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By Docket Room via email 03

03/31/15

March 31, 2015

The Office of Fossil Energy Natural Gas Regulatory Activities U.S. Department of Energy 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

DOE/FE Order Nos. 2833, 2961, 3384, 3442, 3306, 3307, and 3595

FE Docket Nos. 10-85-LNG, 10-111-LNG, 13-121-LNG, 14-31-LNG, 13-30-LNG, 13-42-LNG, and

14-92-LNG

### Dear Ms. Moore:

Pursuant to the above-referenced Orders, Sabine Pass Liquefaction, LLC ("Sabine Pass"), herein submits documents describing the progress of the Sabine Pass Liquefaction Project ("Project") for September 1, 2014, through February 28, 2015. Please refer to Table 1 below for a summary of activities and **Attachment A** for the Monthly Reports submitted to Federal Energy Regulatory Commission ("FERC") under FERC Docket Numbers CP11-72-000 and CP13-2-000 during the reporting period.

| Sabine Pass Liquefaction Project   |  |  |  |  |  |
|--|--|--|--|--|--|
| Construction Report for Period: September 1, 2014, through February 28, 2015 |  |  |  |  |  |
| Area   | Comments   |  |  |  |  |
| Liquefaction Stage 1 Area –  | • Erecting structural steel, installing and pressure testing pipe, and paving concrete   |  |  |  |  |
| Train 1  | Completed LNG trench installation  |  |  |  |  |
|  | • Installing cable tray, conduit, and lighting in all available areas  |  |  |  |  |
|  | • Installing instrument tubing and instruments in all areas  |  |  |  |  |
|  | • Continued work on compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHR units in the compressor area |  |  |  |  |
|  | • Completed installation of propane motors in the propane piperack area, and continued   |  |  |  |  |
|  | installation of air cooler motors in the AGRU piperack area, and cryo air cooler motors in   |  |  |  |  |
|  | the cyro piperack area   |  |  |  |  |
|  | Major equipment set  |  |  |  |  |
| Liquefaction Stage 1 Area –  | • Continued erecting steel, installing and pressure testing pipe, and LNG trench installation  |  |  |  |  |
| Train 2  | Continued cable tray installation and pulling cable  |  |  |  |  |
|  | • Continued work on compressors, turbines, and commenced installation of inlet and outlet ventilation ducts                                  |  |  |  |  |
|  | Completed concrete leave-out pedestals in dehydration areas  |  |  |  |  |
|  | Major equipment set  |  |  |  |  |
| Liquefaction Stage 2 Area –  | Constructing foundations, erecting structural steel, installing electrical cable tray and  |  |  |  |  |
| Train 3  | installing above ground and underground piping   |  |  |  |  |
|  | Completed the installation of underground HDPE piping  |  |  |  |  |
|  | • Continued installation of the propane refrigerant condenser fin fans   |  |  |  |  |
|  | Completed installation of amine underground piping   |  |  |  |  |
|  | • Set the CO2 absorber, various drums, and pumps   |  |  |  |  |
|  | Major equipment set  |  |  |  |  |

| Sabine Pass Liquefaction Project<br>Construction Report for Period: September 1, 2014, through February 28, 2015 |  |  |  |  |
|--|--|--|--|--|
| Area   | Comments   |  |  |  |
| Liquefaction Stage 2 Area –<br>Train 4   | <ul> <li>Poured pedestals, columns, and foundations</li> <li>Continued erection of structural steel, installation of cable tray, and installation of aboveground piping</li> <li>Continued the installation of the AG pipe in cyro rack</li> <li>Set Train 4 CO2 absorber, analyzer shelter, and propane condenser subcoolers in Train 4</li> </ul>  |  |  |  |
| OSBL   | propane condenser rack  • Foundations constructed  • Continued LNG swale installation  |  |  |  |
|  | <ul> <li>Continued steel erection, installation of cable tray and conduit, and pipe pressure testing</li> <li>Set Thermal Oxidizers for Trains 3 and 4</li> <li>Poured pedestals in flare area piperacks and GTG piperack</li> <li>Continued road crossing trenches</li> <li>Completed the main 13.8 kV cable pull from sync bus substation to utility substation</li> <li>Energized the utility substation</li> </ul> |  |  |  |
| Support Buildings  | <ul> <li>Warehouse – pile cap foundation 98% complete</li> <li>Maintenance Building – columns, beams and roof panel fabrication continued</li> </ul>   |  |  |  |
| Access Roads, Waterline  | Water trucks were operated for dust control, as necessary     Staging for dual waterline   |  |  |  |
| Laydown, Staging Areas   | Contractors continue to mobilize personnel and equipment.  |  |  |  |
| Construction Dock (Ro-Ro)  | Received and offload piles and equipment at the construction dock  |  |  |  |
| Revamp Area  | <ul> <li>Commenced steel erection</li> <li>Completed tie-in work</li> <li>Continued with loop checks</li> <li>Completed pipe installation, insulation and testing</li> <li>Revamp completed sync bus ("A" and "B" side) modifications</li> </ul>   |  |  |  |
| Condensate Storage   | <ul> <li>Painting subcontractor finished</li> <li>Completion of original Scope of Work pipe installation including hydro-test</li> <li>Initiated work on piping for sump and pump changes at the truck loading area by LACT Skid</li> <li>Completed installation of the dike around the tank containment area</li> <li>Mechanical completion achieved February 27, 2015</li> </ul>                                     |  |  |  |

Please call me if you have any questions.

Sincerely,

Karri Mahmoud

Sabine Pass Liquefaction, LLC

/S/ Karri Mahmoud

# Sabine Pass Liquefaction, LLC DOE Semi-Annual Report

DOE/FE Order Nos. 2833, 2961, 3384, 3442, 3306, 3307, and 3595

FE Docket Nos. 10-85-LNG, 10-111-LNG, 13-121-LNG, 14-31-LNG, 13-30-LNG, 13-42-LNG, and 14-92-LNG

### **ATTACHMENT A**

# SABINE PASS LIQUEFACTION, LLC Cameron Parish, Louisiana Monthly Progress Report September 2014

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1 and SPL Stage 2 projects occurring during the month of September 2014.

Stage 1 Engineering is 99.9% complete, Procurement is 99.9%, and Subcontract and direct hire Construction work are 50.9% and 44.5% complete, respectively. Stage 1 overall project completion is 75.6% against the plan of 76.1%.

Stage 2 Engineering is now 88.3% complete, Procurement is 63%, and Subcontract and direct hire Construction work are 26.8% and 8.5% complete, respectively. Overall project completion for Stage 2 is 42.8% against the plan of 42.6%.

Actual project progress continues to support the achievement of the scheduled Substantial Completion Dates for Trains 1 and 2, which remain as February 2016 and June 2016, respectively. Trains 3 and 4 Substantial Completion Dates are April 2017 and August 2017.

### 2.0 Project Highlights

Stage 1 Engineering continued in punch list mode and Stage 2 Engineering issued first loop check drawings.

Multiple columns and vessels arrived at site for Trains 3 and 4, while Trains 3 and 4 also received deliveries for propane condensers, pentane heaters and shell and tube heat exchangers. Procurement continued to support construction activities at the jobsite through delivery of piping and structural items.

During the month of September, Subcontracts managed the following major subcontracts for Trains 1 and 2: storm water ditch work, field erected tanks, onsite concrete batch plant, offsite and onsite equipment insulation, permanent telecommunications, fire and gas detection, and the supervision of refrigeration compressors installation. For Trains 3 and 4, Subcontracts managed the efforts for field erected tanks, busing, the onsite concrete batch plant, permanent telecommunications, NDE, and fire and gas detection. The equipment insulation subcontract was awarded. Bids were received for the electric heat tracing and heavy haul subcontracts.

Construction in Train 1 continued to work on structural and paving concrete, structural steel erection, installation of underground and aboveground piping, testing of aboveground pipe, and installation of electrical grounding, cable tray, lighting, control cable, and mechanical equipment. Train 2 continued to work on structural and paving concrete, structural steel erection, electrical grounding, installation of underground and aboveground pipe, control cable, and cable tray installation and mechanical equipment. Construction in the Stage 1 OSBL area continued to work on structural and paving concrete, including LNG swales and trench, structural steel erection, electrical grounding, installation of underground and aboveground pipe, testing of aboveground pipe, cable tray installation, and mechanical equipment installation. In the Revamp area, work commenced on tie-ins of aboveground piping and electrical, including installation of remaining electrical conduit, cable, and trays.

Construction in Train 3 continued to work on structural concrete and paving concrete, installation of underground piping, erection of structural steel, installation of aboveground piping and installation of mechanical equipment. Construction in Train 4 continued to work on structural and paving concrete, installation of underground piping, and erection of structural steel. Construction in the Stage 2 OSBL continued with the placement of structural concrete, fabrication and installation of underground piping, erection of structural steel, and installation of mechanical equipment. Installation of Revamp area rack piping continued.

### 3.0 Environmental, Safety, and Health Progress

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

|                | Near Miss Cases |                  | First Aid OS |                    | OSHA Cases |                    | LWDC Cases |                  |
|----------------|-----------------|------------------|--------------|--------------------|------------|--------------------|------------|------------------|
|                | Month           | ITD <sup>1</sup> | Month        | ITD <sup>1,2</sup> | Month      | ITD <sup>1,2</sup> | Month      | ITD <sup>1</sup> |
| Bechtel        | 30              | 316              | 82           | 897                | 2          | 36                 | 0          | 4                |
| Subcontractors | 5               | 33               | 19           | 129                | 0          | 6                  | 0          | 1                |
| Total          | 35              | 349              | 101          | 1029               | 2          | 41                 | 0          | 5                |

<sup>1.</sup> ITD = cases from inception of project to date.

### 4.0 Schedule

Overall, Train 1 and 2 project progress is 75.6% complete against a plan of 76.1%. Overall Train 3 and 4 project progress is 42.8% complete against a plan of 42.6%.

### 5.0 Construction

| Area                                      | Comments  | Planned Work for Next Reporting<br>Period   |
|---|---|---|
| Liquefaction<br>Stage 1 Area –<br>Train 1 | <ul> <li>Continued to erect structural steel.</li> <li>Continued pipe installation.</li> <li>Continued concrete paving and trench installation.</li> <li>Continued to install cable tray, conduit, and lighting in all available areas.</li> <li>Continued hydro testing.</li> <li>Continued to install instrument tubing and instruments in all areas.</li> <li>Major equipment: commenced installation of propane motors and continued work on compressors, turbines, inlet and outlet ventilation ducts, and GT stacks.</li> </ul> | <ul> <li>Continue LNG trench installation on the south end of ISBL.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul> |
| Liquefaction<br>Stage 1 Area –<br>Train 2 | <ul> <li>Continued steel erection.</li> <li>Continued pipe installation.</li> <li>Continued cable tray installation and pulling cable.</li> <li>Continued concrete paving.</li> <li>Continued hydro testing.</li> <li>Major equipment was set in H/I/L stage propane suction drums, and L/S propane - ethylene condensate/feed chillers, molecular sieve after filters, heavies removal column, and continued work on compressors and turbines.</li> </ul>  | <ul> <li>Continue paving and constructing foundations.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul>              |

<sup>2.</sup> First Aid ITD – two late reports, one OSHA Recordable changed to first aid.

| Area                                       | Comments  | Planned Work for Next Reporting Period   |
|--|---|--|
| Liquefaction<br>Stage 2 Area –<br>Train 3  | <ul> <li>Continued to construct base slab foundations and table tops.</li> <li>Continued compressor deck construction.</li> <li>Continued the fabrication of amine &amp; hot oil underground piping.</li> <li>Continued with the installation of underground pipe.</li> <li>Continued to erect structural steel.</li> <li>Commenced construction of above ground pipe.</li> <li>Completed the installation of underground HDPE piping.</li> <li>Continued installation of the propane refrigerant condenser fin fans.</li> <li>Major equipment: set the H2S removal skids.</li> </ul> | <ul> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue constructing foundations.</li> <li>Commence the heavy lift program.</li> </ul> |
| Liquefaction<br>Stage 2 Area –<br>Trains 4 | <ul> <li>Continued to construct base slab foundations.</li> <li>Continued with fabrication of underground HDPE piping.</li> <li>Commenced the fabrication of amine and hot oil underground piping.</li> <li>Commenced erection of structural steel.</li> </ul>  | Continue constructing foundations.   |
| OSBL                                       | <ul> <li>Continued LNG swale installation.</li> <li>Continued steel erection.</li> <li>Continued pipe installation.</li> <li>Continued installation of cable tray and conduit.</li> <li>Foundations constructed.</li> <li>Continued with the fabrication of underground pipe.</li> <li>Pipe pressure testing continued.</li> <li>Continued setting of Thermal Oxidizers for Trains 3 and 4.</li> </ul>  | <ul> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue activities to support construction.</li> </ul>                                 |
| Support Buildings  Access Roads,           | <ul> <li>Continued construction of the warehouse.</li> <li>Renovations to control room completed.</li> <li>Water trucks were operated for dust</li> </ul>   | Continue warehouse.      Dust control will continue.   |
| Waterline Laydown, Staging Areas           | <ul> <li>control, as necessary.</li> <li>Contractors continue to mobilize personnel and equipment.</li> </ul>   | Contractors will continue to mobilize personnel and equipment.   |
| Construction Dock (Ro-Ro) Revamp Area      | <ul> <li>Received and offload piles and equipment at the construction dock.</li> <li>Continued steel erection.</li> <li>Commenced fabrication of aboveground piping.</li> <li>Revamp pipe installation continued with priority assigned from south to north to facilitate logical testing and insulation.</li> </ul>  | Continue to receive piles and equipment.     Continue activities to support construction.  |

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

| Date  | Description |
|-------|-------------|
| None. |             |

**Agency Contacts/Inspections** 

| Agency | Name | Date | Location/Activity |
|--------|------|------|-------------------|
| None.  |      |      |                   |

# 7.0 Progress Pictures



Train 1 Installing Plumes for Propane Subcoolers



Train 1 Installing Pipe



Train 1 Running Electrical Conduit to the Thermal Oxidizer Fans





OSBL Stage 1 Setting top section of Wet Dry Gas Flare



Train 3 Installing Propane Coolers



Train 3 Installing Pipe in Propane Rack



Train 4 Starting form work on Compressor Deck



OSBL2 Installed Thermal Oxidizer Fans

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report October 2014

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1 and SPL Stage 2 projects that occurred during the month of October 2014.

Stage 1 Engineering and Procurement are 100% complete, Subcontract and direct hire Construction work are 52% and 49.6% complete, respectively. Stage 1 overall project completion is 77.6% against the plan of 78.4%.

Stage 2 Engineering is now 91.3% complete, Procurement is 67.6%, and Subcontract and direct hire Construction work are 29.6% and 11.1% complete, respectively. Overall project completion for Stage 2 is 46.4% against the plan of 46.3%.

During October, Construction in Train 1 worked on steel above the compressor table top, WHRU installation and on above ground pipe installation. Also, the Train 2 ethylene and methane cold boxes were delivered to the site. In Train 3, mechanical equipment was set while steel erection and aboveground piping work continued. Train 4 worked on completing the refrigeration compressor table top foundation and underground pipe installation.

Actual project progress continues to support the achievement of the scheduled Substantial Completion Dates for Trains 1 and 2, which remain as February 2016 and June 2016, respectively. Trains 3 and 4 Substantial Completion Dates are April 2017 and August 2017.

### 2.0 Project Highlights

Stage 1 engineering is complete and is in punch list mode. The T-boxes for the WHRUs on Stage 1 were delivered to site. Multiple columns and vessels arrived at site for Trains 3 and 4 in addition to completed deliveries for Train 3 propane condensers, propane feed chillers, filters, thermal oxidizer, and shell and tube heat exchangers. Additionally, the first shipment of Train 3 methane and propane refrigeration compressors and the BOG compressor shipped. Procurement continues to support construction activities at the jobsite through delivery of piping and structural items.

During the month of October, Subcontracts managed the following major subcontracts for Trains 1 and 2: field erected tanks, onsite concrete batch plant, offsite and onsite equipment insulation, permanent telecommunications, fire and gas detection, and the supervision of refrigeration compressors installation. Recon completed storm water ditch work in October. For Trains 3 and 4, Subcontracts managed efforts for field erected tanks, busing, onsite concrete batch plant, permanent telecommunications, NDE, fire and gas detection, and equipment insulation. Evaluations of the electric heat tracing and heavy haul proposals continued.

Construction in Train 1 continued to work on structural and paving concrete, structural steel erection, installation of underground and aboveground piping, testing of aboveground pipe, installation of electrical grounding, cable tray, lighting, control cable and power cable, and mechanical equipment. Train 2 continued to work on structural and paving concrete, structural steel erection, electrical grounding, installation of underground and aboveground pipe, control cable, power cable tray installation, and mechanical equipment. Construction in the Stage 1 OSBL area continued with structural and paving concrete, including LNG swales and trench, structural steel erection, electrical grounding, installation of underground and aboveground pipe, testing of aboveground pipe, cable tray installation, lighting, control cable and power cable, and mechanical equipment installation.

Construction in Train 3 continued to work on structural concrete and paving concrete, installation of underground piping, erection of structural steel, installation of aboveground piping, and

installation of mechanical equipment. Construction in Train 4 continued to work on structural and paving concrete, installation of underground piping, and erection of structural steel. Construction in the Stage 2 OSBL continued with the placement of structural concrete, fabrication and installation of underground piping, erection of structural steel, and installation of mechanical equipment. Installation of Revamp area rack piping continued.

### 3.0 Environmental, Safety, and Health Progress

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

|               | Near               | Miss | Firs  | t Aid            | Recor | dable            | Lost  | Time |
|---------------|--------------------|------|-------|------------------|-------|------------------|-------|------|
|               | Month <sup>1</sup> | ITD  | Month | ITD <sup>2</sup> | Month | ITD <sup>3</sup> | Month | ITD  |
| Bechtel       | 34                 | 349  | 119   | 1099             | 7     | 40               | 1     | 5    |
| Subcontractor | 1                  | 36   | 3     | 44               | 0     | 7                | 0     | 1    |
| Total         | 35                 | 385  | 122   | 1143             | 7     | 47               | 1     | 6    |

<sup>&</sup>lt;sup>1.</sup> Near Miss Month – 1 S/C was reported late, 2 Bechtel were actually S/C

### 4.0 Schedule

Overall, Train 1 and 2 project progress is 77.6% complete against a plan of 78.4%. Overall Train 3 and 4 project progress is 46.4% complete against a plan of 46.3%.

<sup>&</sup>lt;sup>2.</sup> First Aid ITD – 3 Bechtel were actually S/C; 8 were non-occupational

<sup>3.</sup> OSHA ITD – 1 recordable cancelled

## 5.0 Construction

| Area                                   | Construction Activities in October   | Planned Work for November  |
|--|--|--|
| Liquefaction Stage 1<br>Area – Train 1 | <ul> <li>Continued to erect structural steel.</li> <li>Continued pipe installation.</li> <li>Continued concrete paving and trench installation.</li> <li>Continued to install cable tray, conduit, and lighting in all available areas.</li> <li>Continued to install instrument tubing and instruments in all areas.</li> <li>Commenced to pull high voltage cable pulls between utility substation and ISBL substations.</li> <li>Completed equipment installation of mercury removal after filters, first three propane motors, and continued work on compressors, turbines, inlet, and outlet ventilation ducts.</li> </ul>                  | <ul> <li>Continue LNG trench and paving.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul>               |
| Liquefaction Stage 1<br>Area – Train 2 | <ul> <li>Continued steel erection.</li> <li>Continued pipe installation.</li> <li>Continued cable tray installation and pulling cable.</li> <li>Continued concrete paving and pouring foundations.</li> <li>Completed equipment installation of six lube oil consoles, lean/rich solvent heat exchangers, seven fin fans, fuel gas knockout drum, fuel gas heater, pentane heaters, start-up fuel gas electric heater, turbine IAH water tank and pumps, LP fuel gas knock out drum, methane cold box, ethylene cold box, mercury removal beds, molecular sieve dehydrators, H.S. propane-feed chillers, and dry feed knock out drum.</li> </ul> | <ul> <li>Continue paving and constructing foundations.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul> |

| Area                 | Construction Activities in October   | Planned Work for November           |
|----------------------|--|-------------------------------------|
| Liquefaction Stage 2 | Continued to construct base slab foundations and                           | Continue to erect structural steel. |
| Area – Train 3       | table tops.  | Continue pipe installation.         |
|                      | Continued compressor deck construction.                                    | Continue constructing foundations.  |
|                      | <ul> <li>Continued the fabrication of amine underground piping.</li> </ul> | Commence the heavy lift program.    |
|                      | Continued to erect structural steel.                                       |                                     |
|                      | <ul> <li>Commenced construction of above ground pipe.</li> </ul>           |                                     |
|                      | Completed the installation of underground HDPE piping.                     |                                     |
|                      | Continued installation of the propane refrigerant condenser fin fans.      |                                     |
|                      | Completed installation of the propane refrigerant condenser fin fans.      |                                     |
|                      | Moved 1,000 TN crane to commence heavy lift program.                       |                                     |
|                      | Major equipment: set feed gas heater and first hot oil pumps               |                                     |
| Liquefaction Stage 2 | Continued to construct base slab foundations.                              | Continue constructing foundations.  |
| Area – Train 4       | Continued with fabrication of underground HDPE                             | g ar and a                          |
|                      | piping.  |                                     |
|                      | Continued the fabrication of amine and hot oil                             |                                     |
|                      | underground piping.  |                                     |
|                      | Continued erection of structural steel.                                    |                                     |

| Area                       | Construction Activities in October  | Planned Work for November  |
|----------------------------|---|--|
| OSBL                       | <ul> <li>Continued LNG swale installation.</li> <li>Continued steel erection.</li> <li>Continued pipe installation.</li> <li>Continued installation of cable tray and conduit.</li> <li>Foundations constructed.</li> <li>Continued with the fabrication of underground pipe.</li> <li>Pipe pressure testing continued.</li> <li>Started the road crossing trenches alongside Doug Lawson loop.</li> <li>OSBL and Revamp commenced the main 13.8 kV cable pull from sync bus substation to utility substation.</li> <li>Continued setting of Thermal Oxidizers for Trains 3 and 4.</li> </ul> | <ul> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue activities to support construction.</li> </ul> |
| Support Buildings          | <ul> <li>Continued construction of the warehouse.</li> <li>Renovations to control room completed.</li> </ul>  | Continue warehouse.  |
| Access Roads,<br>Waterline | Water trucks were operated for dust control, as necessary.  | Dust control will continue.  |
| Laydown, Staging<br>Areas  | Contractors continue to mobilize personnel and equipment.   | Contractors will continue to mobilize personnel and equipment.   |
| Construction Dock (Ro-Ro)  | Received and offload piles and equipment at the construction dock.  | Continue to receive piles and equipment.   |
| Revamp Area                | <ul> <li>Continued steel erection.</li> <li>Commenced fabrication of aboveground piping.</li> <li>Conducted tie-ins.</li> <li>Continued pipe installation.</li> <li>Continued electrical tie-ins.</li> <li>Continued loop checks.</li> </ul>  | Continue activities to support construction.   |

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

| Date  | Description |  |  |  |
|-------|-------------|--|--|--|
| None. |             |  |  |  |

**Agency Contacts/Inspections** 

| Agency | Name | Date | Location/Activity |
|--------|------|------|-------------------|
| None.  |      |      |                   |

## 7.0 Progress Pictures



Train 1 Prefab of the Filter house



Train 2 Installed Lean Rich Solvent Heat Exchangers



Train 2 Installed Molecular Sieve Dehydrators and Mercury Removal Beds



OSBL Stage 1 Installing Siding on Water Treatment Building



Train 3 Installed Hot Oil Pumps



Train 4 Installing Rebar and Formwork on Compressor Deck



OSBL Stage 2 Installing Dry Gas Flare Vaporizers

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1 and SPL Stage 2 projects that occurred during the month of November 2014.

Stage 1 Engineering and Procurement are 100% complete, Subcontract and direct hire Construction work are 52.8% and 53.4% complete, respectively. Stage 1 overall project completion is 79% against the plan of 80.2%.

Stage 2 Engineering is now 92.9% complete, Procurement is 72.6%, and Subcontract and direct hire Construction work are 31.2% and 13.6% complete, respectively. Overall project completion for Stage 2 is 49.8% against the plan of 50.0%.

During November, Construction in Train 1 worked on WHRU installation, steel above the refrigeration compressor table top, and aboveground pipe installation in all areas with a focus on compressor lube oil piping so that compressor lube oil flush may begin in December. Train 2 worked on structural steel erection to support major mechanical equipment setting and aboveground piping installation in all areas. The first refrigeration compressor was received for Train 3, while Train 4 focused on completing the refrigeration compressor table top, underground pipe installation, and steel erection.

Actual project progress continues to support the achievement of the scheduled Substantial Completion Dates for Trains 1 and 2, which remain as February 2016 and June 2016, respectively. Trains 3 and 4 Substantial Completion Dates are April 2017 and August 2017.

### 2.0 Project Highlights

Stage 1 engineering is complete and is in punch list mode. The T-boxes, guillotines and bypass stacks for the WHRUs on Stage 1 were delivered to site. The last shipment of vessels from Doosan will ship in December, including the Train 3 CO<sub>2</sub> absorber. Procurement continues to support construction activities at the jobsite through delivery of piping and structural items.

During the month of November, Subcontracts managed the following major subcontracts for Trains 1 and 2: field-erected tanks, offsite and onsite equipment insulation, permanent telecommunications, fire and gas detection, and the supervision of refrigeration compressors installation. For Trains 3 and 4, Subcontracts managed efforts for field erected tanks, busing, onsite concrete batch plant, permanent telecommunications, NDE, fire and gas detection, and equipment insulation.

Construction in Train 1 continued to work on structural and paving concrete, structural steel erection, installation of aboveground piping, testing of aboveground pipe, installation of electrical grounding, cable tray, lighting, control cable and power cable, and mechanical equipment. Train 2 continued to work on structural and paving concrete, structural steel erection, electrical grounding, installation of aboveground pipe, control cable, power cable tray installation, and mechanical equipment. Construction in the Stage 1 OSBL area continued to work on structural and paving concrete, including LNG swales and trench, structural steel erection, electrical grounding, installation of underground and aboveground pipe, testing of aboveground pipe, cable tray installation, lighting, control cable and power cable, and mechanical equipment installation. In the Revamp area, work continued on tie-ins of aboveground piping, fuel gas heater replacement, and sync bus modification / tie-in work.

Construction in Train 3 continued to work on structural concrete and paving concrete, installation of underground piping, erection of structural steel, installation of aboveground piping, and installation of mechanical equipment. Construction in Train 4 continued to work on structural and

paving concrete, installation of underground piping, and erection of structural steel. The installation of aboveground pipe commenced. Construction in the Stage 2 OSBL continued to work on the placement of structural concrete, fabrication and installation of underground piping, erection of structural steel, installation of mechanical equipment, and installation of aboveground pipe commenced. Installation of Revamp area rack piping continued.

### 3.0 Environmental, Safety, and Health Progress

During the month of November, the following ES&H related events occurred. A description of the recordable events follows.

|               | Near Miss          |     | First Aid |                  | Recordable |                  | Lost Time |     |
|---------------|--------------------|-----|-----------|------------------|------------|------------------|-----------|-----|
|               | Month <sup>1</sup> | ITD | Month     | ITD <sup>2</sup> | Month      | ITD <sup>3</sup> | Month     | ITD |
| Bechtel       | 18                 | 368 | 74        | 1173             | 4          | 44               | 0         | 5   |
| Subcontractor | 1                  | 37  | 7         | 51               | 0          | 7                | 0         | 1   |
| Total         | 19                 | 405 | 81        | 1224             | 4          | 51               | 0         | 6   |

<sup>&</sup>lt;sup>1.</sup> Near Miss Month – 1 reported late

### 4.0 Schedule

Overall, Train 1 and 2 project progress is 79.0% complete against a plan of 80.2%. Overall Train 3 and 4 project progress is 49.8% complete against a plan of 50.0%.

### 5.0 Construction

| Area                                   | Construction Activities in October  | Planned Work for November  |
|--|---|--|
| Liquefaction Stage 1<br>Area – Train 1 | <ul> <li>Continued to erect structural steel.</li> <li>Continued pipe installation.</li> <li>Continued concrete paving and trench installation.</li> <li>Continued to install cable tray, conduit, and lighting in all available areas.</li> <li>Continued to install instrument tubing and instruments in all areas.</li> <li>Commenced to pull high voltage cable pulls between utility substation and ISBL substations.</li> <li>Pipe pressure testing continued.</li> <li>Continued work on compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHRU's.</li> <li>Continued installation of propane motors.</li> <li>Installed heavies removal column reflux condenser and pumps and hot oil sump drum.</li> <li>Continued installation of sub-cooler plumes.</li> </ul> | <ul> <li>Continue LNG trench and paving.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul>               |
| Liquefaction Stage 1<br>Area – Train 2 | <ul> <li>Continued steel erection.</li> <li>Continued pipe installation.</li> <li>Continued cable tray installation and pulling cable.</li> <li>Continued concrete paving and pouring foundations.</li> <li>Commenced LNG trench installation.</li> <li>Continued work on compressors, turbines, and commenced installation of inlet and outlet ventilation ducts.</li> </ul>   | <ul> <li>Continue paving and constructing foundations.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul> |

| Area                                   | Construction Activities in October   | Planned Work for November  |
|--|--|--|
| Liquefaction Stage 2<br>Area – Train 3 | <ul> <li>Continued to construct base slab foundations and table tops.</li> <li>Continued compressor deck construction.</li> <li>Completed installation of amine underground piping.</li> <li>Continued to erect structural steel.</li> <li>Continued construction of above ground pipe.</li> <li>Continued installation of the propane refrigerant</li> </ul>  | Continue to erect structural steel.     Continue pipe installation.     Continue constructing foundations.     Commence the heavy lift program.    |
|  | condenser fin fans.  • Equipment Set: propane accumulator, propane subcoolers, hot oil surge drum, condensate stabilizer, regeneration gas KO drum, mercury removal bed, molecular sieve dehydrator, heavies removal column reboiler.  |  |
| Liquefaction Stage 2<br>Area – Train 4 | <ul> <li>Continued to construct base slab foundations.</li> <li>Continued with fabrication of underground HDPE piping.</li> <li>Continued the fabrication of amine and hot oil underground piping.</li> <li>Continued erection of structural steel.</li> <li>Commenced installation of aboveground piping.</li> </ul>  | Continue constructing foundations.   |
| OSBL                                   | <ul> <li>Continued LNG swale light weight concrete installation.</li> <li>Commenced concrete coating around sump and chemical areas.</li> <li>Continued road crossing trenches alongside Doug Lawson Loop.</li> <li>Continued erecting structural steel.</li> <li>Installed the two underground feed gas lines across the heavy haul road.</li> <li>Started installation of underground stormwater pipe.</li> <li>Continued to install cable tray, conduit, and lighting in all available areas.</li> <li>Continued instrument installation in all areas as well as instrument air headers and tubing.</li> <li>Equipment Set: Train 3 BOG compressors, thermal oxidizers for Trains 3 and 4.</li> </ul> | <ul> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue activities to support construction.</li> </ul> |

| Area                       | Construction Activities in October  | Planned Work for November                                      |
|----------------------------|---|--|
| Support Buildings          | <ul><li>Continued construction of the warehouse.</li><li>Renovations to control room completed.</li></ul>   | Continue warehouse.  |
| Access Roads,<br>Waterline | Water trucks were operated for dust control, as necessary.  | Dust control will continue.                                    |
| Laydown, Staging<br>Areas  | Contractors continue to mobilize personnel and equipment.   | Contractors will continue to mobilize personnel and equipment. |
| Construction Dock (Ro-Ro)  | <ul> <li>Received and offload piles and equipment at the<br/>construction dock.</li> </ul>  | Continue to receive piles and equipment.                       |
| Revamp Area                | <ul> <li>Completed tie-in work.</li> <li>Pipe installation continued.</li> <li>Pipe insulation commenced in October and continued in November.</li> <li>Completed sync bus ("B" side) modifications.</li> <li>Continued electrical wire/cable pulls, terminations, and instrument installation.</li> <li>Continued with loop checks.</li> </ul> | Continue activities to support construction.                   |

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

| Date  | Description |
|-------|-------------|
| None. |             |

**Agency Contacts/Inspections** 

| Agency | Name | Date | Location/Activity |
|--------|------|------|-------------------|
| None.  |      |      |                   |

# 7.0 Progress Pictures



Train 1 Installing Elevated Steel



Train 1 Installing Platforms on WHRU



Train 2 Installing Inlet Ventilation Bull Horn



OSBL Stage 1 Pipe Lift



Train 3 Installed Hot Oil Drum



Train 3 Setting Equipment with Steel Installation



Train 4 Installing Table Top Rebar and Formwork



OSBL Stage 2 Setting BOG Compressor



# SABINE PASS LIQUEFACTION PROJECT

Cameron Parish, Louisiana

Monthly Progress Report
December 2014

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1 and SPL Stage 2 projects that occurred during the month of December 2014.

Stage 1 Engineering and Procurement are 100% complete, Subcontract and direct hire Construction work are 54.9% and 58.8% complete, respectively. Stage 1 overall project completion is 81.1% against the plan of 82%.

Stage 2 Engineering is now 94.9% complete, Procurement is 78.7%, and Subcontract and direct hire Construction work are 33.4% and 15.6% complete, respectively. Overall project completion for Stage 2 is 53.7% against the plan of 53.5%.

During December, Train 1 construction commenced preliminary alignment and lube oil flush on refrigeration compressors, and one WHRU was installed. In Train 2, cryo coolers were installed. In Train 3, the CO2 absorber and refrigeration compressors were received at the Site. In Train 4, the last concrete pour on refrigeration compressor table top was completed and above ground piping installation commenced.

Actual project progress continues to support the achievement of the scheduled Substantial Completion Dates for Trains 1 and 2, which remain as February 2016 and June 2016, respectively. Trains 3 and 4 Substantial Completion Dates are April 2017 and August 2017.

### 2.0 Project Highlights

Stage 1 engineering is complete and is in punch list mode. For Stage 1, Procurement issued the initial awards for operating spare parts, and delivered the load shedding system. For Stage 2, the Train 3 refrigeration compressors and CO2 absorber were delivered. Also, delivery of the cryo air coolers commenced.

During the month of December, Subcontracts managed the following major subcontracts for Trains 1 and 2: field-erected tanks, offsite and onsite equipment insulation, permanent telecommunications, fire and gas detection, and the supervision of installation of refrigeration compressors. For Trains 3 and 4, Subcontracts managed efforts for field-erected tanks, busing, onsite concrete batch plant, permanent telecommunications, NDE, fire and gas detection, and equipment insulation.

Construction in Train 1 commenced preliminary alignment and lube oil flushing on refrigeration compressors. Also Train 1 completed installation of one WHRU. In Train 2, cryo coolers were installed. In OSBL, U/G pipe installation and backfill of the heavy haul road was completed. In Revamp, pipe installation continued.

In Train 3, the debutanizer column and fin fans were set. In Train 4 the last concrete pour on refrigeration compressor table top was completed. In OSBL area, the installation of aboveground pipe and flare assembly commenced.

### 3.0 Environmental, Safety, and Health Progress

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

|               | Near Miss |         | First Aid |      | Recordable |   | Lost Time |       |     |
|---------------|-----------|---------|-----------|------|------------|---|-----------|-------|-----|
|               | Month     | ITD (1) | Month     | ITD  | Month      |   | ITD       | Month | ITD |
| Bechtel       | 22        | 392     | 68        | 1233 |            | 2 | 47        | -     | . 6 |
| Subcontractor | 1         | 38      | 7         | 57   |            | 0 | 7         | (     | 1   |
| Total         | 23        | 430     | 75        | 1290 |            | 2 | 54        | _     | . 7 |

### 4.0 Schedule

Overall, Train 1 and 2 project progress is 81.1% complete against a plan of 82.0%. Overall Train 3 and 4 project progress is 53.7% complete against a plan of 53.5%.

<sup>1.</sup> Near Miss ITD - 2 near miss late reports
2. First Aid ITD - 8 first aids cancelled: 6 Bechtel, 1 S/C
3. Recordable ITD - 1 first aid became a recordable

### 5.0 Construction

| Area                                   | Construction Activities in December   | Planned Work for January   |
|--|---|--|
| Liquefaction Stage 1<br>Area – Train 1 | <ul> <li>Completed LNG trench installation.</li> <li>Continued to erect structural steel.</li> <li>Continued pipe installation.</li> <li>Continued concrete paving and trench installation.</li> <li>Continued to install cable tray, conduit, and lighting in all available areas.</li> <li>Continued to install instrument tubing and instruments in all areas.</li> <li>Continued to pull high voltage cable pulls between utility substation and ISBL substations.</li> <li>Pipe pressure testing continued.</li> <li>Continued work on compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHRU's.</li> <li>Continued installation of propane motors.</li> <li>Installed heavies removal column reflux condenser and pumps and hot oil sump drum.</li> <li>Continued installation of sub-cooler plumes.</li> <li>Completed installation of one 131A01 WHR unit and continued work on compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and the remaining WHR unit.</li> <li>Installed the feed gas filter coalescer, the feed gas heater, and the dry inlet filter coalescer.</li> </ul> | <ul> <li>Continue LNG trench and paving.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul>               |
| Liquefaction Stage 1<br>Area – Train 2 | <ul> <li>Continued steel erection.</li> <li>Continued pipe installation.</li> <li>Continued cable tray installation, pulling cable and continued lighting installation.</li> <li>Continued concrete paving and pouring foundations.</li> <li>Commenced LNG trench installation.</li> <li>Continued work on compressors, turbines, and commenced installation of inlet and outlet ventilation ducts.</li> <li>Installed the feed gas filter coalescer, the IS propane-methane/ethylene feed chiller and one of the ethylene surge drums, installed the remaining cryo fin fans and the heavies removal column reflux drum.</li> <li>Pipe pressure testing continued in all available areas.</li> </ul>   | <ul> <li>Continue paving and constructing foundations.</li> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue installing electrical cable tray.</li> <li>Continue setting major equipment.</li> </ul> |

| Area                                   | Construction Activities in December  | Planned Work for January   |
|--|--|--|
| Liquefaction Stage 2<br>Area – Train 3 | <ul> <li>Continued to construct base slab foundations and table tops.</li> <li>Continued compressor deck construction.</li> <li>Completed installation of amine underground piping.</li> <li>Continued to erect structural steel.</li> <li>Continued construction of above ground pipe.</li> <li>Continued installation of the propane refrigerant condenser fin fans.</li> <li>Equipment Set: propane accumulator, propane subcoolers, hot oil surge drum, condensate stabilizer, regeneration gas KO drum, mercury removal bed, molecular sieve dehydrator, heavies removal column reboiler.</li> </ul>                            | <ul> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue constructing foundations.</li> <li>Commence the heavy lift program.</li> </ul> |
| Liquefaction Stage 2<br>Area – Train 4 | <ul> <li>Continued to construct base slab foundations.</li> <li>Continued with fabrication of underground HDPE piping.</li> <li>Continued the fabrication of amine and hot oil underground piping.</li> <li>Continued erection of structural steel.</li> <li>Commenced installation of aboveground piping.</li> </ul>  | Continue constructing foundations.   |
| OSBL                                   | <ul> <li>Continued LNG swale installation.</li> <li>Completed concrete coating around sump and chemical areas.</li> <li>Continued road crossing trenches alongside Doug Lawson Loop.</li> <li>Completed installation of U/G pipe and backfill of the heavy haul road.</li> <li>Continued steel installation and pipe installations.</li> <li>Pipe pressure testing continued in all available areas.</li> <li>Installed the BOG compressor bridge crane in place.</li> <li>Continued pulling cable in all available areas.</li> <li>Continued the main 13.8 kV cable pull from sync bus substation to utility substation.</li> </ul> | <ul> <li>Continue to erect structural steel.</li> <li>Continue pipe installation.</li> <li>Continue activities to support construction.</li> </ul>                                 |
| Support Buildings                      | Continued construction of the warehouse.     Renovations to control room completed.  | Continue warehouse.  |
| Access Roads,<br>Waterline             | Water trucks were operated for dust control, as necessary.   | Dust control will continue.  |
| Laydown, Staging<br>Areas              | Contractors continue to mobilize personnel and equipment.  | Contractors will continue to mobilize personnel and equipment.   |
| Construction Dock (Ro-Ro)              | Received and offload piles and equipment at the construction dock.   | Continue to receive piles and equipment.   |
| Revamp Area                            | <ul> <li>Revamp pipe installations completed in 121R01.</li> <li>Revamp pipe insulation continued.</li> <li>Revamp completed sync bus ("A" side) modifications.</li> <li>Revamp continued electrical wire/cable pulls, terminations, and</li> </ul>  | Continue activities to support construction.   |

| Area | Construction Activities in December | Planned Work for January |
|------|-------------------------------------|--------------------------|
|      | instrument installation.            |                          |
|      | Revamp continued with loop checks.  |                          |
|      | Continued with loop checks.         |                          |

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

| Date  | Description |
|-------|-------------|
| None. |             |

**Agency Contacts/Inspections** 

| Agency | Name           | Date     | Location/Activity       |
|--------|----------------|----------|-------------------------|
| FERC   | Sentho White   | 12/11/14 | Liquefaction Inspection |
| FERC   | Karla Bathrick | 12/11/14 | Liquefaction Inspection |

## 7.0 Progress Pictures



Train 1 Lube Oil Flush



Train 1 Setting of the WHRU Upper Convection



Train 2 Installing Cable Tray and Pipe under the Compressor Deck



OSBL Stage 1 Flare Knockout Drum Pipe Installation



Train 3 Analyzer Shelter



Train 3 Mercury Removal/Molecular Sieve Dehydrators



Train 4 Debutanizer Reflux Pumps Installed



OSBL Stage 2 Start Setting Mechanical Equipment Wet/Dry Gas Flare

# SABINE PASS LIQUEFACTION PROJECT

Cameron Parish, Louisiana

Monthly Progress Report January 2015

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1 and SPL Stage 2 projects that occurred during the month of January 2015.

Stage 1 Engineering and Procurement are 100% complete. Subcontract and direct hire Construction work are 58.6% and 63.7% complete, respectively. Stage 1 overall project completion is 83.1% against the plan of 84.1%.

Stage 2 Engineering is now 96.8% complete. Procurement is 82.3% complete. Subcontract and direct hire Construction work are 34.8% and 17.9% complete, respectively. Overall project completion for Stage 2 is 56.5% against the plan of 57.5%.

During January, Train 1 completed the lube oil flush on the first circuit of the ethylene refrigeration compressors, as well as the erection of the first WHRU. Cable to both Train 1 compressor substation and propane substation was pulled with cable terminations in progress. Train 2 continued to install compressor inlet and outlet ventilation ducts and motors on cryo air coolers. Construction in Train 3 continued with aboveground pipe installation in the propane condenser rack and began cable tray installation in the acid gas removal area pipe rack. Train 4 completed the last concrete pour on refrigeration compressor table top and commenced installation of above ground piping. In OSBL, the dry gas flare KO drum was set and steel installation at utility substation commenced.

Actual project progress continues to support the achievement of the scheduled Substantial Completion Dates for Trains 1 and 2, which remain as February 2016 and June 2016, respectively. Trains 3 and 4 Substantial Completion Dates are April 2017 and August 2017.

### 2.0 Project Highlights

Stage 1 engineering is complete and is in punch list mode. For Stage 1, Procurement issued the third award for operating spare parts, and delivered the final tagged mechanical equipment. For Stage 2, the Train 3 refrigeration compressors, the Doosan vessels, and the Train 3 cryo coolers were delivered to site. Procurement continues to support construction activities at the jobsite through delivery of piping and structural items.

During the month of January, Subcontracts managed the following major subcontracts for Trains 1 and 2: field-erected tanks, onsite equipment insulation, permanent telecommunications, fire and gas detection, and the supervision of the installation of refrigeration compressors. For Trains 3 and 4, Subcontracts managed efforts for field-erected tanks, busing, onsite concrete batch plant, permanent telecommunications, NDE, fire and gas detection, and equipment insulation.

Construction in Train 1 worked on aboveground pipe installation and pipe testing in refrigeration, compressors, and cold box areas. Also work continued on the compressor filter house and WHRU installation, and aboveground pipe installation to support compressor lube oil flush. Train 2 continued to work on structural steel erection and aboveground piping and electrical installation in all areas. In OSBL, installation of common rack pipe was followed by pipe testing and restoration. In Revamp, the modification and testing in sync bus building and insulation work was essentially completed.

Construction in Train 3 continued with aboveground pipe installation and cable tray. In January, the Train 3 CO2 absorber and one each of propane, ethylene, and methane refrigeration compressors were set. Train 4 completed the last concrete pour on refrigeration compressor table

top and commenced installation of above ground piping. In OSBL, the dry gas flare KO drum was set and steel installation at utility substation commenced.

### 3.0 Environmental, Safety, and Health Progress

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

|               | Near Miss |     | First A | Aid  | Recordable |     | Lost Time |     |
|---------------|-----------|-----|---------|------|------------|-----|-----------|-----|
|               | Month     | ITD | Month   | ITD  | Month      | ITD | Month     | ITD |
| Bechtel       | 15        | 405 | 70      | 1299 | 0          | 48  | 0         | 6   |
| Subcontractor | 0         | 40  | 6       | 65   | 0          | 7   | 0         | 1   |
| Total         | 15        | 445 | 76      | 1364 | 0          | 55  | 0         | 7   |

### 4.0 Schedule

Overall, Train 1 and 2 project progress is 83.1% complete against a plan of 84.1%. Overall Train 3 and 4 project progress is 56.5% complete against a plan of 57.5%.

### 5.0 Construction

| Area                                   | Construction Activities in January  | Planned Work for February  |
|--|---|--|
| Liquefaction Stage 1<br>Area – Train 1 | <ul> <li>Steel erection continued.</li> <li>Continued pipe installation and pressure testing.</li> <li>Completed the setting of WHR units and started setting the GT stacks.</li> <li>Continued work on refrigeration compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHR units.</li> <li>Continued installation of propane condenser motors; started installation of air cooler motors on acid gas removal piperack, and started installation of cryo air cooler motors.</li> <li>Continued cable tray and conduit installation.</li> <li>Continued installation of low voltage cables and lighting.</li> <li>Completed all medium voltage cable pulls in ISBL.</li> </ul> | <ul> <li>Continue steel erection.</li> <li>Continue pipe installation and pressure testing Set the refrigeration compressor turbine filter houses and the gas turbine stacks.</li> <li>Continue work on refrigeration compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHR units.</li> <li>Continue setting all available mechanical equipment.</li> <li>Continue cable tray and conduit installation Continue installation on low voltage cables and lighting.</li> <li>Continue instrument and tubing installation</li> </ul> |
| Liquefaction Stage 1<br>Area – Train 2 | <ul> <li>Continued instrument and tubing installation</li> <li>Continued LNG trench installation.</li> <li>Completed concrete leave-out pedestals in dehydration areas.</li> <li>Continued steel erection.</li> <li>Continued pipe installation and pressure testing Continued work on refrigeration compressors, turbines, inlet and outlet ventilation ducts.</li> <li>Continued cable tray and conduit installation Continued to pull cable/wire and continued lighting installation.</li> </ul>   | <ul> <li>Complete LNG trench installation and paving Complete steel erection in cold box area and dehydrator areas.</li> <li>Continue pipe installation and pressure Continue work on refrigeration compressors, turbines, inlet and outlet ventilation ducts.</li> <li>Continue to set available mechanical equipment.</li> <li>Continue to pull cable/wire and install lighting.</li> <li>Start pulling high voltage power cable to refrigeration compressor substation.</li> </ul>  |
| Liquefaction Stage 2<br>Area – Train 3 | <ul> <li>Poured pedestals, columns, and foundations.</li> <li>Continued cable tray installation.</li> <li>Continued steel installation.</li> <li>Continued AG pipe installation.</li> <li>Set the CO2 absorber, various drums and pumps.</li> <li>Commenced setting of the refrigeration compressors.</li> </ul>  | Continue cable tray and conduit installation<br>Continue steel and AG pipe installation Continue<br>setting refrigeration compressors and associated<br>equipment.   |

| Area                                   | Construction Activities in January   | Planned Work for February  |
|--|--|--|
| Liquefaction Stage 2<br>Area – Train 4 | <ul> <li>Poured pedestals, columns, and foundations.         Continued conduit installation in propane condenser area.</li> <li>Continued steel installation.</li> <li>Commenced steel installation.</li> <li>Commenced AG pipe installation in cryo rack.</li> <li>Set the debutanizer column.</li> </ul>   | <ul> <li>Continue steel installation.</li> <li>Commence AG pipe installation in cryo rack.</li> <li>Set CO2 absorber analyzer shelter.</li> </ul>  |
| OSBL                                   | <ul> <li>Continued LNG swale installation.</li> <li>Continued road crossing trenches.</li> <li>Continued steel installation.</li> <li>Continue pipe installation continued.</li> <li>Continue Pipe pressure testing.</li> <li>Continued cable tray and conduit installation.</li> <li>Continued cable/wire pulls in all available areas.</li> <li>Poured pedestals in flare area piperacks and GTG piperack.</li> <li>Continued AG pipe installation.</li> </ul> | <ul> <li>Continue LNG swale installation and road crossing trenches.</li> <li>Continue pipe installation and pressure testing Continue pipe insulation.</li> <li>Continue to set all available mechanical equipment.</li> <li>Continue cable/wire pulls.</li> <li>OSBL and Revamp will complete the main 13.8 kV cable pull from sync bus substation to utility substation.</li> <li>Energize the utility substation.</li> </ul> |
| Support Buildings                      | <ul> <li>Warehouse - pile cap foundation 70% complete.</li> <li>Maintenance Building - pile cap concrete pours continued.</li> </ul>   | Continue to support construction.  |
| Access Roads,<br>Waterline             | Water trucks were operated for dust control, as necessary.   | Dust control will continue.  |
| Laydown, Staging<br>Areas              | Contractors continue to mobilize personnel and equipment.  | Contractors will continue to mobilize personnel and equipment.   |
| Construction Dock (Ro-Ro)              | Received and offload piles and equipment at the construction dock.   | Continue to receive piles and equipment.   |
| Revamp Area                            | <ul> <li>Pipe installation and pipe testing completed.</li> <li>Continued pipe insulation.</li> <li>Commenced pulling cable in support of OSBL utility substation energization.</li> </ul>   | <ul> <li>Complete pulling cable in support of OSBL energizing the utility substation.</li> <li>Start erecting cable racks for revamp substation.</li> <li>Complete pipe insulation.</li> </ul>   |

| Area                       | Construction Activities in January   | Planned Work for February  |
|----------------------------|--|--|
| Condensate<br>(CP13-2-000) | <ul> <li>Painting Subcontractor finished and demobilized from Site.</li> <li>Completion of original Scope of Work pipe installation including hydro-test.</li> <li>Initiated work on piping for sump pump changes at the truck loading area by LACT Skid.</li> <li>Installation of the dike around the tank containment area continued.</li> <li>Mechanical completion is expected at end of February 2015.</li> </ul> | <ul> <li>Continue work on piping for sump pump changes at the truck loading area by LACT Skid.</li> <li>Continue installation of the dike around the tank containment area.</li> </ul> |

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

| Date  | Description |
|-------|-------------|
| None. |             |

**Agency Contacts/Inspections** 

| Agency | Name | Date | Location/Activity |
|--------|------|------|-------------------|
| None.  |      |      |                   |
|        |      |      |                   |

# 7.0 Progress Pictures



Train 1 Installed WHRU Elbow



Train 2 Ethylene Surge Drum Installed



Train 2 Installing Cable Tray around Thermal Oxidizer



Train 3 Setting CO2 Absorber



Train 3 Lean Booster Pumps Installed



Train 4 Erecting Steel in Heavy Removals Area



Condensate Storage & Send-Out System – Leased Access Control Transfer (LACT) Skid.



Condensate Storage & Send-Out System – LACT Skid (foreground) - Surface Coat applied.

# SABINE PASS LIQUEFACTION PROJECT Cameron Parish, Louisiana Monthly Progress Report February 2015

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### 1.0 Executive Summary

This report covers activities of the SPL Stage 1 and SPL Stage 2 projects that occurred during the month of February 2015.

Stage 1 Engineering and Procurement are 100% complete. Subcontract and direct hire Construction work are 61.8% and 69.2% complete, respectively. Stage 1 overall project completion is 85.4% against the plan of 85.8%.

Stage 2 Engineering is now 98.3% complete. Procurement is 86.7% complete. Subcontract and direct hire Construction work are 36.9% and 20.7% complete, respectively. Overall project completion for Stage 2 is 59.8% against the plan of 60.5%.

During February, Train 1 worked on aboveground pipe installation and pipe testing in refrigeration, compressor, and cold box areas, including cable pulling and termination to support upcoming energization of the compressor substation and propane substation. Train 1 has completed all major mechanical lifts. Train 2 worked on aboveground piping and electrical installation in all areas. Trains 3 and 4 continued to set mechanical equipment and erect steel to open additional aboveground piping work fronts. Work also continued on the Train 3 propane condenser and cryo pipe rack aboveground piping.

Actual project progress continues to support the achievement of the scheduled Substantial Completion Dates for Trains 1 and 2, which remain as February 2016 and June 2016, respectively. Trains 3 and 4 Substantial Completion Dates are April 2017 and August 2017.

### 2.0 Project Highlights

Stage 1 engineering is complete and is in punch list mode. For Stage 1, Procurement issued the fourth award for operating spare parts. For Stage 2, the first two Train 3 chillers were delivered to site. Procurement continued to support construction activities at the jobsite through delivery of piping and structural items.

During the month of February, Subcontracts directed the following major subcontracts for Trains 1 and 2: field-erected tanks, onsite equipment insulation, permanent telecommunications, fire and gas detection, and the supervision of the installation of refrigeration compressors. For Trains 3 and 4, Subcontracts supervised field-erected tanks, busing, onsite concrete batch plant, permanent telecommunications, NDE, fire and gas detection, and equipment insulation.

Construction in Train 1 worked on lube oil flushes on the propane refrigeration compressors and the methane refrigeration compressors, as well as making significant progress on the restoration for the completed oil flush of the ethylene refrigeration compressor. The power and control cable pulling and terminations to Train 1 compressor substation and propane substation are ongoing. Train 2 worked on installing motors on cryo air coolers, commenced installation of GT exhaust stacks and fabricated GT filter house. Train 2 also continued pipe installation and pipe testing for all available areas. The OSBL utility substation main bus was energized in February for system checks, and de-energized, to support the upcoming downstream Train 1 compressor and propane substation energization in March and April, respectively.

Construction in Train 3 worked on aboveground pipe installation in the propane condenser pipe rack, cryo pipe rack, and piping under compressor table top. For Train 3, all six sets of compressors and turbines have been set. Structural steel erection under the Train 3 table top is completed and steel erection begun on the table top. Train 4 started above ground pipe installation under the compressor table top and continued installation of above ground piping at the propane condenser pipe rack and cryo pipe rack. Train 4 propane condenser steel erection is

completed and ready for installation of fin fans. Train 4 also set solvent regenerator and CO2 absorber. In OSBL, utility substation building was set and steel installation at utility substation is in-progress as well as pre-assembly of the flare.

### 3.0 Environmental, Safety, and Health Progress

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

|               | Near Miss |         | s First Aid |      | Recordable |     | Lost Time |     |
|---------------|-----------|---------|-------------|------|------------|-----|-----------|-----|
|               | Month     | ITD (1) | Month       | ITD  | Month      | ITD | Month     | ITD |
| Bechtel       | 18        | 424     | 70          | 1365 | 1          | 51  | 0         | 6   |
| Subcontractor | 0         | 41      | 5           | 72   | 0          | 7   | 0         | 1   |
| Total         | 18        | 465     | 75          | 1437 | 1          | 58  | 0         | 7   |

<sup>(1)</sup> ITD – rates from project inception to date.

### 4.0 Schedule

Overall, Train 1 and 2 project progress is 85.4% complete against a plan of 85.8%. Overall Train 3 and 4 project progress is 59.8% complete against a plan of 60.5%.

## 5.0 Construction

| Area                                   | Construction Activities in February  | Planned Work for March   |
|--|--|--|
| Liquefaction Stage 1<br>Area – Train 1 | <ul> <li>Steel erection continued.</li> <li>Continued pipe installation and pressure testing.</li> <li>Continued work on compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHR units in the compressor area.</li> <li>Completed installation of propane motors in the propane piperack area, and continued installation of air cooler motors in the AGRU piperack area, and cryo air cooler motors in the cryo piperack area.</li> <li>Continued cable tray and conduit installation.</li> <li>Continued instrument and tubing installation.</li> <li>Installed compressor area propane and methane filter houses and completed setting the GT stacks.</li> <li>Continued installation on power, control and instrumentation cables and continued installation of lighting.</li> </ul> | <ul> <li>Continue steel erection.</li> <li>Continue pipe installation and pressure testing.</li> <li>Continue work on refrigeration compressors, turbines, inlet and outlet ventilation ducts, GT stacks, filter houses and WHR units.</li> <li>Continue setting all available mechanical equipment.</li> <li>Continue installation on power, control and instrumentation cables and continue installation of lighting.</li> <li>Continue instrument and tubing installation.</li> </ul> |
| Liquefaction Stage 1<br>Area – Train 2 | <ul> <li>Continued LNG trench installation.</li> <li>Continued steel erection.</li> <li>Continued pipe installation and pressure testing.</li> <li>Continued cable tray and conduit installation.</li> <li>Continued to pull cable/wire and continued lighting installation.</li> <li>Continued work on compressor area compressors, turbines, inlet and outlet ventilation ducts.</li> <li>Began pulling high voltage power cable to compressor substation.</li> </ul>  | <ul> <li>Continue installation of LNG trench.</li> <li>Continue steel erections.</li> <li>Continue installing pipe and pressure testing.</li> <li>Continue work on compressor, turbines, WHR units, GT stacks, inlet and outlet ventilation ducts.</li> <li>Continue cable tray and conduit installation.</li> <li>Continue to pull cable/wire install lighting.</li> <li>Continue pulling high voltage power cable to compressor substation.</li> </ul>                                 |
| Liquefaction Stage 2<br>Area – Train 3 | <ul> <li>Continued cable tray installation.</li> <li>Continued steel installation.</li> <li>Continued to install conduit.</li> <li>Continued AG pipe installation.</li> <li>Set the CO2 absorber, various drums and pumps.</li> <li>Continued setting of the refrigeration compressors.</li> </ul>   | <ul> <li>Continue cable tray and conduit installation</li> <li>Continue steel and AG pipe installation.</li> <li>Continue setting refrigeration compressors and associated equipment.</li> </ul>   |

| Area                                   | Construction Activities in February  | Planned Work for March   |  |  |  |
|--|--|--|--|--|--|
| Liquefaction Stage 2<br>Area – Train 4 | <ul> <li>Continued steel installation.</li> <li>Set Train 4 CO2 absorber, and Train 4 analyzer shelter.</li> <li>Set propane condenser subcoolers in Train 4 propane condenser rack.</li> </ul>  | <ul> <li>Continue steel installation.</li> <li>Continue cable tray installation.</li> <li>Continue AG pipe installation in cryo rack.</li> </ul>   |  |  |  |
| OSBL                                   | <ul> <li>Continued steel erections in east-west main piperack.</li> <li>Continued pipe installations and pressure testing.</li> <li>Continued pipe insulation.</li> <li>Completed cable tray in north-south flare piperack area.</li> <li>Continued cable tray &amp; conduit installation.</li> <li>Continued cable/wire pulls.</li> <li>Completed the main 13.8 kV cable pull from sync bus substation to utility substation.</li> <li>Energized the utility substation.</li> </ul> | <ul> <li>Continue LNG swale installation and road crossing trenches.</li> <li>Continue steel installation.</li> <li>Continue pipe installation and pressure testing Continue pipe insulation.</li> <li>Continue to set all available mechanical equipment.</li> <li>Continue cable/wire pulls.</li> <li>OSBL and Revamp will complete the main 13.8 kV cable pull from sync bus substation to utility substation.</li> <li>Energize the utility substation.</li> </ul> |  |  |  |
| Support Buildings                      | <ul> <li>Warehouse - pile cap foundation 98% complete.</li> <li>Maintenance Building - columns, beams and roof panel fabrication continued.</li> </ul>   | Continue to support construction.  |  |  |  |
| Access Roads,<br>Waterline             | <ul> <li>Water trucks were operated for dust control, as necessary.</li> <li>Staging for dual waterline.</li> </ul>  | <ul><li>Dust control will continue.</li><li>Install dual waterlines.</li></ul>   |  |  |  |
| Laydown, Staging<br>Areas              | Contractors continue to mobilize personnel and equipment.  | Contractors will continue to mobilize personnel and equipment.   |  |  |  |
| Construction Dock (Ro-Ro)              | <ul> <li>Received and offload piles and equipment at the construction dock.</li> </ul>   | Continue to receive piles and equipment.   |  |  |  |
| Revamp Area                            | <ul> <li>Completed pipe insulation.</li> <li>Completed the main 13.8 kV cable pull from sync bus substation to utility substation.</li> </ul>  | <ul> <li>Complete pulling cable in support of OSBL energizing the utility substation.</li> <li>Start erecting cable racks for revamp substation.</li> <li>Complete pipe insulation.</li> </ul>   |  |  |  |
| Condensate<br>(CP13-2-000)             | <ul> <li>Installation of the dike around the tank containment area completed.</li> <li>Mechanical completion achieved February 27, 2015.</li> </ul>  | Demobilize.  |  |  |  |

## 6.0 Permitting and Environmental

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

| • • • • • • • • • • • • • • • • • • • |             |  |  |  |
|---------------------------------------|-------------|--|--|--|
| Date                                  | Description |  |  |  |
| None.                                 |             |  |  |  |

**Agency Contacts/Inspections** 

| Agency | Name | Date | Location/Activity |
|--------|------|------|-------------------|
| None.  |      |      |                   |
|        |      |      |                   |

### 7.0 Progress Pictures



Train 1 Compressor Area - Installing bottom platform for ethylene filter houses.



Train 1 Compressor Area - lube oil flush.



Train 2 Compressor Area – Installing perlins.



Stage 1 OSBL BOG Compressor Area – Installing siding.



Train 3 Heavies Removal Area – Equipment & steel installation.



Train 4 Amine Regen Acid Gas Removal Area – Setting CO2 absorber.



Stage 2 OSBL Utility Substation Area – Setting substation building.



Completed Berm surrounding tank and LACT Skid.



Black containment pipe (10") for 6" condensate line (pipe in pipe); has leak detection system.



Line labels for instrument air at condensate area.