

March 27, 2022

Ref.: 282374

 To: All Tender Participants
 Dear Sir / Madam,

Re: Public Tender No. PD22000173 (the "Tender") – Clarifications

The Company has received certain requests for clarification regarding the Tender, in accordance with Section 5.1 thereof, provided below (the "Questions"). Next to each Question is the Company's answer, which shall be considered by the Company as authoritative.

| | <u>Question</u> | <u>Answer</u> |
|---|---|--|
| 1 | What is the gas slugs duration | The expected gas slugs duration is up to 13 hours |
| 2 | The ratio of the gas volumetric flow rate to the total volumetric flow rate of all fluid. Include GVF value. | See table attached. |
| 3 | The definition of pumps is broad, volumetric pumps can come in several types, for example diaphragm pumps, piston pumps and more. Will any type that does the job fit or are you interested in a particular type of pump? | <p>The intention is for rotary type pump that is suitable for crude mixture/ steam suction, and capable of self-priming.</p> <p>There are two purposes for the pumps:</p> <ol style="list-style-type: none"> 1. To empty the headers of the tanks. the pump should be able to perform suction of all the fluid as much as possible, meaning, the pumps will starts from header full of fluid, and will stop when the fluid become a mixture of the liquid residue with the steam. Therefore, the pumps need to be suitable for multiphase flow. 2. Suction from drainage pit (below level "0") from debt up to 3 m. Thus the pump should be self-priming. |
| 4 | Percentage of gas inside the product | See table attached. |

Thank you for your continued interest in the Tender; we look forward to receiving your bids.

Sincerely,

Talmor

Talmor Sela

Procurement and Engagements Department



| Pressure in emptying header | Pressure at the pump inlet | Vapor Fraction at the pump inlet | Total evacuating flow rate | Vapor volume flow at the pump inlet | Vapor density | Liquid volume flow at the pump inlet | Liquid density | Gas Volume Fraction at the pump inlet |
|-----------------------------|----------------------------|----------------------------------|----------------------------|-------------------------------------|---------------|--------------------------------------|----------------|---------------------------------------|
| P | PSUCT | VF | MFLOW | VFLOW | VDENS | LFLOW | LDENS | GVF |
| bar-G | bar-G | | kg/hr | Am3/hr | kg/Am3 | Am3/hr | kg/Am3 | |
| -0.9 | -0.90022 | 0.269003 | 128.349 | 49.8617 | 0.345622 | 0.138325 | 803.299 | 0.997234 |
| -0.882 | -0.88227 | 0.254114 | 156.64 | 49.8288 | 0.394627 | 0.171145 | 800.349 | 0.996576 |
| -0.864 | -0.86432 | 0.231295 | 195.719 | 49.7823 | 0.441448 | 0.217732 | 797.968 | 0.995646 |
| -0.846 | -0.84638 | 0.2113 | 240.032 | 49.7289 | 0.487499 | 0.271133 | 795.88 | 0.994578 |
| -0.828 | -0.82845 | 0.193514 | 290.158 | 49.6679 | 0.532873 | 0.332096 | 794.021 | 0.993358 |
| -0.81 | -0.81053 | 0.177485 | 346.832 | 49.5984 | 0.577655 | 0.401571 | 792.341 | 0.991968 |
| -0.792 | -0.79262 | 0.162881 | 410.964 | 49.5193 | 0.621902 | 0.480734 | 790.808 | 0.990386 |
| -0.774 | -0.77472 | 0.14945 | 483.68 | 49.429 | 0.665658 | 0.57104 | 789.396 | 0.98858 |
| -0.756 | -0.75683 | 0.137 | 566.372 | 49.3257 | 0.708952 | 0.674297 | 788.083 | 0.986514 |
| -0.738 | -0.73896 | 0.125382 | 660.789 | 49.2072 | 0.751808 | 0.792767 | 786.858 | 0.984144 |
| -0.72 | -0.72111 | 0.114481 | 769.103 | 49.0707 | 0.794232 | 0.929265 | 785.706 | 0.981414 |
| -0.702 | -0.70327 | 0.104208 | 894.091 | 48.9126 | 0.836238 | 1.08739 | 784.619 | 0.978252 |
| -0.684 | -0.68547 | 0.094491 | 1039.29 | 48.7283 | 0.877821 | 1.27172 | 783.59 | 0.974566 |
| -0.666 | -0.66769 | 0.085274 | 1209.27 | 48.5118 | 0.918967 | 1.4882 | 782.615 | 0.970236 |
| -0.648 | -0.64996 | 0.076516 | 1410.04 | 48.2554 | 0.959661 | 1.7446 | 781.687 | 0.965108 |
| -0.63 | -0.63227 | 0.068183 | 1649.63 | 47.9487 | 0.999877 | 2.05133 | 780.805 | 0.958974 |
| -0.612 | -0.61465 | 0.060252 | 1938.89 | 47.5775 | 1.03957 | 2.42246 | 779.965 | 0.95155 |
| -0.594 | -0.59712 | 0.052708 | 2292.78 | 47.1226 | 1.07867 | 2.87737 | 779.168 | 0.942452 |
| -0.576 | -0.57969 | 0.045543 | 2732.65 | 46.5563 | 1.11711 | 3.44373 | 778.411 | 0.931126 |
| -0.558 | -0.5624 | 0.038757 | 3289.05 | 45.8388 | 1.15478 | 4.16116 | 777.696 | 0.916776 |
| -0.54 | -0.54532 | 0.032359 | 4007.61 | 44.9112 | 1.19152 | 5.08878 | 777.024 | 0.898224 |
| -0.522 | -0.5285 | 0.026367 | 4957.81 | 43.6833 | 1.22711 | 6.31663 | 776.397 | 0.873666 |
| -0.504 | -0.51208 | 0.020812 | 6248.35 | 42.0144 | 1.26123 | 7.98556 | 775.82 | 0.840288 |
| -0.486 | -0.49622 | 0.015742 | 8052.09 | 39.6804 | 1.29342 | 10.3196 | 775.3 | 0.793608 |
| -0.468 | -0.48111 | 0.011217 | 10649.2 | 36.3183 | 1.32312 | 13.6817 | 774.842 | 0.726366 |
| -0.45 | -0.46699 | 0.00733 | 14460.5 | 31.3829 | 1.34957 | 18.6171 | 774.459 | 0.627658 |
| -0.432 | -0.45401 | 0.004181 | 20014.9 | 24.189 | 1.37214 | 25.811 | 774.153 | 0.48378 |
| -0.414 | -0.44093 | 0.00169 | 28272.5 | 13.4914 | 1.39252 | 36.5086 | 773.892 | 0.269828 |
| -0.396 | -0.43136 | 0.000442 | 35333.5 | 4.34009 | 1.40626 | 45.6599 | 773.707 | 0.086802 |
| -0.378 | -0.41873 | 0 | 38681.5 | 0 | 0 | 50 | 773.63 | 0 |
| -0.36 | -0.40075 | 0 | 38681.5 | 0 | 0 | 50 | 773.63 | 0 |
| -0.342 | -0.38275 | 0 | 38681.5 | 0 | 0 | 50 | 773.63 | 0 |



| | | | | | | | | |
|--------|----------|---|---------|---|---|----|---------|---|
| -0.324 | -0.36475 | 0 | 38681.5 | 0 | 0 | 50 | 773.63 | 0 |
| -0.306 | -0.34675 | 0 | 38681.5 | 0 | 0 | 50 | 773.63 | 0 |
| -0.288 | -0.32875 | 0 | 38681.5 | 0 | 0 | 50 | 773.629 | 0 |
| -0.27 | -0.31075 | 0 | 38681.5 | 0 | 0 | 50 | 773.629 | 0 |
| -0.252 | -0.29275 | 0 | 38681.5 | 0 | 0 | 50 | 773.629 | 0 |
| -0.234 | -0.27475 | 0 | 38681.5 | 0 | 0 | 50 | 773.629 | 0 |
| -0.216 | -0.25675 | 0 | 38681.4 | 0 | 0 | 50 | 773.629 | 0 |
| -0.198 | -0.23875 | 0 | 38681.4 | 0 | 0 | 50 | 773.629 | 0 |
| -0.18 | -0.22075 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.162 | -0.20275 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.144 | -0.18475 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.126 | -0.16675 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.108 | -0.14875 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.09 | -0.13075 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.072 | -0.11275 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.054 | -0.09475 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.036 | -0.07675 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| -0.018 | -0.05875 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |
| 0 | -0.04075 | 0 | 38681.4 | 0 | 0 | 50 | 773.628 | 0 |

The goal is to reach the vacuum as deeply as possible

