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September 18, 2015

VIA E-FILING AND U.S. MAIL

Larine A. Moore
U.S. Department of Energy
FE-34
P.O. Box 44375
Washington DC 20026-4375

16 - 22 -CGL

Re: *Application of SeaOne for Long-Term Authorization to Export CGL to Non-Free Trade Agreement Countries*

Dear Ms. Moore:

Enclosed please find the Application of SeaOne Gulfport, LLC for Long-Term Authorization to Export Compressed Gas Liquid to Non-Free Trade Agreement ("NFTA") Countries in the Caribbean Basin and Gulf of Mexico.

In addition to the application, enclosed is a check in the amount of $50.00 payable to the Treasurer of the United States, for the filing fee.

Sincerely,

Squire Patton Boggs (US) LLP

John R. Sharp
Senior Attorney

Enclosures

cc: Gordon Arbuckle

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

In the Matter of:	**)**	
	)	
SEAONE GULFPORT, LLC	**)**	**Docket No. 16 - 22 -CGL**
	)	

APPLICATION OF SEAONE GULFPORT, LLC FOR LONG-TERM AUTHORIZATION TO EXPORT COMPRESSED GAS LIQUID TO NON-FREE TRADE AGREEMENT ("NFTA") COUNTRIES IN THE CARIBBEAN BASIN AND GULF OF MEXICO

Pursuant to Section 3 of the Natural Gas Act ("NGA''), 15 U.S.C. Section 717b, and Part 590 of the Department of Energy's ("DOE") regulations, 10 C.F.R. Part 590 (2011), SeaOne Gulfport, LLC ("SeaOne") hereby submits this application (the "Application") to the Office of Fossil Energy ("DOE/FE") for long-term, multi-contract authorization to export up to a total of 1.0 Bcf per day of natural gas contained in Compressed Gas Liquid ("CGL")[1] to NFTA countries ("NFTA Countries") as described in Section III below. In support of this Application, SeaOne respectfully offers the following:

[1] As noted in SeaOne's previous application for authority to export CGL used for a primary purpose of exporting natural gas to FTA countries, *see* SeaOne Pascagoula, LLC, *Application for Long-term Authorization to Export LNG to FTA Countries*, DOE/FE Docket No. 14-83-CGL (Jun. 3, 2014), CGL is not "natural gas" and its export of NGLs and higher Btu products not constituting "natural gas" under Section 3 of the NGA does not require authorization under Section 3. *See* 15 U.S.C. § 717b (2005) ("[N]o person shall export any *natural gas* from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the Commission authorizing it to do so.") (Emphasis added). SeaOne's assessment of the Caribbean market indicates that a large proportion of utilities and other end users will be purchasing higher Btu formulations, capable of being burned in existing facilities configured to use propane, liquefied petroleum gases and similar hydrocarbon blends. However, since DOE's previous order approving the export of CGLs where a primary purpose is to deliver "natural gas" to end users specifies "methane" as the surrogate measure of natural gas contained in CGL, *see* SeaOne Pascagoula, LLC, *Order Granting Long-Term Multi-Contract Authorization to Export to Free Trade Agreement Nations in the Caribbean Basin and Gulf of Mexico*, DOE/FE Docket No. 14-83-CGL, Order No. 3555 (Dec. 2, 2014), we are requesting authorization at a level sufficient to cover the methane in non-jurisdictional as well as jurisdictional CGL.

I.
COMMUNICATIONS

Correspondence and communications regarding this Application should be addressed to:

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Pursuant to Section 590.103(b) of the DOE regulations,[2] SeaOne hereby certifies that the persons listed above and the undersigned are the duly authorized representatives of SeaOne.

II.
DESCRIPTION OF APPLICANT AND CGL

The legal name of the applicant is SeaOne Gulfport, LLC. SeaOne is a limited liability company formed under the laws of the State of Delaware with its principal place of business located at 333 Clay Street, Suite 4890, Houston, Texas, 77002 and licensed to do business in the State of Mississippi. SeaOne is a wholly owned subsidiary of SeaOne Caribbean, LLC ("SOC"). SOC is a limited liability company formed under the laws of the State of Delaware with its principal place of business located at 333 Clay Street, Suite 4890, Houston, Texas, 77002.

CGL is a manufactured product solvated under pressure to produce a custom manufactured blend of various hydrocarbon products produced from oil and gas wells. CGL has a much higher Higher Heating Value ("HHV") or Btu per standard cubic foot (Btu/scf)

[2] SeaOne Gulfport, LLC requests waiver of Section 590.202(a) of DOE's regulations, 10 C.F.R. § 590.202(a), to the extent necessary, to include outside counsel on the official service list in this proceeding.

content than the fuels we typically classify as "natural gas." A produced CGL solution may contain various levels of methane and, accordingly, the process may, in some instances, be utilized as a means of transporting methane to end users. The HHV content of traditional "natural gas" fuels is in the 900–1100 Btu/scf range. The CGL, which by contrast will always have a HHV above 1200 Btu/scf, will, in many if not most cases, be delivered for use as fuel in burners that are currently configured to burn propane or other high-Btu fuel blends that have traditionally not been subject to export controls. Non-jurisdictional hydrocarbons extracted from CGL may also provide feedstock for the production of petrochemicals, fertilizers, vehicle or vessel fuels, or a broad range of other uses. CGL capable of efficient utilization as a means of transporting methane will generally have a HHV content of less than 1200 Btu/scf. This Application is filed to cover the export of CGL with a HHV of less than 1200 Btu/scf and the export of CGL to NFTA Countries where the product formulation, conditions of export, or end user specifications suggest that export of methane is a primary purpose.

III.
AUTHORIZATION REQUESTED

By the instant Application, SeaOne requests long-term, multi-contract authorization to engage in exports of up to 1.0 Bcf per day of natural gas contained in CGL[3] to any NFTA Country located in or adjoining the Caribbean Basin and the Gulf of Mexico, effective for a thirty (30) year term beginning on the date of the first export under the authorization. Prior to any export of natural gas contained in CGL pursuant to this authorization, SeaOne will file

[3] *See* note 1, *supra*.

the long-term export contracts for such products that are the subject of the authorization requested herein following execution of such agreements, which has yet to occur.[4]

SeaOne's negotiations with prospective customers are of a continuing nature. Therefore, SeaOne requests that export authority be granted on a long-term basis at all points of import to NFTA Countries located in or adjoining the Caribbean Basin and the Gulf of Mexico in order to provide SeaOne with the flexibility necessary to respond quickly to these marketing opportunities.[5] Because CGL is manufactured to customer specifications, SeaOne cannot be competitive with other sellers if it must apply for export authorization for each transaction. The subject Application is similar to other long-term export arrangements approved by the DOE/FE.

SeaOne requests these authorizations both on its own behalf and as agent for other parties who hold title to the hydrocarbons contained in the CGL solution at the time of export.

IV.
THE FACILITY AND FEEDSTOCK SOURCE

(a) *The Facility*

SeaOne initially intends to export CGL produced at its proposed Gulfport CGL Production Facility (the "Gulfport Facility") currently being developed within the existing Port of Gulfport, Mississippi, which is owned and operated by the Mississippi State Port

[4] The terms of the individual contracts, including, but not limited to, commencement and termination dates, pricing, volumes, and export destinations, will vary and be determined by market conditions.

[5] DOE/FE has permitted other applicants to submit transaction-specific information required by 10 C.F.R. § 590.202(b) as it becomes available. *See* Sabine Pass Liquefaction, LLC, *Opinion And Order Conditionally Granting Long-Term Authorization To Export Liquefied Natural Gas From Sabine Pass LNG Terminal To Non-Free Trade Agreement Nations*, FE Docket No. 10-111-LNG, DOE/FE Order No. 2961, at 42 (May 20, 2011) [hereinafter Sabine Pass Order No. 2961].

Authority (MSPA) and subject to regulation by the State of Mississippi. SeaOne is expected to develop, site, own, and operate the Gulfport Facility and has executed a lease option agreement jointly with the Mississippi State Port Authority at Gulfport and the Mississippi Development Authority. A copy of the lease option agreement is provided as Appendix C to this Application. This requested authorization applies to natural gas contained in CGL, which may be exported from the Port of Gulfport for end use as natural gas. The equipment used for SeaOne's CGL process and systems is modular and redeployable. SeaOne anticipates CGL exports from other locations will follow and, hence, may amend or supplement this Application to include other locations, as necessary. A diagram of the proposed Gulfport Facility is provided as Appendix D to this Application. SeaOne is not a "natural-gas company" as that term is defined for purposes of the NGA[6] and SeaOne's Gulfport Facility is a manufacturing, production and storage facility which will not itself be engaged in either interstate or foreign commerce.[7] CGL produced at the Gulfport Facility can

[6] *See Distrigas Corporation*, 47 F.P.C. 752 (1972), *infra* note 37; 15 U.S.C. § 717(b) (applying the NGA to "*natural gas companies* engaged in such transportation or sale, and to the importation or exportation of natural gas in foreign commerce and to persons engaged in such importation or exportation.") (Emphasis added). A "natural-gas company" is defined as "a person engaged in the transportation of natural gas in *interstate* commerce, or the sale in *interstate* commerce of such gas for resale." 15 U.S.C. § 717a (2005) (emphasis added). The Commission has traditionally viewed processing facilities as independent operations from interstate or foreign commerce activities. *See id.* at 756–757; *see also* Emera CNG, LLC, *Order On Petition For Declaratory Order*, 148 F.E.R.C. ¶ 61,219, ¶ 62,391 (2014) (noting that because Emera compressed gas into containers to be moved by truck to a dock where the containers will be loaded onto a ship for export, the processing facility was not subject to Section 7 jurisdiction by reason of interstate or foreign commerce) [hereinafter Emera].

[7] *See* Emera, *supra* note 6, at ¶ 62,390–62391. In Emera, the Commission noted that "Emera's facility will not include a pipeline to deliver gas to an international border or be capable of transferring CNG directly into an ocean-going carrier for export. Thus, we find that Emera's facilities to compress and load CNG onto trucks are unlike the border-crossing pipelines and coastal LNG terminals that the Commission traditionally has regulated under section 3 as import/export facilities, and more like existing, unregulated facilities that deliver LNG into trucks which are subsequently driven across the border into Canada or Mexico." Similarly, SeaOne's Gulfport facility will not be an export facility subject to FERC regulation as neither the processing facility nor any downstream mode of transport of the new product exiting the facility will be within FERC's traditional jurisdiction.

be delivered by truck, train or barge to other locations within or without the State of Mississippi.

(b) *Feedstock Source*

Feedstock for CGL production will be delivered via one or more new pipelines that are expected to be provided by one or more existing regional pipeline companies extending their existing pipeline(s) located entirely within the State of Mississippi to SeaOne's facility gate at the boundary of the Port of Gulfport.

V.
PUBLIC INTEREST

Section 3(a) of the NGA creates a presumption that an application for export of natural gas is in the public interest, and the DOE/FE will grant such application unless the presumption of public interest is rebutted. When evaluating applications for natural gas exports, the DOE/FE seeks to "minimize federal control and involvement in energy markets and promote a balanced and mixed energy resource system."[8] In evaluating whether applications for the direct export of LNG from the U.S. to NFTA Countries are in the public interest, the DOE/FE has consistently focused on "domestic need for the natural gas proposed to be exported; whether the proposed exports pose a threat to the security of domestic natural gas supplies; and any other issue determined to be appropriate, including whether the arrangement is consistent with DOE's policy of promoting competition in the marketplace by allowing commercial parties to freely negotiate their own trade

[8] President Reagan, Statement on the National Energy Policy Plan Transmitted to the Congress (Oct. 4, 1983), *available at* http://www.reagan.utexas.edu/archives/speeches/1983/100483e.htm.

arrangements."[9] As discussed at length below, the exports contemplated by this Application contribute to the public interest as that term is characterized by the DOE/FE.

This Application is for authorization to export natural gas to NFTA Countries located in the Caribbean and/or those bordering on the Gulf of Mexico. The SeaOne plan of operations in the Caribbean also contemplates deliveries of CGL (not covered by this Application but with respect to which the authorizations sought herein are closely related) to Puerto Rico and other U.S. territories in the Caribbean. The quantity of natural gas exports contemplated by this Application is not only consistent with the export scenarios contemplated by the AEO2014 reference case, discussed in detail below, but also an important element in attainment of the objectives of the U.S. Caribbean Energy Security Initiative (CESI) that has been advanced by President Obama, Vice President Biden, Secretary Moniz, and other high-level U.S. Government officials.

Approving exports of natural gas contained in CGL to the Caribbean Basin will support U.S. energy policy, as laid out in the CESI and the related Statement of Intent signed between the U.S. Government and the Government of Jamaica. The CESI is focused on providing a sustainable, clean mix of energy sources to the Caribbean Islands—a region where further economic development, in the words of President Obama, has been limited by "expensive, often unreliable and carbon-intensive energy"[10]—by forging economic ties between Caribbean nations and the U.S., and protecting the world's environment by reducing carbon emissions. Delivering the keynote address at the January 2015 Caribbean

[9] Sabine Pass Order No. 2961, *supra* note 5, at 29.

[10] Remarks by President Obama in Meeting with CARICOM (Apr. 9, 2015), *available at:* https://www.whitehouse.gov/the-press-office/2015/04/09/remarks-president-obama-meeting-caricom [hereinafter CARICOM].

Energy Security Summit ("CESS" or the "Summit"), Vice President Biden noted that "[s]mall isolated economies and unattractive investment policies discourage investment necessary to build sustainable energy systems. The high cost of energy diverts resources away from economic development, reduces competitiveness, and renders the energy sectors of Caribbean nations vulnerable to supply shocks."[11]

SeaOne's exports of CGL to these countries will help replace coal, oil, gasoline, and diesel as the preferred fuel sources for vehicles and industrial operations, an essential objective for the achievement of the CESI's objectives. The specific role of natural gas as a bridging and baseload fuel for the Caribbean region was recognized at the Summit, where CARICOM Chair Perry Christie, Prime Minister of the Commonwealth of the Bahamas, called for allowing middle-income nations, like so many Caribbean nations, to acquire concessional finance and faster access to US natural gas.[12] Vice President Biden, in his address to the Summit, noted that "We have technologies in natural gas that are moving forward . . . there are more options at your disposal now for natural gas delivery than there have ever been - from small-scale barge trades of LNG, to floating import terminals. And [they're not] just designs on paper. They exist. They operate."[13] CGL, with its capability to deliver not only natural gas but also comparably clean-burning and more economic higher Btu blends, is clearly the sort of technology that the Vice President contemplated in this statement.

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[11] Remarks by Vice President Biden on the Caribbean Energy Security Initiative (Jan. 16, 2015), *available at:* https://www.whitehouse.gov/the-press-office/2015/01/26/remarks-vice-president-biden-caribbean-energy-security-initiative [hereinafter Biden].

[12] Remarks by Prime Minister Perry Christie, address to the Caribbean Energy Security Summit, Washington, D.C. (Jan. 26, 2015).

[13] Biden, *supra* note 11.

The commitment towards those sorts of energy advancements was further strengthened when President Obama and Prime Minister Christie co-chaired the U.S.-CARICOM Summit in April 2015 in Jamaica. President Obama's introductory remarks noted that the Caribbean region "has some of the highest energy costs in the world" and the Caribbean nations "are particularly vulnerable to the effects of climate change."[14] He emphasized the criticality of these and related U.S.-CARICOM challenges and commitments, stating, "We have to act now."[15] The President then reiterated the U.S. commitment of the Caribbean Energy Security Initiative, which "aims to help move the region toward cleaner more affordable energy" and announced new partnerships, including avenues to help "mobilize private investment in clean energy projects in the Caribbean and in Central America."[16] He concluded his comments on the regional energy crisis by noting his confidence, "given the commitment of the CARICOM countries and the U.S. commitment, that this is an issue in which we can make great strides over the short term and even greater strides over the long term."[17] SeaOne's CGL technology is precisely the type of affordable, innovative technology that will allow the U.S. to fulfill these commitments timely and achieve its policy of providing clean, sustainable energy to its Caribbean allies, while also reducing global greenhouse gas emissions and supporting job growth here at home.

Export of natural gas to fulfill these commitments and advance these objectives will not adversely affect availability and price in the United States. According to the AEO2014

[14] CARICOM, *supra* note 10.

[15] *Id.*

[16] *Id.*

[17] *Id.*

Early Release Overview ("AEO2014"), the cumulative production of dry natural gas from 2012 to 2040 in the AEO2014 reference case is about 11% higher than in AEO2013, primarily reflecting continued growth in shale gas production resulting from the dual application of horizontal drilling and hydraulic fracturing.[18] Cumulative production levels for tight gas and on shore associated-dissolved gas from oil formations exceed those in AEO2013 through 2040 by 9% and 36%, respectively, making material contributions to the overall increase in production.[19]

In the AEO2014 reference case, the United States becomes an overall net exporter of natural gas in 2018, two years earlier than in AEO2013.[20] Large volumes of domestic shale gas reserves and their development and extraction, as well as continued low production costs, will enable the United States to develop significant quantities of natural gas, enabling the United States to meet domestic demand for decades to come, and, as a result, will also provide an over-capacity of natural gas that would be available for export.

A decrease in natural gas prices from 2008 to 2010 provides evidence of such over-capacity.[21] Ongoing improvements in advanced technologies for crude oil and natural gas production continue to lift domestic supply and reshape the U.S. as a net energy exporter.[22] Domestic production of crude oil (including condensate) increases sharply in the AEO2014 reference case, with annual growth averaging 0.8 million barrels per day (MMBbl/d) through

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[18] U.S. ENERGY INFORMATION ADMINISTRATION, *Annual Energy Outlook 2014 Early Release Overview* at 9 (2014), *available at:* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2013_applications/sc_exhibts_13_116_118/Ex._109_-_AEO_2014_Early_Release_Overvie.pdf.

[19] *Id.* at 13.

[20] *Id.*

[21] *Id.* at 7.

[22] *Id.* at 1.

2016, when it totals 9.5 MMBbl/d.[23] While domestic crude oil production is expected to level off and then slowly decline after 2020 in the reference case, natural gas production grows steadily, with a 56% increase between 2012 and 2040, when production reaches 37.6 TCF.[24] As outlined in AEO2014, natural gas supply continues to exceed projections. To the extent that CGL exported does contain methane as a component, such exports would have a negligible impact on natural gas supply for the domestic market, when viewed in the context of the increased production and export outlook in the AEO2014 reference case and the authority already granted and pending before the DOE/FE, and when coupled with the current oversupply of oil and gas in domestic and international markets.

As the DOE/FE noted in the Sabine Pass conditional NFTA authorization, "natural gas production associated with exports in this Application will result in increased production that could be used for domestic requirements if market conditions warrant such use."[25] In addition to supporting domestic natural gas production, this authorization will have a near-term, highly positive impact on the U.S. economy and on U.S. foreign policy goals. The modular facilities required to accomplish CGL exports can be up and running relatively quickly, as compared to the large, complex facilities envisioned by other NFTA applications, thereby creating domestic jobs more expediently and enhancing America's ability to export hydrocarbons to NFTA Countries.

[23] *Id.*

[24] *Id.*

[25] Sabine Pass Order No. 2961, *supra* note 5, at 35.

VI.
ENVIRONMENTAL IMPACT

The Gulfport Facility does not require application to the Federal Energy Regulatory Commission ("FERC") pursuant to Sections 1, 3 or 3(e)(1) of the NGA and can be fully constructed prior to and independently of any authorization to export natural gas to NFTA Countries, and therefore this Application does not require environmental review pursuant to the National Environmental Policy Act ("NEPA").[26] Although DOE/FE is required to evaluate the need for environmental review under NEPA and under its own regulations, DOE/FE is not required to conduct environmental review in this case because (i) authorization under this Application will not have a significant effect on the human environment, and DOE/FE's authorization for export of CGL produced at the Gulfport Facility as requested in this Application would fall within the DOE/FE's categorical exclusion B5.7 for "[i]mport or export natural gas, with operational changes";[27] (ii) review by FERC is also not required because under FERC precedent and under a common sense understanding of the term "LNG Facility," the proposed Gulfport Facility is not an LNG facility requiring filing of an application for its siting, construction, and operation pursuant to Section 3(e)(1) of the NGA; and (iii) review by FERC is not otherwise required because Section 3 of the NGA, the exclusive authority for FERC regulation of non-LNG natural gas export facilities other than pipelines at the U.S.-Mexico or U.S.-Canada borders, does not authorize FERC regulation of non-LNG natural gas export facilities except to the extent that FERC's and DOE's evaluation of the public interest concludes that such regulation is

[26] 42 U.S.C. § 4321 et seq. (2006).

[27] 10 C.F.R. Part 1021, Subpart D, Appendix B, Exclusion B5.7.

necessary to fill regulatory gaps that do not exist in this case.[28] With respect to DOE/FE's new procedures related to conditional authorizations of export of natural gas from LNG facilities in the lower 48 states, these new procedures are inapplicable regarding this Application because: (a) SeaOne is not proposing to export LNG via an LNG facility located in the lower 48 states, and (b) SeaOne is not requesting a conditional order authorizing the export of LNG before completion of any environmental review required in conjunction with this Application, as no environmental review is required.

(a) Environmental Review of the Gulfport Facility Is Not Required under NEPA

NEPA requires the DOE/FE to determine whether granting the authorization requested in this Application is a major federal action that may have a significant impact on the environment.[29] In order to comply with NEPA, the DOE/FE must determine whether a proposed action: (1) is categorically excluded from the preparation of either an Environmental Assessment ("EA") or Environmental Impact Statement ("EIS"); (2) requires preparation of an EA and a subsequent issuance of a Finding of No Significant Impact ("FONSI"); or (3) requires preparation of an EIS.[30] If a proposed action meets the description of a categorical exclusion, and there are no "extraordinary circumstances,"

[28] Section (3)(e)(1) of the NGA provides only that "[t]he Commission shall have the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal." 15 U.S.C. § 717b(e)(1) (2005).

[29] National Environmental Policy Act, 42 U.S.C. § 4321 et seq. (2006); 10 C.F.R. § 1021.2 10(b) (2014).

("DOE shall complete its NEPA review for each DOE proposal before making a decision on the proposal . . .").

See also 10 C.F.R. § 1021.104(b) ("DOE proposal (or proposal) means a proposal, as discussed at 40 CFR 1508.23 (whether initiated by DOE, another Federal agency, or an applicant), for an action, if the proposal requires a DOE decision."); 10 CFR § 1021.103 ("DOE adopts the regulations for implementing NEPA published by CEQ at 40 CFR parts 1500 through 1508.")

[30] 10 C.F.R. § 1021.300(a)(l)–(3).

neither an EA nor an EIS is required.[31] DOE/FE's authorization for export of production from the Gulfport Facility as requested in this Application would fall within the DOE/FE's categorical exclusion B5.7 for "[i]mport or export natural gas, with operational changes."[32] This categorical exclusion applies to "[a]pprovals . . . of new authorizations [to] export natural gas under section 3 of the NGA that involve minor operational changes (such as changes in natural gas throughput, transportation, and storage operations) but not new construction."[33] The Gulfport Facility can operate sustainably and independently based on exports of natural gas liquids and of natural gas/gas liquid blends (having a HHV of 1200 Btu/scf or higher) to U.S. territories and Free Trade Agreement ("FTA") Countries, it can and is expected to be built and operated whether or not this Application is granted. Because the Gulfport Facility will be constructed and operated whether or not export of natural gas to NFTA Countries is authorized, minor operational changes, if any, would be required in order to deliver natural gas to end users in NFTA Countries. Accordingly, the granting of authorization pursuant to this Application cannot be considered to constitute a federal action significantly affecting the quality of the human environment within the meaning of NEPA.

Although FERC is designated as the lead agency under Section 15(b)(1) of the NGA for purposes of the approval of new interstate natural gas and LNG facilities,[34] as discussed in detail in Sections VI(b) and VI(c) below, FERC approval is not required for the Gulfport

[31] 40 C.F.R. § 1508.4 ("'Categorical exclusion' means a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency in implementation of these regulations (§ 1507.3) and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.").

[32] 10 C.F.R. Part 1021, Subpart D, Appendix B, Exclusion B5.7.

[33] *Id.*

[34] 15 U.S.C. § 717n (2005) ("The Commission shall act as the lead agency for the purposes of coordinating all applicable Federal authorizations and for the purposes of complying with the National Environmental Policy Act of 1969 . . .").

Facility. FERC environmental review pursuant to NEPA also is not required. SeaOne has committed to keeping FERC continually updated on the Company's activities related to CGL exports, and to proactively addressing any potential concerns regarding regulatory compliance.

The Gulfport Facility is expected to have a zero carbon footprint, use no process water and have no process effluents for operations at the Port of Gulfport site. SeaOne CGL systems use approximately one-third of the energy and produce approximately one-third the emissions of alternative technologies, such as LNG. SeaOne is currently working with the lead State agency, the Mississippi Department of Environmental Quality ("MDEQ") and its advisors to satisfy the various environmental requirements and required permit applications for those project assets that are intended to be located on MSPA property in the State of Mississippi. There is no regulatory gap to be filled by environmental review pursuant to NEPA, and FERC has previously declined to assert jurisdiction where a facility subject to adequate regulation and oversight by other state and federal regulatory agencies.[35] Accordingly, DOE/FE is not required to conduct environmental review of the Gulfport Facility pursuant to NEPA.

[35] See, e.g., Emera, *supra* note 6, at ¶ 62,390–62391 (2014) ("[T]he fact that this Commission does not have NGA jurisdiction over Emera's CNG facility does not mean that other federal, state, and local regulatory agencies lack the authority to impose environmental and safety conditions on the construction and operation of Emera's CNG facility. Emera's facility, the pipeline delivering the gas, and the trucking operations will be subject to the U.S. Department of Transportation's (DOT) regulations and requirements addressing the transportation and storage of hazardous materials. The ships carrying the CNG containers and docks at the ports where the containers will be loaded on to the ships will be subject to the U. S. Coast Guard's requirements and restrictions. The port authorities also will exercise oversight. In addition, the facilities and activities involved in Emera's export operations will be subject to regulations and requirements of the U.S. Environmental Protection Agency under its various enabling statutes, including the Clean Water Act, Clean Air Act, and the Hazardous Materials Transportation Act."); Gas Co., LLC, *Order Dismissing Request For Section 3 Authorization*, 142 F.E.R.C. ¶ 61,036, 61,190 (2013) ("[I]in this case, we have concluded that the proposed project would not constitute an LNG terminal as contemplated by Congress. Therefore, in this case we find no basis for asserting section 3 authority over the described facilities or operations. Moreover, uniform federal environmental and safety standards are already in effect and would apply to the proposed project.") [hereinafter "Gas Co."].

(b) No Approval of Facility Construction Is Required by the Federal Energy Regulatory Commission Pursuant to Section 3(e)(1) of the NGA

The proposed Gulfport Facility is not an LNG terminal requiring filing of an application for its siting, construction, and operation pursuant to Section 3(e)(1) of the NGA. The authority of FERC to require approval for siting, construction, or operation of an LNG terminal is based on the addition of Section 3(e)(1) to the NGA by the Energy Policy Act of 2005 ("EPAct 2005").[36] Prior to the addition of this provision to the NGA, the authority of FERC, and of its predecessor, the Federal Power Commission, to regulate natural gas import and export facilities was limited to situations in which the cognizant agency concluded that the public interest required such regulation in order to fill regulatory gaps.[37] Following the addition of this provision to the NGA, there have been no instances in which FERC has exercised its authority pursuant to Section 3(e)(1) to require filing of an application for siting, construction, and operation of any export facility other than a cross-border pipeline facility or an LNG facility.

FERC has traditionally interpreted and exercised its Section 3 jurisdiction over import and export facilities in a manner consistent with the way it has interpreted and exercised its Section 7 jurisdiction over facilities used to transport gas in interstate

[36] Pub. L. No. 109–58, 119 Stat. 685 (2005).

[37] *See Distrigas Corporation,* 47 F.P.C. 752 (1972). The Commission also held, *inter alia*, that the Commission's jurisdiction included the authorization or denial of importation or exportation of LNG; the regulation of sales for resale in interstate commerce of LNG or regasified LNG; the importation or exportation of natural gas is not interstate commerce as those words are used in the NGA; and that Distrigas was a "natural gas company" within the meaning of the NGA act, and analogous to a producer or gather of natural gas, *to the extent that the Distrigas proposed to sell natural gas in interstate commerce for resale* (emphasis added). *See also Dynegy LNG Production Terminal, L.P.*, 97 FERC ¶ 61,231 (2001), in which the Commission made clear that its Section 3 jurisdiction was broadly discretionary and did not require the Commission to regulate any particular facility.

commerce.[38] FERC has stated that it "does not view EPAct 2005 as having in any way expanded the scope of section 7 of the NGA to processing facilities or processing as an activity,"[39] and that "the Commission will have no authority to authorize the siting or construction of facilities to process LNG or regasified LNG except to the extent such facilities are part of an LNG terminal."[40]

FERC has stated that "to date, the Commission has only exercised its authority under section 3 over import and export facilities to regulate: (1) pipelines that transport natural gas to or from the United States' international borders; and (2) coastal LNG terminals that are accessible to ocean-going LNG tankers and connected to pipelines that deliver gas to or take gas away from the terminal."[41] In considering its authority under Section 3(e)(1), FERC has declined to "read 'LNG' out of the term 'LNG terminal'"[42] and noted the lack of "evidence of any expression of Congressional intent that the EPAct 2005 revisions to NGA section 3

[38] Pivotal LNG, Inc., *Order On Petition For Declaratory Order*, 148 F.E.R.C. ¶ 61,164, 61,823 (2014) [hereinafter Pivotal I].

[39] 70 Fed. Reg. 60,426, 60,431 (Oct. 18, 2005).

[40] *Id.*

[41] Emera, *supra* note 6, at ¶ 62,390. In Emera, the Commission declined to exert jurisdiction over Emera's facility which, like SeaOne's Gulfport Facility, would not "include a pipeline to deliver gas to an international border or be capable of transferring CNG directly into an ocean-going carrier for export." *Id.* at ¶ 62,390. *See also* Pivotal LNG, Inc., *Order On Petition For Declaratory Order*, 151 F.E.R.C. ¶ 61,006, 61,057–8 (2015) [hereinafter Pivotal II]. Note that connection to an interstate pipeline is not of itself determinative of FERC jurisdiction, *See Emera*, *supra* note 6, at n.16 (in which the Commission explains that "Xpress Natural Gas (XNG) has a CNG plant in Maine that *receives gas from an interstate pipeline* and loads CNG containers onto trucks for delivery to customers in Canada and in New England) (emphasis added).. The Commission does not regulate the CNG facility under either Section 3 or 7 of the NGA, nor does it exercise jurisdiction over the trucks' passage across the border under Section 3. Further, the Commission has never issued authorization under Section 3 to designate points of import or export for gas carried by truck, train, or waterborne vessel or authorized the siting of, or construction and operation of, any complementary facility, such as a road, bridge, railway, or stand-alone pier, needed to import or export gas by a non-pipeline mode of transportation. However, regardless of how natural gas is transported, all imports and exports of natural gas require Section 3 authorization from DOE/FE.

[42] Emera, *supra* note 6, at 62,390.

should apply to facilities that produce or transport natural gas in other than a liquid state."[43] Although EPAct 2005 added as Section 2(11) of the NGA a broad definition of "LNG Facility,"[44] FERC has additionally noted that "a literal reading of section 2(11) would cause otherwise NGA-exempt gathering, intrastate pipeline, processing, and local distribution facilities to be jurisdictional under section 3 as LNG terminal facilities if they transport gas that was imported or gas that will be exported,"[45] and that "while section 2(11) sets forth a very broad definition of an 'LNG Terminal,' that encompasses 'all natural gas facilities that are used to receive, unload, load, store, transport, gasify, liquefy, or process gas,' it does not seek to redefine the term 'natural gas facilities' as commonly understood for purposes of Commission jurisdiction . . . ."[46]

Pursuant to FERC's common-sense construction of the meaning of "LNG Facility" for purposes of its jurisdiction, FERC has found a facility processing natural gas in non-LNG format[47] to be a non-jurisdictional facility, and likewise has excluded from FERC jurisdiction under Section 3(e)(1) facilities that do not otherwise resemble LNG facilities in format, mode of operation, or mode of transport.[48] The proposed Gulfport Facility similarly falls outside FERC's Section 3(e)(1) jurisdiction. CGL is a solvated product consisting of a custom manufactured blend of gas and gas liquids that is under pressure and at moderate

[43] *Id.*

[44] *See* 15 U.S.C. § 717a(11) (2005).

[45] Pivotal II, *supra* note 41, at 61,057.

[46] Shell United States Gas & Power, LLC, *Order On Petition For Declaratory Order*, 148 F.E.R.C. ¶ 61,163, 61,815 (2014) [hereinafter Shell]; *see also* Pivotal I, *supra* note 38, at 61,821 ("In interpreting the scope of our NGA section 3 jurisdiction, we have exercised our regulatory authority over the siting, construction, and operation of facilities at the United States' international borders when a pipeline is used to effect imports or exports, but not when gas is carried across the border by other means.")

[47] Emera, *supra* note 6 (addressing a compressed natural gas processing facility).

[48] *See* Pivotal I, *supra* note 38; Pivotal II, *supra* note 41; Shell, *supra* note 46.

temperature, and is very different than the product exported as LNG, which requires only cooling to cryogenic temperatures to change the physical state, but not the composition of the natural gas which is "liquefied"[49] and which after such treatment is simply natural gas in a different state. The CGL solvation process produces a solvated product (a manufactured solution of gas and gas liquids) which is substantially different from natural gas[50] and the proposed Gulfport Facility does not resemble the traditional LNG facility over which FERC jurisdiction extends. DOE/FE has previously authorized export of natural gas where FERC recognized that the facilities to be used in connection with the export did not require FERC approval.[51] As a non-LNG facility, under FERC's precedent and under a common sense understanding of the term "LNG Facility," the proposed Gulfport Facility is not an LNG terminal requiring filing of an application for its siting, construction, and operation pursuant to Section 3(e)(1) of the NGA.

(c) No Approval of Facility Construction Is Required by the Federal Energy Regulatory Commission Pursuant to Section 3 of the NGA

The proposed Gulfport Facility is subject to the general jurisdiction of FERC under Section 3 of the NGA only to the extent that the Department of Energy determines that

[49] Letter from Dr. Hong-Cai Joe Zhou, Professor, Texas A&M University, Department of Chemistry, to Michael R. Engleman, Squire Patton Boggs (US) LLP (Sep. 17, 2013), attached hereto as Appendix E.

[50] *Id.*

[51] Xpress Natural Gas LLC, *Order Granting Long-Term Multi-Contract Authorization To Export Compressed Natural Gas By Truck From The Proposed Compressor Station In Baileyville, Maine To Canada*, FE Docket No. 12-168-CNG, DOE/FE Order No. 3222 (Jan. 8, 2013). *See also* Emera, *supra* note 6, at n.16 (addressing a compressed natural gas processing facility) ("For example, Xpress Natural Gas (XNG) has a CNG plant in Maine that receives gas from an interstate pipeline and loads CNG containers onto trucks for delivery to customers in Canada and in New England. The Commission does not regulate the CNG facility under either section 3 or 7, nor does it exercise jurisdiction over the trucks' passage across the border under section 3. Further, the Commission has never issued authorization under section 3 to designate points of import or export for gas carried by truck, train, or waterborne vessel or authorized the site of, or construction and operation of, any complementary facility, such as a road, bridge, railway, or stand-alone pier, needed to import or export gas by a nonpipeline mode of transportation. However, regardless how natural gas is transported, all imports and exports of natural gas require section 3 authorization from the DOE's Office of Fossil Energy.")

certain CGL exports constitute or transport "natural gas", that FERC determines, contrary to prior precedents[52] that the CGL production facility is an export facility, and that DOE and FERC determine that the public interest requires FERC environmental review and approval of the Gulfport Facility.[53] Section 3 of the NGA, the exclusive authority for FERC regulation of non-LNG natural gas export facilities other than pipelines at the U.S.-Mexico or U.S.-Canada borders, does not authorize FERC regulation of non-LNG natural gas export facilities except to the extent that the cognizant agencies' evaluation of the public interest concludes that such regulation is necessary to fill regulatory gaps.[54] The present Application does not create such a regulatory gap and neither DOE nor FERC has concluded that additional regulation is needed to protect the public interest.

To the extent that the Gulfport Facility exports non-jurisdictional products or where facility approval is not required to protect the public interest, it does not require an application to FERC in order to construct. Approval to construct the Gulfport Facility is not required under FERC's specific jurisdiction to regulate the siting and construction of LNG facilities under Section (3)(e)(1) of the NGA, nor is it required under FERC's general jurisdiction under Sections 1 and 3 of the NGA.

[52] *See* Pivotal I, *supra* note 38; Pivotal II, *supra* note 41; Shell, *supra* note 46; Emera, *supra* note 6; Gas Co., *supra* note 35.

[53] *See* note 37, *supra*.

[54] Section (3)(e)(1) of the NGA provides only that "[t]he Commission shall have the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal." 15 U.S.C. § 717b(e)(1) (2005).

(d) New Procedures Regarding Conditional Authorizations to Export Natural Gas to NFTA Countries Do Not Apply

In August of 2014, DOE/FE announced modifications to its procedures with respect to granting conditional authorizations to export natural gas to NFTA Countries.[55] The new procedures provide that "DOE will suspend its practice of issuing conditional decisions on applications to export LNG to non-FTA countries from the lower-48 states . . . DOE will no longer act in the published order of precedence, but will act on applications in the order they become ready for final action. An application is ready for final action when DOE has completed the pertinent NEPA review process and when DOE has sufficient information on which to base a public interest determination."[56]

These new procedures are inapplicable with respect to this Application because: (i) SeaOne is not proposing to export LNG via an LNG facility located in the lower 48 states and (ii) SeaOne is not requesting a conditional order authorizing the export of LNG before completion of any environmental review required in conjunction with this Application, as no environmental review is required and no LNG will be exported. Physical facilities required to export CGL from the U.S. at the proposed point of export will already exist prior to, and independently of, export of any CGL to NFTA Countries, and any environmental review by FERC or by any other U.S. federal, state or local agency, as appropriate, of subsequent changes to the facilities would occur independently of the proposed exports. Accordingly, DOE/FE's authorization pursuant to this Application does not require environmental review

[55] *See* 10 C.F.R. § 590.402 (1992); Procedures for Liquefied Natural Gas Export Decisions, 79 Fed. Reg. 48,132 (Aug. 15, 2014), *available at:* http://energy.gov/sites/prod/files/2014/08/f18/FR%20Procedures%20LNG%20Exports%2008_15_14.pdf [hereinafter Procedures].

[56] Procedures, *supra* note 55, at 48,135.

as (i) the granting of authorization pursuant to this Application cannot be considered to constitute a major federal action significantly affecting the quality of the human environment within the meaning of NEPA and (ii) the Gulfport Facility falls within an existing categorical exclusion, and a conditional order is not required.

VII.
REPORTING REQUIREMENTS

With respect to all exports made pursuant to the authorization requested herein, SeaOne will file with the DOE/FE in the month following the close of each calendar month, reports indicating by month whether exports have occurred, and if so, the details of each transaction, including the total volumes of exports of natural gas, in Mcf and the average price for the natural gas exports per Mcf at the international border. SeaOne, as agent or seller, will provide reports that will include the name of the seller, the name of the purchaser, the estimated or actual duration of the agreements, the name of the transporter(s), the point of entry or point of exit, whether the sales are made on an interruptible or firm basis, and if applicable, the method of transportation and any specific related requirements. SeaOne will notify the DOE/FE in writing of the date of the first delivery of CGL exported under the requested authorization within two weeks of such delivery.

VIII.
CONCLUSION

For the foregoing reasons, SeaOne respectfully requests that the DOE/FE expeditiously consider the instant Application and, pursuant to Section 3 of the NGA and Part 590 of the DOE's regulations, grant its request for long-term export authorizations. The grant of such authorizations is consistent with the public interest, and, based on the relatively

simple nature of the project and the project's strong support of U.S. policy objectives, e.g., the Caribbean Energy Security Initiative and related U.S.-Caribbean Nation Government commitments, this Application should be processed on an expedited basis.

Respectfully submitted,

J. Gordon Arbuckle
Squire Patton Boggs (US) LLP
Counsel for SeaOne Gulfport, LLC

Dated at Washington, D.C., September 18, 2015

Appendix A

Verification

STATE OF TEXAS)
)
COUNTY OF HARRIS)

BEFORE ME, the undersigned authority, on this day personally appeared Bruce Hall, who, having been by me first duly sworn, on oath says that he is President and Chief Operating Officer of SeaOne Gulfport LLC; that he is familiar with the contents of the foregoing Application; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.

Sworn to and subscribed before me, a Notary Public, this 17th day of September 2015.

Notary Public

(NOTARIAL SEAL)

My commission expires: 11/08/2018

Appendix B

Opinion of Counsel

September 18, 2015

Office of Fuels Program
Fossil Energy, U.S. Department of Energy
Docket Room 3F-056, FE-50
Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Re: SeaOne Gulfport LLC, Application for Long-term Authorization to Export Compressed Gas Liquid to the Non-Free Trade Agreement Countries in the Caribbean Basin and Gulf of Mexico

Dear Sir:

This opinion of counsel is provided in accordance with the requirements of Section 590.202(c) of the U.S. Department of Energy's regulations, 10 C.F.R. § 590.202(c). I have examined the Certificate of Incorporation of SeaOne Gulfport, LLC and other authorities as necessary, and have concluded that the proposed exportation of compressed gas liquid by SeaOne is within its corporate powers. Further, SeaOne is authorized to do business in Texas and other U.S. states and to engage in foreign commerce.

Respectfully submitted,

J. Gordon Arbuckle
Counsel for SeaOne Gulfport, LLC

Appendix C

Lease Option Agreement

EXECUTION VERSION

LEASE OPTION AGREEMENT

This **LEASE OPTION AGREEMENT** (this "***Agreement***") is dated as of June 1, 2015 (the "***Effective Date***") and is entered into by and between:

1) **Mississippi State Port Authority at Gulfport** (the "***Optionor***") and the **Mississippi Development Authority**, agencies of the State of Mississippi

and

2) **SeaOne Gulfport, LLC**, a Delaware limited liability company, together with its permitted successors and assigns (the "***Optionee***")

where Optionor and Optionee may be referred to herein individually as a "***Party***" and collectively as the "***Parties***".

WHEREAS, Optionor is the owner of certain real property located in Harrison County, Mississippi, being more particularly as described and shown in Exhibit A attached hereto and incorporated by reference (the "***Premises***");

WHEREAS, Optionee desires to seek such permits and authorizations as may be necessary from local, State of Mississippi and United States governmental authorities and agencies for the construction, use, and operation of a compressed gas liquids, or CGL™, production and export facility to be located on the Premises designed to permit the manufacture and export of CGL from the Premises to island sovereign states and countries, island overseas departments and dependencies, island territories, and sovereign continental countries that border or have coastlines on either the Caribbean Sea or Gulf of Mexico ("***Intended Use***"); and

WHEREAS, Optionee desires to acquire from Optionor the option to lease the Premises and Optionor desires to grant such option to Optionee all on the terms and conditions set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are acknowledged and in consideration of the mutual covenants and agreements contained in this Agreement, the Parties hereby agree as follows:

ARTICLE 1
OPTION TO LEASE

1.1 **Grant of Option.** Subject to the terms and conditions more particularly described in this Agreement, Optionor grants to Optionee the exclusive right and option to lease the Premises (the "***Option***") during the Term (capitalized terms not immediately defined are hereinafter defined).

ARTICLE 2
CONSIDERATION

2.1 **Option.** Optionee, within three (3) Business Days after the execution of this Agreement by Optionor, shall pay or cause to be paid to Optionor as consideration for the Option for the Initial Term a fee equal to One Hundred Thousand Dollars ($100,000.00) (the "***Option Fee***") pursuant to Section 2.2.

2.2 **Optionor Bank wiring instructions**. The Option Fee shall be payable by wire transfer as follows:

Bank:	Hancock Bank of Mississippi
ABA Number:	065503681
Account Number:	01-302-2373
REF:	Option Fee - SeaOne Gulfport, LLC

ARTICLE 3
TERM AND TERMINATION

3.1 **Initial Term**. This Agreement shall commence on the Effective Date and terminate on June 30, 2016 (the "***Initial Term***").

3.2 **Extension Terms**. If, in Optionee's sole business judgement, any business matters, including, but not limited to the matters specified in Section 4.3, make it impracticable to exercise the Option during the Initial Term, Optionor grants to the Optionee the right to extend the Term to December 31, 2016, or such other later date as may be mutually agreeable to the Parties, (the "***Extended Term***") by acting on or before June 15, 2016 to (a) provide written notice to Optionor of Optionee's right to extend the Term and (b) pay or cause to be paid to Optionor an amount equal to one-fourth of the Option Fee pursuant to Section 2.2 for the Extended Term which amount shall become part of the Option Fee.

3.3 **Term**. The "***Term***" of this Agreement shall commence on the Effective Date and shall terminate on the last day of the Initial Term or the Extended Term, as applicable; provided however, in the event the Option has been exercised and the Parties are negotiating the Lease terms, the Term shall terminate on the date that is the earlier of December 31, 2016 or six (6) months after the date of the written notice of exercise of the Option by Optionee to Optionor pursuant to Section 4.1.

3.4 **Termination by Optionor**. Notwithstanding anything to the contrary in this Agreement, Optionor may, upon thirty (30) days written notice to Optionee, terminate this Agreement without liability or recourse to Optionee in the event Optionee fails to make commercially reasonable progress within such thirty (30) day notice period. Optionee will be deemed to be making commercially reasonable progress if the following milestones have been met:

(a) completion by SeaOne Caribbean, LLC, an Affiliate of Optionee, of the capital raise for the front end engineering and design (FEED) by August 31, 2015;

(b) the commencement of the site evaluation of the Premises as part of the FEED by September 30, 2015; and

(c) Optionee shall have provided to Optionor, by June 30, 2016, evidence that Optionee has made the Final Investment Decision ("FID") to construct a CGL production and export facility on the Premises. The FID decision will include a determination by Optionee that adequate lending, investment and customer commitments are in place to support phase 1.

From and after the satisfaction (or, in MSPA's sole discretion, waiver of satisfaction) of the milestones set forth in (a), (b), and (c) above, Optionee may demonstrate that it is making commercially reasonable progress by reporting to Optionor a visible series of substantive project development steps, including commercially reasonable progress in completing each of (i) the

FEED, (ii) the pipeline engineering, and (iii) final investment decision without, in Optionor's reasonable opinion, a stagnation of progress or an ongoing pattern of delays.

ARTICLE 4
EXERCISE OF OPTION; GENERAL TERMS OF LEASE AGREEMENT

4.1 **Exercise of Option**. Prior to the expiration of the Term, Optionee may exercise the Option by (a) the delivery to Optionor a written notice stating that Optionee exercises the Option and (b) paying or causing to be paid to Optionor an amount equal to one-half of the Option Fee pursuant to Section 2.2.

4.2 **General Terms of Lease Agreement**. The Parties agree that the complete terms of the lease for the Premises shall be contained in a lease agreement (the "***Lease***") which shall include, at a minimum, that the term of the Lease shall be for a period of not less than thirty (30) years for an annual lease amount of not more than Seventy-Five Thousand Dollars ($75,000.00) per acre, except as such amount may be increased pursuant to an indexing methodology as described in the Lease, and not inclusive of any changes for wharfage, dockage, tonnage or other similar charges, payable in monthly instalments commencing on the effective date of the Lease and thereafter payable on the first day of each month. The Lease shall be a ground lease and Optionee shall be responsible for payment of the lease amount which shall be net to Optionor. Optionee shall pay for all other assessments, expenses and operating costs during the term of the Lease. Optionee may assign the Lease or may sublet the Premises to a third party which is financially and technically capable of achieving the Intended Use and performing Optionee's financial obligations under the Lease so long as the use of the Premises remains the Intended Use. This right to assign shall include the right of Optionee to grant a leasehold security interest in the Premises, and the right of any secured party to exercise any and all of its rights including but not limited to foreclosure of its security interest. Any improvements on the Premises shall become the property of Optionor upon termination of the Lease in the then current condition; provided that Optionor shall have the right to require Optionee to remove any such improvement. The Lease shall provide that upon expiration of the Term, the Term of the Lease shall automatically renew and extend for one (1) year terms at the prevailing lease rate until either party shall give at least six (6) months' notice of termination to the other party. In the event Optionor shall desire to increase the lease rate during any renewal term, Optionor shall give at least eight (8) months' prior notice of the proposed lease amount which amount shall be the new lease rate for the next renewal term unless Optionee shall give timely notice of termination or the Parties shall agree otherwise. The Parties further agree to commence negotiations in good faith upon receipt by Optionor of the exercise of the Option as to the complete terms and conditions of the Lease which is expected to consist of such terms and conditions to permit Optionee to proceed with such additional permits and authorizations as may be necessary from time to time from local, State of Mississippi and United States governmental authorities and agencies to use the Premises for the Intended Use.

ARTICLE 5
INSPECTION RIGHTS

5.1 **Rights of Optionee**. During the Term, and upon reasonable prior notice to Optionor and satisfaction of the requirements in Section 7.1, Optionee's officers, members, consultants, contractors, or other agents, including, but not limited to the employees, officers, members, and

directors of its Affiliates, shall have the right to enter the Premises at the sole cost and expense of Optionee for the purpose of inspecting, investigating, evaluating, studying, testing, surveying, and analysing the Premises for its suitability for the Intended Use upon receipt of Optionor's prior written consent which consent shall not be unreasonably withheld. Optionee shall use reasonable care to prevent injury or damage to the Premises. After entry and upon any damage to the Premises, Optionee agrees to restore the Premises to substantially the same condition as existed before Optionee entered the Premises.

5.2 **Optionor's covenants**. In order to facilitate the conduct of any inspections, investigations, evaluations, studies, tests, surveys, or analyses desired to be performed by Optionee, Optionor shall within ten (10) Business Days following the Effective Date furnish Optionee with copies of (i) Optionor's most recent title commitment or policy for the Premises and vesting deed, (ii) Optionor's most recent topographical and/or ALTA survey(s) of the Premises, (iii) any and all Phase I and/or Phase II environmental site assessments or other soils and/or hazardous substance reports pertaining to the Premises, including all forms of documents in Optionor's possession relating to compliance with all federal, state, and local environmental laws, and all hazardous abatement reports, (iv) information on the zoning permits and approvals applicable to the Premises, and (v) information on the location and capacity of utilities. In the event Optionor does not possess any such information, Optionor shall advise Optionee within such time period.

ARTICLE 6
INDEMNIFICATION

6.1 Optionee shall indemnify, protect, defend and hold Optionor harmless for, from, and against any liability, loss, claim, damage, cost (including, but not limited to, mechanics' and materialmen's liens), or expense (including reasonable attorney's fees and court costs) arising from any physical damage to the Premises caused by Optionee's exercise of its rights granted in Section 5.1 of this Agreement including, but not limited to, injuries to persons or property caused by Optionee or its employees, agents and independent contractors while present on the Premises. Unless otherwise provided by law, in no event shall Optionee be liable to Optionor for discovering or releasing, disturbing or moving any hazardous or regulated substance caused to be on, under, or about, the Premises by anyone other than Optionee, Optionee's officers, members, consultants, contractors, or other agents, including but not limited to the employees, officers, members, and directors of its Affiliates. The foregoing indemnity does not apply to:

(a) any loss, liability, cost or expense to the extent arising from, or related to, the grossly negligent or wilful acts of Optionor;

(b) any diminution in value in the Premises arising from, or related to, matters discovered by Optionee during its investigation of the Premises; and

(c) the release or spread of any hazardous materials or regulated substances which are discovered (but not deposited) on or under the Premises by Optionee.

ARTICLE 7
INSURANCE

7.1 **Insurance Certificate**. Prior to entering the Premises, Optionee shall deliver to Optionor a certificate of insurance evidencing insurance coverage in compliance with this Article 7.

7.2 **Insurance Coverage Requirements**. Optionee shall maintain and keep in effect, at the sole expense of Optionee, at all times during the Term:

(a) worker's compensation and comprehensive liability coverage to cover any activities on the Premises permitted pursuant to Section 5.1 in an amount not less than the statutory limits of coverage;

(b) commercial general liability insurance in an amount of not less than one million dollars ($1,000,000) per occurrence and in the aggregate; and

(c) automobile liability in an amount not less than one million dollars ($1,000,000).

The insurance coverage (except worker's compensation) shall name Optionor (together with its Board of Commissioners, officers, agents and employees) and the State of Mississippi, as additional insureds, and shall include an express waiver of any right of subrogation by the insurance company against Optionor. Optionee shall provide a certificate of liability insurance to Optionor evidencing the foregoing required insurance coverages, which certificate shall provide that the issuing insurer shall mail to Optionor thirty (30) days prior written notice of cancellation of any of such insurance coverages.

ARTICLE 8
APPROVALS AND ENCUMBRANCES

8.1 **Permits and approvals**. Optionee shall have the right during the Term to apply for all permits and approvals from local, state, and federal authorities and agencies that are necessary or desirable for Optionee's Intended Use of the Premises. Optionor agrees to reasonably consent to, and to promptly execute if and when required, as the owner of the Premises, such plans, applications, and other requests for governmental approvals, together with any amendments thereto, if any, which may be prepared by or at the direction of Optionee during the Term.

8.2 **Prohibited Encumbrances**. From the Effective Date and until the expiration of the Term or termination of this Agreement, Optionor shall not cause or permit any mortgage, deed of trust, lien, encumbrance, covenant, condition, restriction, assessment, easement, right-of-way, obligation, encroachment or liability whatsoever to be placed of record or to affect the leasehold interest to be given to Optionee pursuant to this Agreement or to otherwise exist, without Optionee's prior written consent.

ARTICLE 9
NOTICES

9.1 **Form of Notices**. All notices and other communications related to this Agreement by a Party shall be addressed to the other Party as specified in Section 9.2 of this Agreement, and shall be in writing, delivered by hand, sent by e-mail, courier, or registered United States mail, postage prepaid, and shall take effect if delivered by hand, upon delivery, if sent by e-mail, upon receipt of a transmittal confirmation, if sent by courier, on the date delivered by the courier service, or if sent by registered United States mail, postage prepaid, three (3) Business Days after being placed with the United States Postal Service.

9.2 **Addresses**. All notices and other communications related to this Agreement by a Party shall be addressed as follows:

Optionor:	Mississippi State Port Authority at Gulfport
Address:	2510 14th Street, Suite 1450 PO Box 40 Gulfport, MS 39501/39502
For the attention of:	Jonathan Daniels
Email:	jdaniels@shipmspa.com
With a copy to:	Balch & Bingham LLP 1310 25th Avenue P. O. Box 130 Gulfport, MS 39501/39502
For the attention of:	Ben H. Stone, Esq.
Email:	bstone@balch.com
Optionee:	SeaOne Gulfport, LLC
Address:	Three Allen Center 333 Clay Street – Suite 4890 Houston, TX 77002
For the attention of:	M. Barton Baker
Email:	bartbaker@seaonecarib.com
With a copy to:	Butler Snow P O Box 6010 Ridgeland, MS 39158-6010
For the attention of:	R. Wilson Montjoy II, Esq.
Email:	wilson.montjoy@butlersnow.com

ARTICLE 10
MISCELLANEOUS

10.1 **Assignment**. Except as provided below, this Agreement may not be assigned by a Party without the prior consent of the other Party whose consent shall not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, Optionee may assign this Agreement (a) to an Affiliate, provided that Optionee shall provide Optionor with such information as Optionor may reasonably require to demonstrate that such Affiliate is financially and technically capable of performing

Optionee's obligations under this Agreement, (b) in connection with the merger or consolidation of Optionee with another entity, or (c) in connection with the sale, pledge or other transfer of Optionee's ownership interest in this Agreement, provided that, in the case of (b) or (c), Optionor may require and Optionee shall provide such financial assurances as Optionor deems necessary. In the event Optionee assigns this Agreement as permitted hereby, Optionor agrees that such assignee shall acquire all the benefits and obligations of Optionee under this Agreement, including all rights to be the tenant under the Lease. If, in the event of any transfer or assignment under this Section 10.1, such transferee or assignee fails to perform all of its obligations under this Agreement, Optionee shall remain liable for and shall perform Optionee's obligations under this Agreement as if such assignment had not occurred and such assignment shall not constitute a novation.

10.2 **Costs**. Each Party shall be responsible for its own costs and expenses incurred in connection with this Agreement. In any legal action brought by a Party related to a dispute, controversy, or claim arising out of or relating to this Agreement or the breach, termination, enforceability or validity thereof, the prevailing Party, as determined by a court of competent jurisdiction, shall receive reimbursement of its reasonable attorney fees and other costs incurred related to such dispute, controversy, or claim or any claim related the breach, termination, enforceability or validity of this Agreement.

10.3 **Brokers**. Each Party represents and warrants that it has not dealt with any real estate broker or agent in connection with this Agreement.

10.4 **Successors**. This Agreement shall bind and inure to the benefit of the respective heirs, personal representatives, executors, successors, and assigns of each Party.

10.5 **Non-Waiver**. The failure or delay of either Party to require performance of any provision of this Agreement shall not affect such Party's right to thereafter require full performance of that provision. A waiver by either Party of a breach of any provision of this Agreement is only effective if given in writing and shall not constitute a waiver of any subsequent breach or nullify the effectiveness of such provision.

10.6 **Further Assurances**. Each Party shall from time to time do, perform, sign, execute and deliver all such acts, deeds, documents and things (or procure the doing, performance, signing, execution or delivery of them) as shall be reasonably necessary to give full effect to this Agreement and secure to the other party the full benefit of the rights, powers and remedies intended to be conferred upon it under this Agreement.

10.7 **No Third Party Rights**. Nothing in this Agreement, express or implied, is intended to confer upon any person, other than the Parties and their respective successors and assigns, any rights or remedies under or by reason of this Agreement.

10.8 **Entire Agreement**. Except as otherwise provided in Section 10.14, this Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes any prior agreement, understanding, discussions, representations, negotiations or proposals between the Parties.

10.9 **Amendment**. This Agreement may not be amended, modified, or altered except by the written agreement of the Parties.

10.10 **Severability**. If any one or more provisions of this Agreement are held to be invalid, illegal, or unenforceable in any respect, the remaining provisions of this Agreement shall remain in effect and shall not be affected by such invalidity, illegality, or unenforceability.

10.11 **Governing Law**. This Agreement and the rights and duties of the Parties arising out of this Agreement shall be governed by, interpreted, construed, and enforced in accordance with the laws of the State of Mississippi, excluding any conflict of laws principles that would refer the matter to the laws of another jurisdiction.

10.12 **Default**. If Optionor defaults under this Agreement for any reason other than Optionee's default hereunder, and such failure is not cured with ten (10) Business Days following written notice thereof from Optionee to Optionor, Optionee may enforce specific performance of Optionor's obligations hereunder to comply with the terms hereof or to execute and deliver the Lease or seek such other remedies at law or in equity as are available or give notice of termination this Agreement and upon such termination by Optionee and Optionee's receipt of a refund of the Option Fee, in such event, Optionor shall be released from this Agreement. If Optionee shall default in its undertakings under Articles 5 or 6 hereof, Optionor shall have the right to seek such remedies at law or in equity as are available. All rights and remedies afforded the Parties by this Agreement will be deemed cumulative and non-exclusive, and exercise of any remedy will not be deemed to be a waiver of any other right, remedy, or privilege provided herein or available at law or in equity; provided, however, each Party shall only recover for actual damages. The failure by the Parties to negotiate the complete terms and conditions of the Lease prior to the Term of this Agreement shall not constitute a default or a breach of this Agreement by either Party.

10.13 **Confidentiality**. Each Party agrees that all terms of this Agreement shall be subject to that certain Confidentiality Agreement by and between the Parties dated to be effective as of January 27, 2015.

10.14 **General Authority**. Each Party represents and warrants that (a) it has the full power, capacity, authority, and legal right to execute and deliver this Agreement and to perform all of its obligations hereunder and (b) this Agreement is a legal, valid and binding obligation of such Party enforceable in accordance with its terms. Each Party represents and warrants that the Person executing this Agreement has the full right and authority to execute this Agreement on behalf of such Party.

10.15 **Definitions**. Certain capitalized words and terms used herein that are not otherwise defined herein shall have the meanings set forth below:

(a) "***Affiliate***" shall mean, with respect to any Person, a Person which controls, is controlled by, or is under the common control with a Party;

(b) "***Business Day***" shall mean any calendar day other than a Saturday, a Sunday, or a legal holiday in New York City, New York on which national banks are authorized or required by federal law to close;

(c) "***Control***" shall mean the ownership, directly or indirectly, of more than fifty percent (50.0%) of the voting rights of a Person or the power to direct the policies and management of such Person; and

(d) "***Person***" shall mean any individual, a corporation, a limited liability company, a partnership, an association, a trust, an unincorporated organization, or any other legal entity.

10.16 **Third Parties**. Nothing in this Agreement shall in any way limit the rights or activities of either Party to deal directly with any non-Affiliate third party so long as such Party complies with its obligations hereunder.

10.17 **Counterparts.** To facilitate execution, this Agreement may be executed in as many counterparts as may be convenient or required. All counterparts shall collectively constitute a single instrument. Any signature page to any counterpart may be detached from such counterpart without impairing the legal effect of the signatures thereon and thereafter attached to another counterpart identical thereto except having attached to it additional signature pages.

10.18 **Exchange of Copies of Agreement.** Optionor and Optionee each does hereby acknowledge, stipulate and agree that (a) the exchange and receipt of copies of this Agreement and of the signature pages of this Agreement by a Party by facsimile transmission or by email transmission in portable document format (.PDF) bearing the other Party's signature shall be deemed to be its due execution and delivery of this Agreement for all purposes, and (b) the executed counterparts of this Agreement delivered by facsimile transmission or by email transmission shall be valid, binding and enforceable against Optionor and Optionee, respectively, to the same extent as an original bearing its signature, and no original thereof shall be required as a condition of its validity or enforceability; provided, however, such acknowledgment, stipulation and agreement by the Parties pursuant to this Section 10.18 shall not (i) waive or release the rights of either party to dispute the authenticity or completeness of any executed document or instrument purportedly delivered pursuant to subclause (a) hereof and (ii) constitute the agreement of either party to conduct any other transaction by such means. Notwithstanding the foregoing, the exchange of copies pursuant to this Section 10.18 shall not relieve the Parties from the obligation subsequently to exchange also original copies.

[The remainder of this page is blank.]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first above-written.

OPTIONOR:	**OPTIONEE:**
Mississippi State Port Authority at Gulfport	**SeaOne Gulfport, LLC**
By: _____	By: _____
Name: Jonathan T. Daniels	Name:
Its: Executive Director & CEO	Its:
MISSISSIPPI DEVELOPMENT AUTHORITY	
By: _____	
Name: Glenn McCullough Jr.	
Its: Executive Director, MDA	

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first above-written.

OPTIONOR:	**OPTIONEE:**
Mississippi State Port Authority at Gulfport	**SeaOne Gulfport, LLC**
By:	By:
Name: Jonathan T. Daniels	Name: B. Hall
Its: Executive Director & CEO	Its: President & COO
MISSISSIPPI DEVELOPMENT AUTHORITY	
By:	
Name:	
Its:	

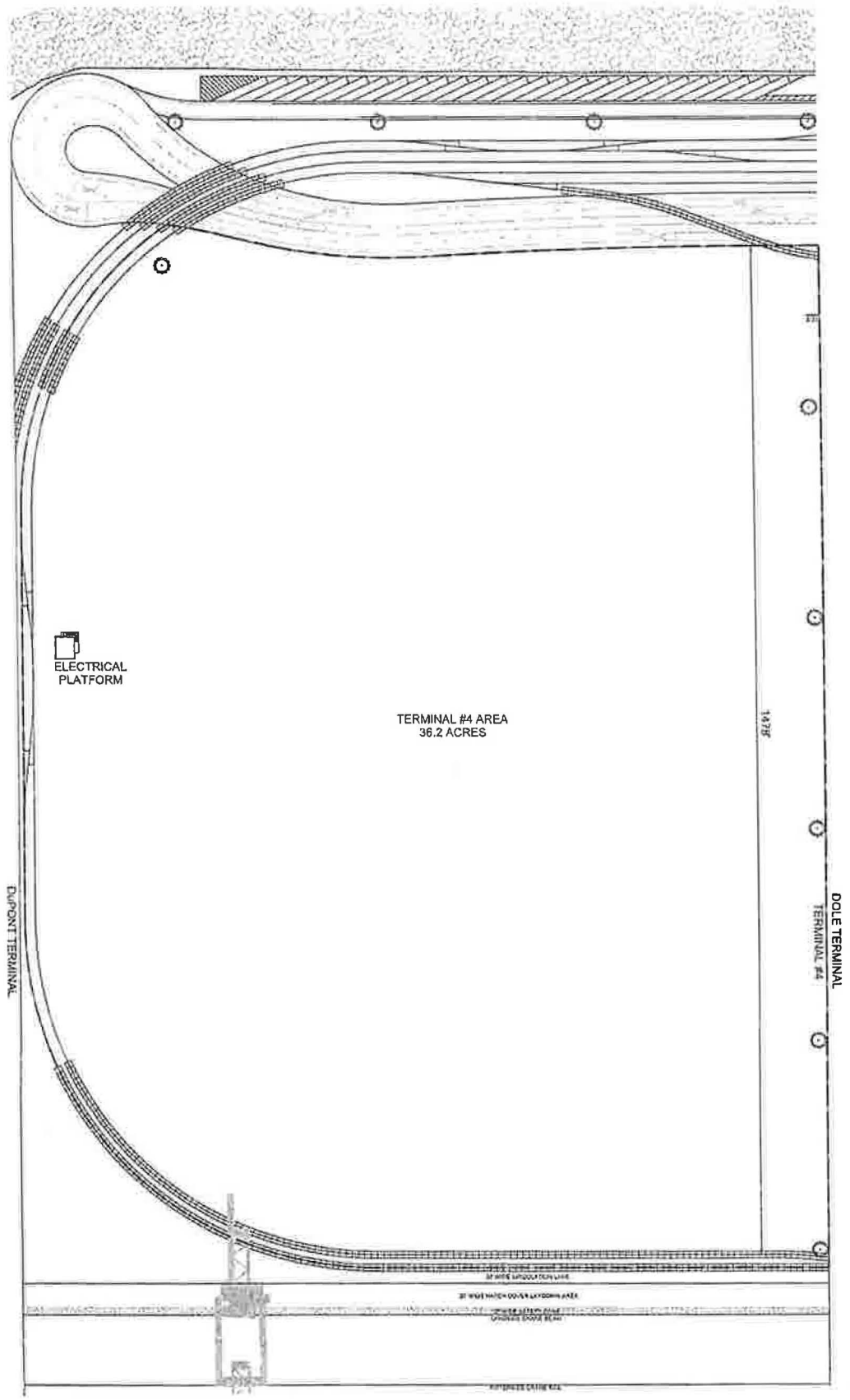
Exhibit A

The Premises

Legal Description: [text to be added and not attached to this draft]

(Aerial View Follows)
(not attached to this draft)

EXHIBIT "A"


ELECTRICAL PLATFORM
TERMINAL #4 AREA
36.2 ACRES
1473'
DuPONT TERMINAL
DOLE TERMINAL
TERMINAL #4

Appendix D

Diagram of Proposed Gulfport Facility

CGL Production Facility Located in Port of Gulfport

- Proposed facilities for manufacture of CGL using standard gas plant technology.
- Gulfport site suitable for CGL production facility expansion to 1.5 Bcf/day or more.
- Like the Port of Gulfport's adjacent container loading facilities, SeaOne's CGL loading facility loads manufactured products onto vessels for trans-portation to various locations, domestic and foreign.
- Customers gas and NGLs come from the nearby BP Pascagoula facility and/or pipelines.
- No environmental or regulatory issues expected to adversely affect facility construction or delay operation.

Appendix E

Letter from Dr. Hong-Cai Joe Zhou

Department of Chemistry

Dr. Hong-Cai Joe Zhou
Professor

TEXAS A&M UNIVERSITY

September 17, 2013

Mr. Michael R. Engleman
Patton Boggs LLP
2550 M Street, NW
Washington, D.C. 20037-1350

Dear Mr. Michael R. Engleman,

The following is the Compressed Gas Liquid review completed for your use. For conveinience, we have attached answers to the specific questions you have asked.

Compressed Gas Liquid(CGL) is a new technology for the transport of natural gas at -42°C(-44°F). Under a pressure of approximately 1400 psig, natural gas and a liquid solvent consisting mostly of propane are mixed until the liquid is saturated with solvated gas. This CGL mixture can then be pumped and transported as a liquid at temperatures far higher than the -162°C temperature necessary for conventional liquid natural gas(LNG), and at a continued pressure far lower than the 2200-3600 psig necessary for compressed natural gas(CNG).

There are two major reasons this process is different from previous LNG or CNG methods. All materials consist of atoms and molecules that interact with each other through the electromagnetic force, and attract each other at close range. Through one of these effects (the London dispersion force), a mixture containing larger molecules will have greater intermolecular forces than one containing smaller ones. [Reid] When a gas consists of molecules that have higher intermolecular forces, it requires less pressure to confine this material at a given temperature - it has less vapor pressure. [Reid] This trend continues until the system is condensed by its own intermolecular forces and the pressure surrounding it, or in other words it undergoes a phase transition into liquid form. The CGL mixture is a solution of methane in propane and heavier molecules, and thus it has higher intermolecular forces. It is easier to contain, which can be demonstrated by the huge differences between the phase diagrams of methane and ethane solutions. (Fig 1)[Kiselev] This effect allows CGL to stay liquid at a comparatively much higher temperature and lower pressure than pure methane could.

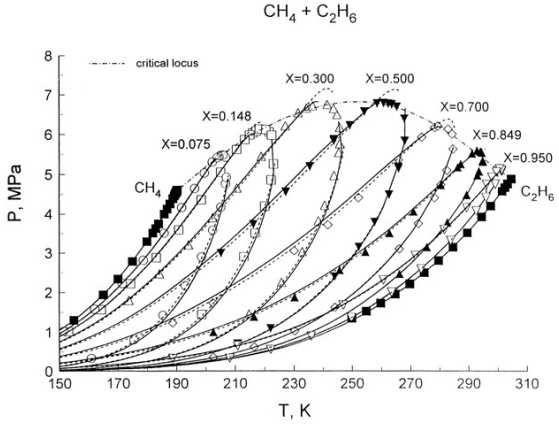


Fig 1: Phase diagram of methane/ethane solutions

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The second reason is that when using only high pressure at ambient temperature, or low temperature at ambient pressure, there is a much larger deviation from standard conditions than occurs when using both moderately low temperature and high pressure. According to Fourier's law, the rate of heat flow between two materials is proportional to the thermal conductivity of the materials times the area of contact times the temperature difference.[Lienhard] Thus, if a material's temperature is three times as far from ambient, it should require thrice as much energy per second to refrigerate it. In principle this means that heat will transfer to the -162°C liquid at approximately triple the rate. In transit, this is usually not an issue due to the efficiency of insulation. However, this means that -162°C liquid requires far more elaborate insulation than a higher temperature liquid does, and that it is not feasible to keep it cold for long periods of time.

LNG is cooled during transport by "auto-refrigeration" – it is simply allowed to boil off and increase the gas pressure in the vessel during transit. If the pressure gets too high, some of the gas must be released and lost. This is usually unavoidable, because it is not economical to keep the liquid at cryogenic temperatures in any other way. Because CGL uses a non-cryogenic temperature of -42°C, chilled nitrogen gas is used to keep the CGL liquid at a constant temperature, and thus no boiling off is required.

When a liquid is heated to its boiling point, it begins to change into a gas, and the vapor pressure increases drastically. At a given pressure, the temperature of the liquid will not increase as it boils, and the rate at which it changes into the gas will depend on the rate at which heat is transferred into the liquid. Thus, a liquid that boils at a higher temperature will usually become a gas more slowly when exposed to ambient temperature, because the rate at which heat will enter it and the rate it boils will be much lower.

The CGL mixture exists as a solution of gas in liquid. If the pressure is released, the gas will leave at a rate proportional to the decreased pressure, so a leak can be detected and contained with far less loss of gas than with high pressure CNG or boiling LNG.[Reid] Because methane can only burn in air at a composition of 5-15%,[ISA] if the rate of loss is low enough there is a greatly decreased chance of a fire or explosion. This danger is further reduced by the chilled nitrogen stream keeping the container cold and insulating it from oxygen. Simply put, a temperature of -42°C is far easier to achieve and maintain than the temperatures used in LNG, and a spill or leak would be less dangerous and easier to detect and contain.

For these reasons, CGL requires much less processing and containment than LNG. LNG plants are physically large, cost billions of dollars[Hashimoto], and deliver only one product. In contrast, CGL requires both less capital expenditure and less operating expense, delivers multiple products after the solution is fractionated into its components after transportation, and can integrate the equipment for processing and fractionation onto carrier ships or in other compact areas. Please feel free to contact us if you have any questions regarding the CGL process or methane storage and transportation.

Sincerely,

Hongcai Zhou

Dr. Hong-Cai Joe Zhou

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REFERENCES

"LNG properties and hazards", ioMosaic corporation,2006
http://www.iomosaic.com/docs/training/Understand_LNG_RPT.pdf

"CNG cylinders 101"
http://www.cleanvehicle.org/technology/CNGCylinderDesignandSafety.pdf

J. H. Lienhard IV, J. H. Lienhard V, *A Heat Transfer Textbook*, Fourth Edition, Phlogyston Press, Cambridge Massachusetts

R. C. Reid, J. M. Praunitz, B. E. Poling (1987) *The Properties of Gases and Liquids*, Fourth Edition, McGraw-Hill Companies, New York, NY

Instrumentation, Systems, and Automation Society , *Flammability Characteristics of Combustible Gases and Vapors*,
http://www.isa.org/Content/Microsites121/Standards_and_Practices_Department_Board/Home119/Ballots/TR_121301_reaff.pdf

H. Hashimoto, Evolving roles of LNG and Asian Economies in the Global Natural Gas Markets,
http://www.nbr.org/downloads/pdfs/eta/PES_2011_Hashimoto.pdf

Kiselev, Cubic crossover equation of state for mixtures,
http://www.sciencedirect.com/science/article/pii/S037838129900182X

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TEXAS A&M UNIVERSITY

Follow-up Questions to Letter of August 13, 2013

Question No. 1: What is the difference between the process of solvation of natural gas into CGL and the process of liquefaction of natural gas into LNG?

CGL is manufactured by processing all the components of natural gas, including natural gas liquids, with a solvent, which produces a mixture with properties different from natural gas or LNG. In LNG, natural gas, that is predominately methane, is cryogenically cooled and liquefies at -260°F. For CGL, natural gas is solvated with heavier hydrocarbons to create CGL at a relatively much higher temperature of -40°F.

Question No. 2: How do the characteristics of the CGL product compare to those of LNG, NGLs and CNG with respect to:

a) pressure and temperature;
CGL is stored at a temperature of -40°F as opposed to the temperature of -260°F of LNG, and a pressure of 1400 psig, as opposed to up to 3600 psig for compressed natural gas. The properties of NGLs depend on which NGL you have, but in general they, like CGL, require more moderate conditions than lean natural gas does.

b) ease of containment;
CGL is stored at temperatures closer to ambient than LNG is, which means that these temperatures are easier to maintain. Likewise, the lower pressure of CGL is easier to contain than that of CNG.

c) necessity of “boil-off” emissions;
LNG is rated for a “holding time” depending on the tank – after the holding time, natural gas must be vented from the container . CGL does not require boil-off or venting as long as the temperature of -40°F is maintained.

d) ability to detect and contain a leak or spill;
CGL is cooled by a nitrogen stream which provides an oxygen-free environment for detection and containment of leaks. LNG and CNG systems typically do not include this, and so leaks occur directly into the atmosphere. Furthermore, the more moderate temperature and pressure of CGL would inherently slow any leaks that did occur.

e) risk of fire or explosion;
Due to the nitrogen stream CGL is cooled by, and the more moderate storage conditions, risks like these are less than in CNG and LNG systems.

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Dr. Hong-Cai Joe Zhou
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f) use as a fuel;
The CGL manufacturing process produces a solution or mixture consisting of multiple types of hydrocarbons, so CGL would not be compatible with methane-powered vehicles or other devices until after it is fractionated back into its components.

g) ability to be transported by pipeline?
CGL cannot be transported by pipeline in its manufactured state. Once fractionated into its constituent components, certain of those components may be pipeline compatible.
Question No. 3. How do the environmental and safety risk profiles of CGL processing and storage facilities compare with those of LNG Export or Import Terminals?
LNG export and import terminals are physically large and process a huge amount of natural gas, whereas CGL processing is conducted on a much smaller scale. Thus, in addition to its inherently lower safety risk, its environmental impact and risk are similarly scaled down.
Question No. 4. In what ways is the CGL product of the solvation process different from the natural gas that enters the process?
CGL consists of the natural gas entering the manufacturing process and pressure sprayed with a solvent. This resulting CGL solution contains larger molecules, leading to increased intermolecular forces. This makes it easier to condense than the natural gas was prior to being solvated.

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