Addendum #1

RFP Number: AA15-PR-4940

TITLE: Temporary LNG/CNG Facility and Supply/Transportation of LNG/CNG

The attention of the bidders submitting proposals for AA15-PR-4940 is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications, are all to be included in and form a part of the proposal submitted.

The number of this Addendum (1) must be referenced on the proposal.

Attached please find responses to the vendor questions and a copy of the MSDS sheets for Fuel oil #2 and Methane, compressed gas.

End of Addendum #1

John O. Martin
Director of Procurement
1. **What dictates the LNG flow rate?**

    Outside ambient temperatures and pressure dictate flow, anytime we above a 30 HHD (heating degree day) there will be LNG flow. Flow will increase has the HHD increase. In addition, we always try to burn our maximum Berkshire Gas nomination unless curtailed or restricted.

2. **Is it based on whatever is required to maintain pressure at burner?**

    See above – Steam demand for the campus dictates our LNG use.

3. **Is it a nominated amount that is adjusted by the LNG operator to maintain a level flow?**

    Yes, a combination of fuel nominated, campus steam demand, pricing at the time of the daily gas or LNG nomination and availability of gas from Berkshire Gas all considered. It should be noted – the primary of fuel of choice is pipeline natural gas. The LNG product is a peaking or intermittent fuel.

4. **How is delivered gas measured?**

    We have a gas flow meter at the Berkshire Gas skid for the LNG and the vendor supplies daily documentation of their usage.

5. **Assume full load of LNG trailer is used?**

    Maximize product usage is desired by any and all trucks that are unloaded at the take station. The amount of product dispersed by each truck or tank is based on the operator’s efficiency and correlating process.

6. **XNG flow meter?**

    We do not understand this question. However and again deliveries are determined by weight and there is a specific flow meter to the LNG operation that is operated and monitored by the CHP control room.

7. **UMASS flow meter?**

    Rosemount 3051SFC1CS060N040T33JAIA3M5Q4E5
    DP Cal 0-263 IN H2O
    SP CAL 0-70 PSI G
    TEMP CAL 32-120 DEG F
    MWP 800PSI / 55.2 BAR
8. In the past 2 year contract, did UMASS allow the minimum gas pressure to decrease below 35 psig to allow the departing trailer to leave at a low pressure?

We maintain LNG pressure @ 38psig and the Berkshire gas skid – Believe this meant that they (TransGas) needed to maintain 42 – 50 psig at the LNG site. It is important that the vendor supply at least 42 psig at the LNG site.

9. If so, what is that pressure and would new contract allow for that deviation?

42 – 50 psig at the LNG site

10. If we have two "stationary" trailers on-site (fixed storage for contract period), can we use a delivery trailer to load into the empty trailer if we stay under the 25,000 LNG gallon limit?

Yes

However the goal is to maintain the 25,000 gallon threshold

11. How will XNG connect to the 480V, 3-phase power at site? Panel does not currently seem to have connection points.

You will need to run a 480v source to the site or run a generator. The primary 480V supply supports the step down transformer. Need to obtain town of Amherst Electrical Permit

12. On page 12 of RFP # AA15-PR-4940 it specifies "One original and six copies of the non-price proposal and the same for the PRICE proposal shall be submitted to UMA."

See answer to 13.

13. Can you please clarify the difference between "Price" & "Non-Price" proposals?

Each bid response will be split into two separate responses, i.e.:

- First bid proposal response will be the Technical Response submitted in envelope labeled "Non Price".

- Second bid proposal response will be Price Response submitted in envelope labeled "Price".
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: FUEL OIL #2
General or Generic ID: ALIPHATIC & AROMATIC HYDROCARBONS

Company
The Valvoline Company
P.O. Box 14000
Lexington, KY 40512

Telephone Numbers
Emergency: 1-800-274-5263
Information: 1-859-357-7206

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s) | CAS Number | % (by weight)
--------------|------------|--------------
ALIPHATIC & AROMATIC HYDROCARBONS | 68476-30-2 | 100.0

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause eye irritation. Additional symptoms of eye exposure may include: blurred vision

Skin
May cause mild skin irritation. Prolonged or repeated contact may dry and crack the skin.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation
Breathing of vapor or mist is possible.

Symptoms of Exposure
Stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and death.

Target Organ Effects
No data

Developmental Information
No data

Cancer Information
Diesel engine exhaust is listed as carcinogenic by the International Agency for Research on Cancer (IARC). Excess lung and bladder cancers have been reported in workers exposed to these emissions. In addition, exposure to diesel exhaust particulates is listed as carcinogenic by the National Toxicology Program. This product (or a component) is a petroleum-derived material. Similar materials and certain compounds occurring naturally in petroleum oils have been shown to cause skin cancer in laboratory animals following repeated exposure without washing or removal.

Continued On Next Page
MATERIAL SAFETY DATA SHEET

The Valvoline Company

Date Prepared: 01/14/02
Date Printed: 11/21/02
MSDS No: 999.0013917-006.012

FUEL OIL #2

Other Health Effects
No data

Primary Route(s) of Entry
Inhalation, Skin contact.

4. FIRST AID MEASURES

Eyes
If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation
If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians
This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 - Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

5. FIRE FIGHTING MEASURES

Flash Point
> 135.0  F (57.2  C) COC

Explosive Limit
No data

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Continued On Next Page
MATERIAL SAFETY DATA SHEET

The Valvoline Company

Date Prepared: 01/14/02
Date Printed: 11/21/02
MSDS No: 999.0013917-006.012

FUEL OIL #2

Fire and Explosion Hazards
Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media
regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions
Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPARating
Health - 1, Flammability - 2, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill
Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from the area of the spill until clean-up has been completed. Contain spill to the smallest area possible. Dike area to prevent spreading. Prevent from entering drains, sewers, streams or other bodies of water. Recover as much of the product as possible by methods such as vacuuming and use of absorbent. Transfer contaminated absorbent, soil and other materials in proper containers for ultimate disposal.

7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred.

Storage
Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Continued On Next Page
MATERIAL SAFETY DATA SHEET

The Valvoline Company

FUEL OIL #2

Date Prepared: 01/14/02
Date Printed: 11/21/02
MSDS No: 999.0013917-006.012

Skin Protection
Wear resistant gloves such as: neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections
If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines
Component

ALIPHATIC & AROMATIC HYDROCARBONS (68476-30-2)
No exposure limits established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for product) > 320.0°F (160.0°C) @ 760.00 mmHg

Vapor Pressure
(for product) < 1.000 mmHg @ 77.00°F

Specific Vapor Density
> 5.000 @ AIR=1

Specific Gravity
.876 @ 60.00°F

Liquid Density
7.296 lbs/gal @ 60.00°F
.876 kg/l @ 15.60°C

Percent Volatiles (including Water)
No data

Evaporation Rate
SLOWER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Continued On Next Page
FUEL OIL #2

Physical Form
HOMOGENEOUS SOLUTION

Color
BLUE TO GREEN COLOR

Odor
No data

pH
Not applicable

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
Not Regulated

Continued On Next Page
MATERIAL SAFETY DATA SHEET

The Valvoline Company

FUEL OIL #2

Container/Mode:
No data

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101
Not applicable

15. REGULATORY INFORMATION

US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4
None

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire(X) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65
None

International Regulations
Inventory Status
DSL (CANADA) The intentional ingredients of this product are listed.

State and Local Regulations
California Proposition 65
None

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Last Page
Safety Data Sheet

Material Name: METHANE, COMPRESSED GAS

*** Section 1 - PRODUCT AND COMPANY IDENTIFICATION***

Product Identifier: METHANE, COMPRESSED GAS

Manufacturer Information
MATHESON TRI-GAS, INC.
150 Allen Road, Suite 302
Basking Ridge, NJ 07920

General Information: 1-800-416-2505
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 703-527-3887 (Call collect)

Chemical Family
hydrocarbons, gas

Synonyms
MTG MSDS 58; FIRE DAMP; MARSH GAS; METHYL HYDRIDE; NATURAL GAS; METHANE; UN 1971; R50; CH4; RTECS: PA1490000

*** Section 2 - HAZARDS IDENTIFICATION***

EMERGENCY OVERVIEW
Color: colorless
Physical Form: gas
Odor: odorless
Health Hazards: difficulty breathing
Physical Hazards: Flammable gas. May cause flash fire. Electrostatic charges may be generated by flow, agitation, etc.

POTENTIAL HEALTH EFFECTS
Inhalation
Short Term: nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, fatigue, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma
Long Term: no information is available

Skin
Short Term: no information on significant adverse effects
Long Term: no information is available

Eye
Short Term: no information on significant adverse effects
Long Term: no information is available

Ingestion
Short Term: ingestion of a gas is unlikely
Long Term: no information is available

*** Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS***

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<thead>
<tr>
<th>CAS</th>
<th>Component</th>
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<tr>
<td>74-82-8</td>
<td>METHANE</td>
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</table>

Page 1 of 6

Issue Date: 06/12/2013  Revision: 1.0900  Print Date: 9/11/2013
Safety Data Sheet

Material Name: METHANE, COMPRESSED GAS

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Aliphatic hydrocarbon gases (Alkane [C1-C4]).

*** Section 4 - FIRST AID MEASURES***

**Inhalation**
If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**Skin**
Wash exposed skin with soap and water.

**Eyes**
Flush eyes with plenty of water.

**Ingestion**
If a large amount is swallowed, get medical attention.

**Note to Physicians**
For inhalation, consider oxygen.

*** Section 5 - FIRE FIGHTING MEASURES***

See Section 9 for Flammability Properties

**NFPA Ratings:** Health: 1 Fire: 4 Reactivity: 0

**Hazard Scale:** 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Flammable Properties**
Severe fire hazard. Severe explosion hazard. Pressurized containers may rupture or explode if exposed to sufficient heat. Vapor/air mixtures are explosive above flash point. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

**Extinguishing Media**
carbon dioxide, regular dry chemical
Large fires: Use regular foam or flood with fine water spray.

**Fire Fighting Measures**
Move container from fire area if it can be done without risk. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Stop flow of gas.

*** Section 6 - ACCIDENTAL RELEASE MEASURES***

**Occupational spill/release**
Safety Data Sheet

Material Name: METHANE, COMPRESSED GAS

*** Section 7 - HANDLING AND STORAGE***

Storage Procedures

*** Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION***

Component Analysis
METHANE (74-82-8)
ACGIH: 1000 ppm TWA

Component Biological Limit Values
There are no biological limit values for any of this product's components.

Ventilation
Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face
Eye protection not required, but recommended.

Protective Clothing
Protective clothing is not required.

Glove Recommendations
Wear appropriate chemical resistant gloves.

Respiratory Protection
Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES***
Material Name: METHANE, COMPRESSED GAS

Physical State: Gas
Color: colorless
Odor: odorless
Taste: tasteless
Melting/Freezing Point: -183 °C
Flash Point: -223 °C
Evaporation Rate: Not available
UEL: 15%
Henry's Law Constant: 0.00045830 atm-m3/mol
Density: 0.717 g/L @ 0 °C
KOW: 724.44 estimated from water solubility, estimated from water solubility
KOC: 2192.80 estimated from water solubility, estimated from water solubility
Viscosity: 0.01118 cP @27 °C
Molecular Formula: C-H4

Solvent Solubility
Soluble: alcohol, ether, benzene, organic solvents

Appearance: Not available
Physical Form: gas
Odor Threshold: Not available
pH: Not available
Boiling Point: -162 °C
Decomposition: Not available
UEL: 15%
Vapor Pressure: 760 mmHg @ -161 °C
Vapor Density (air = 1): 0.555
Water Solubility: 3.5 % @ 17 °C
Log KOW: Not available
Auto Ignition: 537 °C

Chemical Stability
Stable at normal temperatures and pressure

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

Materials to Avoid
halogens, oxidizing materials, combustible materials

Decomposition Products
oxides of carbon

Possibility of Hazardous Reactions
Will not polymerize.

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified.

Acute Toxicity Level
METHANE (74-82-8)
Slightly Toxic: inhalation

Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Component Analysis - Aquatic Toxicity
No LOI ecotoxicity data are available for this product's components.
**Section 13 - DISPOSAL CONSIDERATIONS**

Disposal Methods
Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262.
Hazardous Waste Number(s): D001.

Component Waste Numbers
The U.S. EPA has not published waste numbers for this product’s components.

**Section 14 - TRANSPORT INFORMATION**

US DOT Information
Shipping Name: Methane, compressed
UN/NA #: UN1971 Hazard Class: 2.1
Required Label(s): 2.1

TDG Information
Shipping Name: Methane, compressed
UN #: UN1971 Hazard Class: 2.1
Required Label(s): 2.1

**Section 15 - REGULATORY INFORMATION**

U.S. Federal Regulations
None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312
Acute Health: Yes Chronic Health: No Fire: Yes Pressure: Yes Reactive: No

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

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<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
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<tr>
<td>METHANE</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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Not regulated under California Proposition 65

Component Analysis - Inventory

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<td>74-82-8</td>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</table>
**Section 16 - OTHER INFORMATION**

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR’s Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

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End of Sheet MAT14160