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March 31, 2017

U. S. Department of Energy – The Office of Fossil Energy

Natural Gas Regulatory Activities

Attention: Larine Moore, Docket Room Manager

Docket Room FE-34 P.O. Box 44375

Washington, DC 20026-4375

Re: Sabine Pass Liquefaction, LLC

DOE Semi-Annual Report for Period of September 1, 2016, through February 28, 2017

FE Docket No / Order:

10-85-LNG / 2833 10-111-LNG / 2961

13-30-LNG, 13-42-LNG, and 13-121-LNG (Consolidated) / 3669

14-92-LNG / 3595 15-63-LNG / 3792 16-197-LNG / 3960

Dear Ms. Moore:

Pursuant to the above-referenced Orders, Sabine Pass Liquefaction, LLC ("Sabine Pass"), herein submits its semi-annual report for September 1, 2016, through February 28, 2017, describing the construction progress of the Sabine Pass Liquefaction Project. Please refer to Table 1 below for a summary of construction activities that occurred during the reporting period. Included as **Attachment A** are the Monthly Reports which were submitted to Federal Energy Regulatory Commission under FERC Docket Numbers CP11-72-000, CP13-2-000, CP13-552-000, and CP15-482-000 during the reporting period.

Stage 1 (Trains 1 & 2) completed all construction and commissioning activities within this reporting period. Train 1 and Stage 1 OSBL were placed in service during the previous reporting period, on May 27, 2016. Train 2 completed commissioning and was placed in service on October 12, 2016. Stage 2 (Trains 3 & 4) overall project completion is 96.7%. Train 3 achieved RFSU and first LNG on January 13th with a first cargo on January 24th. Train 3 substantial completion is estimated to occur within the first quarter of 2017, based on actual construction progress realized. Train 4 is projecting November 2017 for substantial completion. Stage 3 (Train 5 and OSBL) overall project completion is 60.5%.

Construction	Sabine Pass Liquefaction Project Construction Report for Period: September 1, 2016, through February 28, 2017				
Area Comments					
Liquefaction Stage 1 Area – Train 2	<ul> <li>Construction activities completed.</li> <li>Commissioning completed and facilities were placed in service.</li> </ul>				
Liquefaction Stage 2 Area – Train 3	<ul> <li>Completed aboveground pipe insulation.</li> <li>Commenced commissioning activities.</li> <li>Addressed punch list items.</li> </ul>				

Construction	Sabine Pass Liquefaction Project Construction Report for Period: September 1, 2016, through February 28, 2017					
Area Comments						
Liquefaction Stage 2 Area – Train 4	<ul> <li>Installed above ground piping, conducted testing, air blows, and restoration.</li> <li>Cable pulls, conduit, instrument, and tubing installation.</li> <li>Conducted loop checks.</li> <li>Setting of equipment, including gas generators.</li> <li>Conducted compressor mineral and synthetic lube oil flushes.</li> <li>Preparing for commissioning.</li> </ul>					
Liquefaction Stage 3 Area – Train 5	<ul> <li>Installed various foundations.</li> <li>Erected structural steel.</li> <li>Installed aboveground piping.</li> <li>Cable tray installation related to ISBL substations.</li> <li>Set refrigeration compressors and equipment in the heavies removal area and amine area.</li> <li>Installation of roads, trenches, culverts, and final grading.</li> <li>Continued underground firewater assembly, testing, and installation.</li> </ul>					
Construction Dock (Ro-Ro)	Received and offloaded equipment at the construction dock.					
East Meter Pipe	<ul> <li>Completed construction of pipe and meter.</li> <li>Commissioned and placed in service on February 1, 2017.</li> </ul>					

Please call me if you have any questions.

Sincerely,

### /s/ Karri Mahmoud

Karri Mahmoud Sabine Pass Liquefaction, LLC

# Sabine Pass Liquefaction, LLC

DOE Semi-Annual Report for Period September 1, 2016, through February 28, 2017

# **ATTACHMENT A**

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report September 2016

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1, SPL Stage 2, and SPL Stage 3 projects that occurred during the month of September 2016.

**Stage 1** Engineering, Procurement, Construction, and Subcontracts activities are 100% complete with both Train 1 and Train 2 in service (Train 2 approved and placed into Service on October 12, 2016). This will be the last report containing Stage 1 progress.

**Stage 2** Engineering and Procurement are 100% complete. Subcontract and direct hire construction work are 69.2% and 85.4% complete, respectively. Overall project completion for Stage 2 is 91.8% against the plan of 98.4%.

**Stage 3** Engineering is now 90.8% complete. Procurement is now 62% complete. Subcontract and direct hire work are 41.9% and 4.6% complete, respectively. Stage 3 overall project completion is 42.8% against the plan of 38.7%.

Train 2 achieved substantial completion on September 15, 2016. Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

### 2.0 Project Highlights

Stage 1 completed in September with the achievement of Substantial Completion of Train 2 on September 15<sup>th</sup>.

Stage 2 engineering and procurement is complete, with support of construction activities continuing. Subcontracted activity continues (e.g. piping insulation, field-erected tanks). In Train 3, the installation, testing, and restoration of above ground pipe continues to progress. In the compressor area, all ethylene and methane turbines have been cold cranked and the mechanical runs were completed. The Thermal Oxidizer was commissioned and refractory dry out completed in mid-September; chemical cleaning of the amine system also completed in September. Train 3 loop checks and motor runs continue. Activities in Train 4 continue with a focus on the installation of above ground piping as well as ramp up of pipe testing. In the compressor area, mineral lube oil flushes are now underway.

On Stage 3, Engineering completed tie-in packages, structural steel and architectural IFC designs, and procurement continues to monitor the fabrication of equipment and bulk materials. Subcontract activity on Stage 3 continued with the soil improvement and concrete batch plant subcontracts; piling completed this month. ISBL and OSBL underground firewater and amine pipe installations continued as well as installation of foundations. Steel erection continued in cryo rack area and propane condenser area. Aboveground pipe installation commenced for the cryo rack area. OSBL and ISBL sitework continued with roads installation, final grading, and trenches and culverts installations.

Bechtel completed the installation of pipe for the new flare system on the Stage 2 pipe rack including pipe for temporary air compressor hookup per the September shutdown plan. In early September, Bechtel commenced the installation of pipe for the new flare system on the Stage 1 pipe rack. Bechtel shutdown the Stage 2 flare in mid-September, immediately after completion of the fourth compressor mechanical run, to allow Stage 2 flare modifications to commence. Cheniere also shut down Stage 1 flare and gave Bechtel access to the flare on September 25<sup>th</sup>.

### 3.0 Environmental, Safety, and Health Progress

During the month of September, the following ES&H related events occurred.

	Near Miss		Near Miss First Aid		Recordable		Lost Time		
	Month	ITD	Month	ITD	Month	ITD	Month	ITD	
Bechtel	4	731	68	2772 <sup>1</sup>	3	85	1		12
Subcontractors	0	54	11	188	0	7	0		1
Total	4	785	79	2960	3	92	1		13

<sup>&</sup>lt;sup>1.</sup> Corrected numbers from previous month.

### 4.0 Schedule

Train 2 achieved substantial completion on September 15, 2016. Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

# 5.0 Construction and Start up

	Construction Activities by Area					
Area	Construction Activities in September	Planned Work for October				
Liquefaction Stage 1 Area – Train 2	<ul> <li>Completed electrical work on the lighting systems.</li> <li>Completed with the shutdown work to clean strainers, as well as other outage activities in preparation for performance testing.</li> <li>Completed performance test and commissioning demonstration tests.</li> <li>Achieved Substantial Completion and turnover to Cheniere.</li> </ul>	Completion of warranty work.				
Liquefaction Stage 2 Area – Train 3	<ul> <li>Continued A/G pipe installation, testing, air blows, and restoration.</li> <li>Continued cable pulls and conduit, instrument, and tubing installation.</li> <li>Continued steel punch-list work-off.</li> <li>Continued with piping insulation.</li> <li>Continued compressor lube oil final flushes.</li> <li>Continued to bump and run motors.</li> <li>Continued mechanical runs for both Ethylene and Methane Machines.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue piping insulation.</li> <li>Complete mechanical runs for the two propane machines (work constrained by flare outage).</li> </ul>				
Liquefaction Stage 2 Area – Train 4	<ul> <li>Continued A/G pipe installation, testing, air blows, and restoration.</li> <li>Continued cable pulls and conduit, instrument, and tubing installation.</li> <li>Continued loop checks.</li> <li>Continued erection of structural steel in the refrigeration area.</li> <li>Continued compressor lube oil flushes.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel erection and punch-list work-off in all available areas.</li> <li>Continue compressor lube oil flushes.</li> <li>Continue loop checks.</li> </ul>				
OSBL – Stage 2	<ul><li>Stage 2 flare outage commenced.</li><li>Continued A/G pipe testing, air blows, and restoration.</li></ul>	Continue with pipe testing, air blows, and restoration.				
Support Buildings	No activities	No activities				
Access Roads, Waterline	No activities	No activities				
Laydown Areas	No activities	No activities				

# Sabine Pass Liquefaction, LLC, Sabine Pass LNG, L.P. and Sabine Pass Liquefaction Expansion, LLC September 2016 Monthly Progress Report

	Construction Activities by A	rea
Area	Construction Activities in September	Planned Work for October
Construction Dock (Ro-Ro)	Received and offload equipment at the construction dock.	Continue to receive equipment.
Revamp Area	No activities	No activities
Condensate (CP13-2-000)	No activities	No activities
Stage 3 – Train 5 & Stage 3 ISBL and OSBL (CP13-552-000)	<ul> <li>Continued UG firewater and amine pipe assembly and installation.</li> <li>Completed foundation installation in mercury removal, heavies removal, propane refrigeration, and inlet gas areas.</li> <li>Continued to install foundations.</li> <li>Continued steel erection in cryo rack area and propane condenser rack.</li> <li>Commenced above-ground installation in the cryo rack area.</li> <li>Continued installation of grounding in all areas and cathodic protection for amine underground pipe.</li> <li>Continued installation of roads, trenches, culverts, and final grading.</li> </ul>	<ul> <li>complete cathodic protection installation for amine underground pipe.</li> <li>Continue final grading and mudmat placement.</li> <li>Continue installation of primary, secondary and heavy haul roads, trenches and culverts.</li> </ul>
East Meter Pipe (CP15-482-000)	Preparing for tie-in.	Preparing for tie-in.

## **6.0** Permitting and Environmental

### **Summary of Problems, Non-Compliances, and Corrective Actions**

Date	Description
Intermittent	As per previous month's report, SPL continues to coordinate with LDEQ to ensure
miemilien	air permit compliance is demonstrated.

### **Agency Contacts/Inspections**

Agency	Name	Date	Location/Activity
None.			

# **7.0** Progress Photos



Train 4 - Compressor Area Bridge Crane



Train 5 - Flying Large Bore Pipe into Cryo Rack



Stage 3 OSBL- Main North South Pipe Rack (R01) Foundations



Train 3 - Insulating Pipe Above the Compressor Deck



Train 3 - Installation of Internals in Molsieve Dehydration Vessels



Stage 2 - East Metering Pipe Rack Installed



Train 5 - Installation of Shoring & Decking for Propane Deck



Train 5 - Commenced Installation of Steel in Propane Condenser Pipe Rack



Stage 3 OSBL - Underground Firewater Pipe Installation



Stage 3 OSBL - Pipe Rack R07 Foundations, Ready to Pour



Stage 3 OSBL - Heavy Haul Road Bridge Installation



Stage 3 OSBL - Culvert Installation

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report October 2016

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 2 and SPL Stage 3 projects that occurred during the month of October 2016.

**Stage 2** Engineering and Procurement are 100% complete. Subcontract and direct hire construction work are 73.5% and 87.8% complete, respectively. Overall project completion for Stage 2 is 93.1% against the plan of 98.9%.

**Stage 3** Engineering is now 93.4% complete. Procurement is now 64.7% complete. Subcontract and direct hire work are 42.9% and 6.4% complete, respectively. Stage 3 overall project completion is 45.0% against the plan of 40.7%.

Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

### 2.0 Project Highlights

Stage 2 engineering and procurement is complete, with support to construction activities continuing. Subcontracted activities continue (e.g. piping insulation and heat tracing). In Train 3, the testing and restoration of above ground pipe continues to progress. In the compressor area, all mechanical runs are now complete. Train 3 loop checks and motor runs continue. Activities in Train 4 continue with a focus on the installation of above ground piping as well as ramp up of pipe testing. In the compressor area, mineral and synthetic lube oil flushes are underway.

On Stage 3, engineering completed lighting packages and continued with OSBL loop drawings, and Procurement delivered the propane substation and continued to monitor the fabrication of equipment and bulk materials. Subcontract activity on Stage 3 continued with the soil improvement and concrete batch plant subcontracts; pile driving and heavy haul road bridge construction completed this month. ISBL and OSBL underground firewater and amine pipe installations continued as well as installation of foundations. Steel erection continued in cryo rack area and propane condenser area. Aboveground pipe installation commenced for the mercury removal area. OSBL and ISBL sitework continued with roads installation, final grading, and trenches and culverts installations.

### 3.0 Environmental, Safety, and Health Progress

	Near Miss		First Aid		Recordable		Lost Time	
	Month	ITD	Month	ITD	Month	ITD	Month	ITD
Bechtel	67	804	49	3177	1	87	0	12
Subcontractor	0	54	4	192	1	9	0	1
Total	67	858	53	3369	2	96	0	13

### 4.0 Schedule

Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

### **5.0** Construction and Start up

	Construction Activities by	y Area
Area	Construction Activities in October	Planned Work for November
Liquefaction Stage 2 Area – Train 3	<ul> <li>Continued A/G pipe installation, testing, air blows, insulation and restoration.</li> <li>Continued cable pulls and conduit, instrument, and tubing installation.</li> <li>Continued steel punch-list work-off.</li> <li>Continued with piping insulation.</li> <li>Continued to bump and run motors.</li> <li>Completed all mechanical runs on compressors.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue piping insulation.</li> <li>Complete mechanical runs for the two propane machines (work constrained by flare outage).</li> </ul>
Liquefaction Stage 2 Area – Train 4	<ul> <li>Continued A/G pipe installation, testing, air blows, and restoration.</li> <li>Continued cable pulls and conduit, instrument, and tubing installation.</li> <li>Continued loop checks.</li> <li>Continued erection of structural steel in the refrigeration area.</li> <li>Continued compressor lube oil flushes.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel erection and punchlist work-off in all available areas.</li> <li>Continue compressor lube oil flushes.</li> <li>Continue loop checks.</li> </ul>
OSBL – Stage 2	<ul> <li>Phase 2 flare modifications completed.</li> <li>Continued A/G pipe testing, air blows and restoration.</li> </ul>	Continue with pipe testing, air blows, and restoration.
Condensate (CP13-2-000)	No activities	No activities
Stage 3 – Train 5 & Stage 3 ISBL and OSBL (CP13-552-000)	<ul> <li>Continued underground firewater an amine/hot oil pipe assembly an installation.</li> <li>Continued installing foundations.</li> <li>Installing structural steel and aboveground piping in cryo rack, propane condenser rack, and mercury removal area.</li> <li>Continued installation of ISBL grounding in all areas and cathodic protection for amine underground pipe.</li> </ul>	
East Meter Pipe (CP15-482-000)	Preparing for tie-in.	Preparing for tie-in.

**6.0 Permitting and Environmental**Summary of Problems, Non-Compliances, and Corrective Actions

Date	Description
Intermittent	As per previous month's report, SPL continues to coordinate with LDEQ to ensure air permit compliance is demonstrated.

**Agency Contacts/Inspections** 

Agency	Name	Date	Location/Activity
None.			

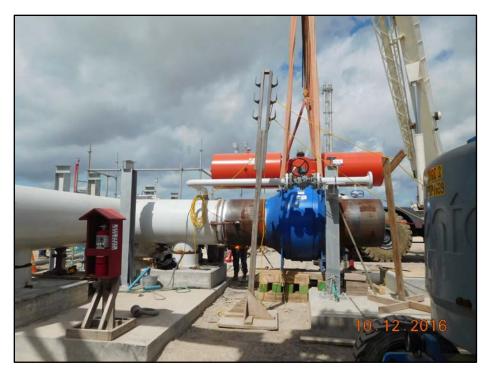
# **7.0** Progress Pictures



Train 3 - Amine Regeneration Area, Final Sump Prep in Progress



Train 4 - Hot Oil Area



Stage 2 - East Metering Tie-in - Valve Installation



Train 5 - Last Compressor Deck Columns (Methane) Complete



Train 5 - Acid Gas Removal Piperack Foundation



Train 5 - Mercury Removal Area Piperack Steel Erection



Train 5 - Cryo Rack Steel and Pipe Erection



Stage 3 Revamp – North-South Piperack 326R01 Foundation Formwork

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report November 2016

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 2 and SPL Stage 3 projects that occurred during the month of November 2016.

Stage 2 Engineering and Procurement are 100% complete. Subcontract and direct hire construction work are 76.1% and 90.8% complete, respectively. Overall project completion for Stage 2 is 94.4% against the plan of 99.3%.

Stage 3 Engineering is now 95.1% complete. Procurement is now 70.9% complete. Subcontract and direct hire work are 43.1% and 8.8% complete, respectively. Stage 3 overall project completion is 48.8% against the plan of 44.0%.

Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

### 2.0 Project Highlights

Stage 2 engineering and procurement is complete, with support to construction activities continuing. Subcontracted activities continue (e.g. piping insulation and heat tracing). In Train 3, the testing of above ground pipe is now substantially complete. The majority of the remaining construction work includes pipe restore, pipe insulation, and completion of the lighting system. Startup activities continued in Train 3 with the introduction of feed gas, circulation of hot oil, and running of the ethylene compressors on nitrogen. Perlite loading into the Train 3 cold boxes also commenced this month. Activities in Train 4 continue with a focus on the installation of above ground piping, pipe testing, pipe restoration and compressor installation activities. In the Train 4 compressor area, mineral and synthetic lube oil flushes continue.

On Stage 3, engineering continued with OSBL loop drawings, and procurement delivered the I-Formation header, nitrogen generator package, pumps and transformers and continued to monitor the fabrication of equipment and bulk materials. Subcontract activity on Stage 3 continued with the concrete batch plant subcontract and the award of the Fire and Gas subcontract; soil stabilization works completed this month. ISBL amine/hot oil pipe installation and testing completed. OSBL firewater pipe installation continued. Installation of foundations in the ISBL and OSBL continued. Steel erection continued in the cryo rack, mercury removal, and propane condenser area. Steel erection commenced in fuel gas facilities, AGRU pipe rack, under compressor tabletop, and OSBL main north-south pipe rack. Aboveground pipe installation continued in cryo rack and mercury removal area. Aboveground pipe fabrication commenced for the compressor area. Revamp structural steel and aboveground pipe installation commenced. OSBL and ISBL site work continued with roads installation, final grading, and trenches and culverts installation.

### 3.0 Environmental, Safety, and Health Progress

	Near Miss		First Aid		Recordable		Lost Time	
	Month	ITD	Month	ITD	Month	ITD	Month	ITD
Bechtel	238	1067	46	3224	2	89	0	12
Subcontractor	14	70	2	195	0	8	0	1
Total	252	1137	48	3419	2	97	0	13

### 4.0 Schedule

Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

### 5.0 Construction and Start up

Construction Activities by Area					
Area	Construction Activities in November	Planned Work for December			
Liquefaction Stage 2 Area – Train 3	<ul> <li>Continued testing, air blows, restoration, and insulation of above ground pipe.</li> <li>Continued cable pulls and conduit, instrument, and tubing installation.</li> <li>Continued steel punch-list work-off.</li> <li>Continued motor runs.</li> <li>Performed high pressure leak checks.</li> <li>Commenced installation of cold box perlite.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel punch list work-off.</li> <li>Complete motor runs.</li> <li>Continue high pressure leak checks.</li> <li>Complete installation of cold box perlite.</li> </ul>			
Liquefaction Stage 2 Area – Train 4	<ul> <li>Continued testing, air blows, restoration, and insulation of above ground pipe.</li> <li>Continued cable pulls and conduit, instrument, and tubing installation.</li> <li>Continued loop checks.</li> <li>Continued erection of structural steel in the refrigeration area.</li> <li>Continue compressor mineral and synthetic lube oil flushes.</li> <li>Commenced the setting of gas generators.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel erection and punchlist work-off in all available areas.</li> <li>Continue loop checks.</li> <li>Continue the setting of gas generators.</li> </ul>			
OSBL – Stage 2	Continued A/G pipe testing, air blows and restoration.	Continue with pipe testing, air blows, and restoration.			
Condensate (CP13-2-000)	No activities	No activities			

Construction Activities by Area						
Area	Construction Activities in November	Planned Work for December				
Stage 3 – Train 5 & Stage 3 ISBL and OSBL (CP13-552-000)	<ul> <li>Completed amine/hot oil pipe installation and testing.</li> <li>Continued to install foundations.</li> <li>Continued erection of structural steel.</li> <li>Continued A/G pipe installation in the cryo rack area and mercury removal area.</li> <li>Commenced pre-fabrication of compressor piping.</li> <li>Continued installation of grounding in all areas and cathodic protection for amine underground pipe.</li> <li>Set compressor and propane substations in ISBL.</li> <li>Continued installation of roads, trenches, culverts, and final grading.</li> <li>Continued underground firewater assembly and installation.</li> <li>Commenced Revamp aboveground pipe and steel installation.</li> </ul>	<ul> <li>Continue concrete foundation installations.</li> <li>Complete methane compressor tabletop and amine area foundations.</li> <li>Continue to erect structural steel.</li> <li>Continue installation of A/G pipe.</li> <li>Set ISBL feed gas heater and H2S removal skids.</li> <li>Continue installation of ISBL grounding in all areas and complete cathodic protection installation for amine underground pipe.</li> <li>Continue installation of roads, trenches and culverts.</li> <li>Continue U/G firewater assembly and installation.</li> <li>Set OSBL utility substation.</li> </ul>				
(CP15-482-000)	Preparing for tie-in.	Preparing for tie-in.				

## **6.0** Permitting and Environmental

**Summary of Problems, Non-Compliances, and Corrective Actions** 

Date	Description
Intermittent	As per previous month's report, SPL continues to coordinate with LDEQ to ensure
memmem	air permit compliance is demonstrated.
October 31, 2016	Sabine Pass LNG, LP. received a Notice of Probable Violation and Proposed Civil Penalty CPF 4-2016-3002 ("NOPV"). In the NOPV, the Pipeline and Hazardous Materials Safety Administration ("PHMSA"), Office of Pipeline Safety noted a probable violation of the Pipeline Safety Regulations: 49 CFR Section 191.22(c)(1)(iii) Construction of a new LNG plant or LNG facility. This NOPV relates to a late notification of start of construction. Sabine Pass is coordinating with PHMSA and corrective actions have been taken. Please see <b>Attachment A.</b>
November 30, 2016	During Train 3 startup operations, a valve in the regeneration system failed, causing a natural gas release of approximately 101,248 lbs. All regulatory notifications were made. There were no injuries due to this incident. A root cause investigation of the incident is underway.

**Agency Contacts/Inspections** 

Agency	Name	Date	Location/Activity	
FERC	Steven Kusy	November 8, 2016	Construction Inspection	
FERC	Dakoriye Charles	November 8, 2016	Construction Inspection	

## 7.0 Progress Pictures



Train 3 - Area Paving



Train 3 – Setting Up to Fill Cold Boxes with Perlite



Train 4 - Compressor Area



Train 5 - Compressor Area, Propane Deck Shoring Removed



Train 5 - Form and Rebar Installation for Ethylene Deck in Compressor Area



Train 5 - Compressor Substation Installation



Stage 3 OSBL - First Steel Installed; in Main North-South Piperack (347R01)



Stage 3 OSBL - Water Treatment Building Foundation

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report December 2016

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 2 and SPL Stage 3 projects that occurred during the month of December 2016.

Stage 2 Engineering and Procurement are 100% complete. Subcontract and direct hire construction work are 78.6% and 93.2% complete, respectively. Overall project completion for Stage 2 is 95.5% against the plan of 99.5%.

Stage 3 Engineering is now 96.6% complete. Procurement is now 76.6% complete. Subcontract and direct hire work are 43.7% and 11.3% complete, respectively. Stage 3 overall project completion is 52.4% against the plan of 45.3%.

Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

# 2.0 Project Highlights

In Stage 2, Train 3, the restoration of above ground pipe is complete. The majority of the remaining construction work includes pipe insulation, and completion of the lighting system. Startup activities continued in Train 3 with the circulation of hot oil, running of the ethylene compressors on nitrogen, high pressure leak checks, and system defrost. Loading of perlite into the Train 3 cold boxes completed this month. Activities in Train 4 continue with a focus on the installation of above ground piping, pipe testing, pipe restoration and compressor fit-out activities. In the Train 4 compressor area, mineral and synthetic lube oil flushes are ongoing.

On Stage 3 activities continued with the concrete batch plant subcontract and the award of the equipment insulation material supply subcontract. OSBL firewater pipe installation continued. Installation of foundations in the ISBL and OSBL areas continued with the last section of the compressor table top, for the methane compressor, and the water treatment building foundations poured. Steel erection continued in the cryo rack, mercury removal, fuel gas facilities, propane condenser area, AGRU pipe rack, under compressor tabletop, and OSBL main north-south pipe rack. Above ground pipe installation continued in cryo rack, AGRU pipe rack, and mercury removal area. Above ground pipe fabrication continued for under compressor tabletop. OSBL structural steel erection continued for the main north-south pipe rack and commenced for the water treatment building pipe rack. Revamp structural steel and above ground pipe installation continued. The OSBL substation was set. OSBL and ISBL sitework continued with roads installation, final grading, and trenches and culverts installation.

# 3.0 Environmental, Safety, and Health Progress

December	Near	Miss	First	Aid	Recor	dable	Lost	Time
2016	Month	ITD	Month	ITD	Month	ITD	Month	ITD
Bechtel	276	1361	41	3270	3	93	0	13
Subcontractor	7	82	5	201	0	8	0	1
Total	283	1443	46	3471	3	101	0	14

### 4.0 Schedule

Train 3 substantial completion is estimated to be June 2017 based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

# 5.0 Construction and Start up

	Construction Activities by	y Area
Area	Construction Activities in December	Planned Work for January
Liquefaction Stage 2 Area – Train 3	<ul> <li>Completed installation and restoration of AG pipe.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel punch list work-off.</li> <li>Continue motor runs.</li> <li>Continue high pressure leak checks.</li> <li>Continue insulation of AG piping.</li> <li>Completed installation of cold box perlite.</li> </ul>	<ul> <li>Complete insulation of above ground pipe to support cool down.</li> <li>Continue steel punch list work-off.</li> <li>Complete system defrost.</li> </ul>
Liquefaction Stage 2 Area – Train 4	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel erection and punch-list work-off in all available areas.</li> <li>Continue loop checks.</li> <li>Continue the setting of gas generators.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue loop checks.</li> <li>Continue compressor mineral and synthetic lube oil flushes.</li> <li>Continue the setting of gas generators.</li> </ul>
OSBL – Stage 2	Continue with pipe testing, air blows, and restoration.	Continue with pipe testing, air blows, and restoration.
Condensate (CP13-2-000)	No activities.	Prepare to drive piles in meter area.
Stage 3 – Train 5 & Stage 3 ISBL and OSBL (CP13-552-000)	<ul> <li>Continue concrete foundation installations.</li> <li>Continue to erect structural steel.</li> <li>Continue installation of A/G pipe.</li> <li>Set ISBL feed gas heater and substation transformers and HVAC units.</li> <li>Continue installation of ISBL grounding in all areas and complete cathodic protection installation for amine underground pipe.</li> <li>Continue installation of roads, trenches and culverts.</li> <li>Continue U/G firewater assembly and installation.</li> </ul>	<ul> <li>Continue concrete foundation installations.</li> <li>Continue to erect structural steel.</li> <li>Continue installation of A/G pipe.</li> <li>Continue installation of ISBL grounding in all areas and complete cathodic protection installation for amine underground pipe.</li> <li>Continue installation of roads, trenches and culverts.</li> <li>Continue U/G firewater assembly and installation.</li> </ul>
East Meter Pipe (CP15-482-000)	Preparing for tie-in.	Commission EMP and place in service.

# **6.0** Permitting and Environmental

Summary of Problems, Non-Compliances, and Corrective Actions

Date	Description
Intermittent	As per previous month's report, SPL continues to coordinate with LDEQ to ensure air permit compliance is demonstrated.

**Agency Contacts/Inspections** 

Agency	Name	Date	Location/Activity
None this			
period			



Train 3 - Area Paving of the Road Across Propane Refrigeration Area



Train 3 - Pipe Insulation in Alleyway Between Compressor Deck & Cryo Rack



Train 4 - Insulation of Pipe Under Compressor Deck (1511 Compressors)



Train 5 - Cryo Rack Pipe Installation at Mercury Removal Rack



Stage 3 OSBL - Water Treatment Building Foundation Concrete Pour



Stage 3 OSBL - Main North South Rack (347R01)



Train 3 - Area Paving of the Road Across Propane Refrigeration Area



Train 3 - Pipe Insulation in Alleyway Between Compressor Deck & Cryo Rack



Train 4 - Insulation of Pipe Under Compressor Deck (1511 Compressors)



Train 5 - Cryo Rack Pipe Installation at Mercury Removal Rack



Stage 3 OSBL - Water Treatment Building Foundation Concrete Pour



Stage 3 OSBL - Main North South Rack (347R01)

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report January 2017

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# 1.0 Executive Summary

This report covers activities for the SPL Stage 2 and SPL Stage 3 projects that occurred during the month of January 2017.

Stage 2 Engineering and Procurement are 100% complete. Subcontract and direct hire construction work are 81.1% and 94.4% complete, respectively. Overall project completion for Stage 2 is 96.2% against the plan of 99.8%.

Stage 3 Engineering is now 97.7% complete. Procurement is now 82.6% complete. Subcontract and direct hire work are 44.0% and 12.9% complete, respectively. Stage 3 overall project completion is 55.9% against the plan of 51.5%.

Train 3 achieved RFSU and first LNG on January 13<sup>th</sup> with a first cargo on January 24<sup>th</sup>. Train 3 substantial completion is estimated to occur within the first quarter of 2017, based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

# 2.0 Project Highlights

Stage 2 engineering and procurement is complete, with support to construction activities continuing. Subcontracted activities continue (e.g. piping insulation and heat tracing). In Train 3, after achieving RFSU and first cargo, the team is focused on completion of pipe insulation, completion of the lighting system, and punch list work-off in preparation for the Performance Test. Activities in Train 4 continue with a focus on the installation of above ground piping, pipe testing, pipe restoration and compressor fit-out activities. In the Train 4 compressor area, cold crank of one ethylene compressor has been completed. Mineral and synthetic lube oil flushes are also ongoing in the compressor area.

On Stage 3, engineering completed interlock and shutdown narratives control set points and completed the revisions to IFC P&IDs; and procurement awarded the flare HPAA air compressors, delivered the utility substation, air compressors, lean solvent heat exchangers, shell and tube heat exchangers, chillers, and pumps, shipped propane, ethylene and methane refrigeration compressors from GE and stainless steel and carbon steel vessels from Doosan. Subcontract activity on Stage 3 continued with progressing the Buildings Sidings and Roofing and the permanent telecoms subcontract development towards awards in February. For construction, OSBL firewater pipe installation continued. Installation of foundations in the ISBL and OSBL areas continued with primary focus in ISBL related to amine and hot oil foundations, while OSBL continued piperacks and miscellaneous foundations. Steel erection continued in the cryo rack, propane condenser area, AGRU pipe rack, under compressor tabletop, heavies removal area, propane refrigeration area, under substations in ISBL. In OSBL steel erection continued in main north-south pipe rack, main east-west piperack, utilities piperack, and water treatment building. Above ground pipe installation continued in cryo rack, AGRU pipe rack, mercury removal area, fuel gas facilities, compressor area, and propane condenser. Above ground pipe testing commenced related to compressor area and propane condenser piping. OSBL structural steel erection continued for the main north-south pipe rack and commenced for the water treatment building pipe rack. OSBL above ground pipe installation commenced in the main north-south piperack. Revamp structural steel, above ground pipe, and cable tray installation continued. In the ISBL, HVAC and transformers were set related to substations, along with the H2S removal skids. OSBL and ISBL site work continued with roads installation, final grading, and trenches and culverts installation.

# 3.0 Environmental, Safety, and Health Progress

During the month of January, the following ES&H related events occurred.

January 2017	Near	Miss	Firs	t Aid	Reco	rdable	Lost	Time	
January 2017	Month	ITD	Month	ITD	Month	ITD	Month	ITD	
Bechtel	486	1877	34	2978	1	94	0		13
Subcontractor	11	93	4	205	0	8	0		1
Total	497	1970	38	3183	1	102	0		14

### 4.0 Schedule

Train 3 achieved RFSU and first LNG on January 13<sup>th</sup> with a first cargo on January 24<sup>th</sup>. Train 3 substantial completion is estimated to occur within the first quarter of 2017, based on actual construction progress realized. Train 4 progress will be monitored over the coming months for any potential impact to the August 2017 substantial completion target.

# 5.0 Construction and Start up

	Construction Activities b	y Area
Area	Construction Activities in January	Planned Work for February
Liquefaction Stage 2 Area – Train 3	<ul> <li>Completed installation and restoration of AG pipe.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel punch list work-off.</li> <li>Completed motor runs.</li> <li>Continue high pressure leak checks.</li> <li>Continue insulation of AG piping.</li> </ul>	<ul> <li>Complete steel punch list work-off.</li> <li>Complete strainer shut-down scope.</li> </ul>
Liquefaction Stage 2 Area – Train 4	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue steel erection and punch-list work-off in all available areas.</li> <li>Continue loop checks.</li> <li>Continue the setting of gas generators.</li> <li>Commenced turbine cold cranks.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue loop checks.</li> <li>Continue compressor mineral and synthetic lube oil flushes.</li> <li>Continue the setting of gas generators.</li> <li>Continue turbine cold cranks.</li> </ul>
OSBL – Stage 2	Continue with pipe testing, air blows, and restoration.	Continue with pipe testing, air blows, and restoration.
Condensate (CP13-2-000)	No activities.	Prepare to drive piles in meter area.

	Construction Activities b	y Area
Area	Construction Activities in January	Planned Work for February
Stage 3 – Train 5 & Stage 3 ISBL and OSBL (CP13-552- 000)	<ul> <li>Continued foundation installation.</li> <li>Continued structural steel erection.</li> <li>Continued A/G pipe installation.</li> <li>Commenced A/G pipe testing related to compressor and propane condenser area piping.</li> <li>Continued installation of grounding in all areas and cathodic protection for amine underground pipe.</li> <li>Set substation transformers and HVAC units in ISBL. Set H2S removal skids.</li> <li>Continued installation of roads, trenches, culverts, and final grading.</li> <li>Continued underground firewater assembly, testing, and installation.</li> </ul>	<ul> <li>Continue concrete foundation installations.</li> <li>Continue to erect structural steel.</li> <li>Continue installation of A/G pipe.</li> <li>Continue installation of grounding in all areas and complete cathodic protection installation for amine underground pipe.</li> <li>Continue installation of roads, trenches and culverts.</li> <li>Continue U/G firewater assembly and installation.</li> </ul>
East Meter Pipe (CP15-482- 000)	Commission EMP and place in service.	No activities.

# **6.0** Permitting and Environmental

Summary of Problems, Non-Compliances, and Corrective Actions

Date	Description
Intermittent	As per previous month's report, SPL continues to coordinate with LDEQ to ensure air permit compliance is demonstrated.

**Agency Contacts/Inspections** 

Agency	Name	Date	Location/Activity
None this			
period			



Train 3 – Asphalt Paving In Amine areas



Train 4 – Propane Refrigeration Area



Train 4 – Hydraulic / Mercury Removal Area



Stage 2 - Flare Modification Air Compressor Foundation In Progress



Stage 3 OSBL - Tank 30S-3603 Foundation Pour



Stage 3 OSBL - Water Treatment Rack Steel Erection



Train 5 – Pouring C01 Area Pads



Train 5 – Loading Pipe in F01 Rack

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report February 2017

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# 1.0 Executive Summary

This report covers activities for the SPL Stage 2 and SPL Stage 3 projects that occurred during the month of February 2017.

Stage 2 Engineering and Procurement are 100% complete. Subcontract and direct hire construction work are 82.8% and 95.9% complete, respectively. Overall project completion for Stage 2 is 96.7% against the plan of 99.9%.

Stage 3 Engineering is now 98.6% complete. Procurement is now 90.3% complete. Subcontract and direct hire work are 44.3% and 16.0% complete, respectively. Stage 3 overall project completion is 60.5% against the plan of 55.4%.

Train 3 achieved RFSU and first LNG on January 13<sup>th</sup> with a first cargo on January 24<sup>th</sup>. Train 3 substantial completion is estimated to occur within the first quarter of 2017, based on actual construction progress realized. Train 4 is projecting November 2017 for substantial completion.

# 2.0 Project Highlights

Stage 2 engineering and procurement is complete, with support to construction activities continuing. Subcontracted activities continue (e.g. piping insulation, paving, and heat tracing). With first cargo achieved, the Train 3 team is preparing for the performance test and subsequent Substantial Completion. Activities in Train 4 continue with a focus on the installation of A/G piping, pipe testing, pipe restoration and compressor fit-out activities. In the Train 4 compressor area, the team has cold cranked both ethylene machines, and one methane machine. Mineral and synthetic lube oil flushes are also ongoing in the compressor area.

On Stage 3, engineering completed interlock and shutdown narratives control set points and completed the revisions to the IFC P&IDs. Procurement completed delivery of the refrigeration compressors and air cooler deliveries continue. Stage 3 subcontract formation activity continued. For construction, OSBL firewater U/G pipe installation continued. Installation of foundations in the ISBL and OSBL areas continued with primary focus in ISBL related to mercury removal and hot oil foundations, while OSBL continued pipe racks and miscellaneous foundations. Steel erection continued in the cryo rack, propane condenser area, AGRU pipe rack, under the compressor tabletop, heavies removal area, propane refrigeration area, amine area, condensate stabilization, and substations in ISBL. In OSBL, steel erection continued in the main north-south pipe rack, main east-west pipe rack, utilities pipe rack, knockout drums pipe rack, and GTG pipe rack. In ISBL, A/G pipe installation continued in the cryo rack, AGRU pipe rack, mercury removal area, fuel gas facilities, compressor area, and the propane condenser area. A/G pipe testing continued related to the compressor area and propane condenser piping. OSBL A/G pipe installation continued in the main north-south pipe rack and commenced in the water treatment building. Revamp structural steel, A/G pipe, and cable tray installation continued. In the ISBL, the refrigeration compressors were set, along with equipment in the heavies removal area and amine area. In OSBL, equipment was set in the instrument/plant air area. OSBL and ISBL sitework continued with roads, trenches and culverts installation and final grading.

# 3.0 Environmental, Safety, and Health Progress

During the month of February, the following ES&H related events occurred.

February	Near	Miss	First	t Aid	Recor	dable	Lost	Time
2017	Month	ITD	Month	ITD	Month	ITD	Month	ITD
Bechtel	553	2601	39	3028	2	97	0	13
Subcontractor	12	110	1	206	0	8	0	1
Total	565	2711	40	3234	2	105	0	14

### 4.0 Schedule

Train 3 achieved RFSU and first LNG on January 13th with a first cargo on January 24th. Train 3 substantial completion is estimated to occur within the first quarter of 2017, based on actual construction progress realized. Train 4 is projecting November 2017 for substantial completion.

# 5.0 Construction and Start up

Construction Activities by Area					
Area	Construction Activities in February	Planned Work for March			
Liquefaction Stage 2 Area – Train 3	<ul> <li>Continued A/G pipe insulation, lighting installation and punch list work-off.</li> <li>Commenced strainer shutdown outage.</li> </ul>	<ul> <li>Complete steel punch list work-off.</li> <li>Complete strainer shut-down scope.</li> <li>Complete the performance test.</li> </ul>			
Liquefaction Stage 2 Area – Train 4	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue loop checks.</li> <li>Continue the setting of gas generators.</li> <li>Continue turbine cold cranks.</li> <li>Conducted compressor mineral and synthetic lube oil flushes.</li> </ul>	<ul> <li>Continue AG pipe installation, testing, air blows, and restoration.</li> <li>Continue cable pulls, conduit, instrument, and tubing installation.</li> <li>Continue loop checks.</li> <li>Continue compressor mineral and synthetic lube oil flushes.</li> <li>Complete the setting of gas generators.</li> <li>Continue turbine cold cranks.</li> </ul>			
OSBL – Stage 2	<ul> <li>Continue with pipe testing, air blows, and restoration.</li> <li>Poured foundations for flare compressors.</li> </ul>	<ul> <li>Continue with pipe testing, air blows, and restoration.</li> <li>Commence steel erection and set compressors and air coolers for flare modification.</li> </ul>			
Meter Facility (CP13-2-000)	No activities.	Commence pile driving in meter area.			

Construction Activities by Area					
Area	Construction Activities in February	Planned Work for March			
Stage 3 – Train 5 & Stage 3 ISBL and OSBL (CP13-552-000)	<ul> <li>Continued foundation installation.</li> <li>Continued structural steel erection.</li> <li>Continued A/G pipe installation.</li> <li>Commenced A/G pipe testing related to compressor and propane condenser area piping.</li> <li>Continued installation of grounding in all areas and cathodic protection for amine underground pipe.</li> <li>Continued cable tray installation related to ISBL substations.</li> <li>Set refrigeration compressors and equipment in the heavies removal area and amine area.</li> <li>Continued installation of roads, trenches, culverts, and final grading.</li> <li>Continued underground firewater assembly, testing, and installation.</li> </ul>	<ul> <li>Continue concrete foundation installations.</li> <li>Continue to erect structural steel.</li> <li>Continue installation of A/G pipe.</li> <li>Continue installation of grounding in all areas and complete cathodic protection installation for amine underground pipe.</li> <li>Continue installation of roads, trenches and culverts.</li> <li>Continue U/G firewater assembly and installation.</li> </ul>			
East Meter Pipe (CP15-482-000)	Placed in service.	Prepare to remove and clean strainers.			

# **6.0** Permitting and Environmental

Summary of Problems, Non-Compliances, and Corrective Actions

Date	Description
Intermittent	As per previous month's report, SPL continues to coordinate with LDEQ to ensure air permit compliance is demonstrated.

**Agency Contacts/Inspections** 

Agency	Name	Date	Location/Activity
DOT-PHMSA	Chad Hall	Feb. 13 – 17, 2017	Construction inspection of LNG Trains 4 & 5. No deficiencies noted.



Stage 2 - Flare Modification Compressor Area



Train 5 – M01 Structure and Equipment



Stage 3 OSBL - 347R05 Steel Erection



Stage 3 OSBL - Pouring Rack R06 Pile Caps Along N-S Run



Train 5 – Hockey Stick Piping Installed



Train 5 - Revamp LNG Trench Rebar Near Tie-In Point In Existing Plant