDG has been backfed to main switchboard in preparation for load trial.
- 801/802 CPP OD boxes inspected by [Redacted].
- Harbour Gen fuel oil pipework has been pressure tested, chemical cleaned and flushed
- Flexible hoses/bellows fitted to Main/Aux engines to allow final connections.

Planned activities for the next 3 weeks.

- 722 HT/LT Cooling System to fill.
- Harbour Gen fuel tank/system to fill.
- Harbour Gen to commence commissioning 18/10/22
- Load Test Emergency Generator 17/10/22
- Fuel supply to Aux/Main engines to flush.
- Gearbox flushing.
- Test Quick closing valves on fuel tanks

[Redacted] Surveys –

801

Unit A11/6 Bonded Windows Aperture Surveys

802

Unit A11/6 Plate Dimension Checks

Unit A7/6 As Built

Unit A11/5 As Built

Unit 85 & 86 Laser Scanning

Calling Log Requests Surveyed

801 / 802- 48 - surveys conducted (Steelwork 16, Pipework 25, Outfitting 6, Engineering 1)

NDT inspections : 801	NDT inspections: 802
MPI 9	MPI 9
DPI 0	DPI 2
UT 0	UT 0

[Redacted] Surveyed

MGO Service and Storage Tanks. Port and Stbd

FO Float Tank

Engine Sludge Tank

Fuel Oil Drain Tank

LO Renovating Tank

[Redacted] – Hydraulics Lines – Mezz deck Aft, Port Pilot Door, Stbd Pilot Door, Port Side from Hydraulic room to Generator Room, LNG Bunkering station Door.

802 Fabrication Surveys with [Redacted]

Units A55 Berth Integration

Units 99 / 100 Port & Stbd Funnels

Units 89 /90. A11/5

Fender deflector plate, Port & Stbd

Pre-Insulation Surveys

Deck 7, further 6 areas complete. AHU /EGR Bulkhead, Harbour Generator Exhaust pipe, Deck vent plenums, Deck AHU

Deck 6, AHU Deckhead

Deck 5, Galley Deckhead

OORs

CMAL Observation Log

Summary

	All categories	Category 1	Category 2	Category 3
Total Raised	605	364	228	13
Total Closed	472	279	187	6
Total committed	48	39	8	1
Total to close when work complete	47	36	9	2
Total still to resolve	38	10	24	4

Outfit

Pipework / Mechanical

Steelwork / Paint

Electrical

	Raised	Closed	Ongoing/ Monitoring
Outfit	14	7	1
Pipework / Mechanical	16	1	2
Steelwork / Paint	9	3	
Electrical	6	3	
Totals	45	14	3

Category 1 - Must be done before handover

Category 2 - General / Specification Issues to be done - may carry over to warranty period

Category 3 - Snagging

- 2 of the 10 Cat 1 OORs are offered to move to CWWC complete as now executable work scopes under review with CMAL
- 6 OOR's closed in the month from CWWC/Committed/CAT 1
- All remaining 95, "Committed" or "Closed when work complete" allocated to subzone/compartments and included within the work pack diary program. Dates with owners will be logged and tracked by projects

- Circulated for discussion.

Variations to Contract

<u>VTC's</u>	<u>Contract Section</u>	<u>Description</u>	<u>Date Requested</u>	<u>Impact</u>	<u>Comments</u>	<u>Status</u>
LNG-100-114	section 813: Fire and Wash Deck System	A fresh water fire main, supplied from the vessel's domestic fresh water system, will be provided in the main accommodation area and small bore fire hoses, of nominal 25 mm diameter and not exceeding 15 m length, will be provided at sufficient locations on each deck level to reach all parts of the accommodation This requirement to be deleted	13/04/2020	Requirement to be removed from technical specification		[Redac to send VTC
LNG-100-119	N/A	Provision of workshop tools		FM to supply various tools/pieces of equipment for workshop		postponed
LNG-100-121	section 561 i) passenger lifts	addition of weathertight door for passenger lift on 07 deck				costs to be determined
LNG-100-123	section 868: shore supply	Addition of a shore supply connection box for 802 only				[Redac to send VTC
LNG-100-127		Sanitary/Grey Water System		Re-routing of laundry discharges to grey water tank		under investigation
LNG-100-128		Quick Release Hatches for shaft inspection in Workshop / Nitrogen spaces				under investigation
LNG-100-129		Domestic Hot Water		The installation for the potable freshwater which within the contract is stipulated as copper piping. Agreement with CMAL to change to Mappress rather than copper. This is a suitable replacement that is easier to install and maintain and is suitable for use on domestic systems. We have engaged with [Redacted] and they do not have any issue with this	Amend Technical specification	[Redac to send VTC

- Comments
- AOB