
 INTERIOR GAS UTILITY <small>CLEAN LOW COST NATURAL GAS FOR THE INTERIOR</small>		Questions & Clarifications Requests Natural Gas LNG loading equipment - LNG Titan Facility			
Q. No.	Date of Question	Topic	Question	Date of Response	Answer
1	5/7/2019	Commercial	Request for extension	5/16/2019 UPDATED 5/20	Extension has been granted. Questions will be accepted until 5/22, bid is due 5/29/19 5pm Alaska Standard Time.
2	5/7/2019	Technical	Para 1.2 and 2.1 states LNG pumps shall have capability to be used to offload LNG trailer. Trailer loading pumps will need to be installed as close as possible to the LNG storage tanks. From scaling from the site layout, the tanks are over 500 ft from the loading racks, which is too far to utilize the trailer loading pumps for trailer offload at the loading rack. a. Is it possible to use trailer pressure building coil for offload?	5/16/2019 UPDATED 5/20	Noted. Piping layout will be finalized during 65% design. Please size pump for current piping run. Vendor should supply a separate pump skid package with integrated controls that would allow us to install closer to the tanks. 5/20/19 update: The trailer pressure building coil can not be used for offload. At the moment we don't foresee to use the same pumps for reverse flow, therefore vendor should propose a pressure building system for offloading. Pressure building coil for offload should be considered outside of vendor scope (will be by trailer or other PBC). Reverse flow is not required for the pumps. Overall system design (vessels, piping, valves, etc) shall accommodate reverse flow.
3	5/7/2019	Technical	b. Is it possible to have provision to move trailer to pump area for pump offload?	5/16/2019	Piping layout will be finalized during 65% design. See question no. 2 above.
4	5/7/2019	Technical	Para 1.8.c requires Alaska PE to supervise the design and seal skid drawings. Can a licensed PE in another state meet this requirement?	5/16/2019	No, it is not acceptable to have PE from another state stamp as Alaska licensure requires Arctic engineering training. See response to item 13 below for additional clarification.
5	5/7/2019	Technical	Para 2.1 indicates ISO container loading. Will the ISO containers have rear loading connections similar to LNG trailers? If not, please provide details of ISO loading connections.	5/16/2019	Yes ISO containers will be rear loading.
6	5/7/2019	Technical	Para 2.2 Can you provide details on the LNG storage vessels (diameter; volume; MAWP; normally operating pressure; elevation of vessel above pump skid foundation; nozzle type, location and size; valve size and Cv). This information is critical in determine the trailer loading pump design.	5/16/2019 UPDATED 5/20	Storage Tanks are part of this project and have not been purchased yet. Parameters will become available as we receive more information from tank vendors. 5/20 update: Assume 75,000gal horizontal tank with 80psig MAWP. Diameter approximately 15', other details to be provided as they become available. Existing fleet of truck vessels have a MAWP of 70 psig and operate at between 20-45psig. Truck elevation is between 36 and 48" from the ground. Existing trucks utilize 3" LNG Hammer on Unions. Fill valves are 2" and 3". Their existing truck fleet has volumes between 9,000-13,000 gallons.
7	5/7/2019	Technical	Para 2.2 We typically have a single LNG supply and single LNG return to a dual trailer loading skid, so cross-over valve requirement is not required. Is this approach acceptable?	5/16/2019	This is fine, as long each of the (2) pumps required is sized for 700 gpm. In that case the pumps will have to be installed in parallel.
8	5/7/2019	Technical	Can you provide details on the interface requirement to the owner supplied CCTV and Intercom systems	5/16/2019	None. Disregard requirement. CCTV and intercom will need to be routed to skid location but this will be done by others.

9	5/10/2019	Technical	Paragraph 1.3 states truck rack shall contain rack specific ESD controls. Does this include gas detectors and flame detectors in addition to the emergency stop buttons?	5/16/2019	Fire & Gas detection systems are excluded from the scope.
10	5/10/2019	Technical	Paragraph 2.2 is unclear if construction of the scales is referring to shop fabrication or field installation and post installation calibration/certification? Can you provide detail and who is responsible for what?	5/16/2019	Scales are part of package. Installation and calibration will be by others, with vendor oversight.
11	5/10/2019	Technical	Paragraph 3.4.1 It is a little unclear given the small volume of LNG piping on the loading skids if the EDP system requirements apply. Can you confirm if each section of LNG piping that will be isolated between the two values in a ESD event will require EDP depressurization system in addition to a thermal relief valve? Are we to assume the EDP system for piping between tank and pump skid and piping between the pump skid and trailer loading rack will be done by others?	5/16/2019	EDP systems requirements do not apply. PSVs and TSVs shall be considered in the design as per API 520, 521.
12	5/10/2019	Technical	Paragraph 7.3.2 stated explosion proof Motor starters with circuit breaker disconnect shall be provided for all motors . The electrical code excludes visible disconnect for hazardous areas so our standard is to install these disconnect and VFD in non hazardous area due to cost and safety concerns. Is this acceptable?	5/16/2019	Current plan is to field install VFD in driver's kiosk which will be enclosed and heated (either provided as part of this package or by others). Proposed plan is acceptable.
13	5/15/2019	Technical	Will 1.8 c. of the RFP be required for all vendor furnished equipment, separate from any potential overall site review/signoff by engineer of record? In other words, does this require that PE approved submissions are required on manufactured equipment covered by the RFP?	5/16/2019	Only foundation requirements (loading and reaction forces) require review by Alaskan engineer. Design of assembled units will need to include Alaskan environmental loading (seismic, snow, wind etc.) as included in RFP. Manufactured equipment (vessels, valves, flanges, pumps etc.) meeting national standard (ASME, API etc.) do not require stamping by Alaskan Engineer.
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