

## TECHNICAL SPECIFICATIONS

| Sl. No. | Description                                                                                                                                                                                                            | Cyl Capacity in Litres                                                 |
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| 1       | 112-AT-2001, Methane 1.00 mol%, Balance Ethane                                                                                                                                                                         | 10                                                                     |
| 2       | 113-AT-6201, Ethylene 0.30 %, Hydrogen 40%, Balance Methane                                                                                                                                                            | 10                                                                     |
| 3       | 113-AT-6501, Methane 250 PPM, Balance Nitrogen                                                                                                                                                                         | 10                                                                     |
| 4       | 113-AT-6801, Stream 2 Propylene 500 ppm, Propane 500ppm, Acetylene 1.00 %, Ethane 30 %, Balance Ethylene                                                                                                               | 10                                                                     |
| 5       | 113-AT-7001 Propylene 300 ppm, Hydrogen 200 ppm, Acetylene 2 %, Ethane 30%, Balance Ethylene                                                                                                                           | 10                                                                     |
| 6       | 113-AT-6701 Carbon Monoxide 0.30 %, Nitrogen 0.20%, Ethane 0.10%, Acetylene 0.10%, Ethylene 0.30% , Methane 18%, Carbon Dioxide 0.50% Balance Hydrogen                                                                 | 10                                                                     |
| 7       | 113-AT-6702 Carbon Monoxide 0.50 ppm, Methane 500 ppm, Acetylene 3 ppm, Ethylene 500ppm, Balance Hydrogen                                                                                                              | 10                                                                     |
| 8       | 113-AT-7801 METHYL ACETYLENE 2%,PROPADIENE 2% PROPANE 10% BALANCE PROPYLENE                                                                                                                                            | 47                                                                     |
| 9       | 113-AT-8601 HYDROGEN 8 ppm, ETHANE 200ppm, ETHYLENE 100 ppm, PROPANE 0.20% METHYL ACETYLENE 3 ppm, PROPADIENE 3 ppm, BALANCE PROPYLENE                                                                                 | 47                                                                     |
| 10      | 113-AT-8502 CIS-2-BUTENE 0.1%, BUTENE - 1 0.10%, Propylene 2.00%, Iso Butane 0.20%, Methyl Acetylene 0.25%, N-butane 0.20%, Propadiene 0.25%, N butane 0.20%, Balance Propane                                          | 47                                                                     |
| 11      | 113-AT-8001 CIS-2-BUTENE 3 % TRANS-2-BUTENE 3 % BUTENE-1 3 % PROPADIENE 5 % PROPANE 7 % ISO BUTYLENE 3 % METHYL ACETYLENE 5 % 1,3 BUTADIENE 7 % ISO PENTANE 0.5 % NPENTANE 0.5 % PROPYLENE BALANCE                     | 47 (sample must be gas phase)                                          |
| 12      | 113-AT-8002 PROPANE 0.15 % PROPYLENE 0.15 % METHYL ACETYLENE 0.05 % PROPADIENE 0.05 % ISOBUTANE 5 % N-BUTANE 8 % ISOBUTYLENE 20 % 1-BUTENE 15 % CIS-2-BUTENE 15 % TRANS-2-BUTENE 15 % ISO PENTANE 1.5 % BALANCE HEXENE | 10 (4 liter Liquid Content with Dip Stick and Nitrogen Pressurization) |
| 13      | 113-AT-8301 PROPANE 30 % METHYL ACETYLENE 0.5 % PROPADIENE 0.5 % 1-BUTENE 1000 PPM PROPYLENE BALANCE                                                                                                                   | 47                                                                     |

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| 14 | 113-AT-8401 METHYL ACETYLENE 100 PPM PROPADIENE 100 PPM PROPANE 20 % HYDROGEN 0.3 % ISOBUTANE 200 PPM N-BUTANE 200 PPM CIS-2-BUTENE 200 PPM TRANS-2-BUTENE 200 PPM PROPYLENE BALANCE                                                                                                                                                             | 47                            |
| 15 | 113-AT-9031 1-HEXENE 0.2 %<br>BENZENE 0.1 %<br>METHYL ACETYLENE 0.2 % PROPADIENE 0.2 % CIS - 2 - BUTENE 20 % TRANS - 2 BUTENE 20 % N PENTANE 6 % 1-3 BUTADIENE BALANCE                                                                                                                                                                           | 47 (sample must be gas phase) |
| 16 | 113-AT-4901 CARBON DIOXIDE 2 PPM CARBON MONOXIDE 0.1 %<br>METHANE 20 %<br>ETHYLENE 30 %<br>HYDROGEN BALANCE                                                                                                                                                                                                                                      | 10                            |
| 17 | 113-AT-8501 PROPYLENE 100 %                                                                                                                                                                                                                                                                                                                      | 10                            |
| 18 | 113-AT-9101 BUTENE - 1 0.6 % ISOBUTANE 1 % CIS-2-BUTENE 0.6 % TRANS-2-BUTENE 0.6 % 1-3 BUTADIENE 0.6 %<br>HYDROGEN 0.2 % ISOBUTANE 1 % N-BUTANE 10 % METHANE 5 % ETHYLENE 2 % PROPANE 17 % ISO-PENTANE 0.6 % N-PENTANE 0.6 % N-HEXANE 1 % 2-METHYLPENTANE 0.6 % 3-METHYLPENTANE 0.6 % 2,3 DIMETHYLBUTANE 0.2 % 1-PENTENE 0.6 % BALANCE PROPYLENE | 47                            |
| 19 | 113-AT-6303 ETHANE 0.1 % ETHYLENE BALANCE                                                                                                                                                                                                                                                                                                        | 10                            |

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| 20 | 113-AT-7151 / 7101 HYDROGEN 0.5 % CARBON MOXIDE 2 PPM METHANE 100 PPM ACETYLENE 0.5 % ETHANE 30 % PROPYLENE 300 PPM PROPANE 100 PPM, Ethylene Balance                                                                                                                         | 10                            |
| 21 | 113-AT-7401 ETHYLENE 20 % NITROGEN BALANCE                                                                                                                                                                                                                                    | 10                            |
| 22 | 113-AT-7402 ETHYLENE 0.5 % PROPYLENE 0.2 % ETHANE BALANCE                                                                                                                                                                                                                     | 10                            |
| 23 | 114-AT-1201<br>1,3 BUTADIENE 400 PPM, CIS-2-BUTENE 400 PPM, TRANS-2-BUTENE 400 PPM ISOPRENE 400 PPM, 2-METHYL-2-BUTENE 400PPM, PROPANE 0.20%, ISOBUTYLENE 2 % ISOPENTANE 15% N-Butane Balance                                                                                 | 47 (sample must be gas phase) |
| 24 | 113-AT-1202 METHANE PROPANE 21 % PROPYLENE 0.6 % PROPADIENE 0.3 % METHYL ACETYLENE 0.6 % ISO BUTANE 3 % N BUTANE 12 % 1,3 BUTADIENE 0.6 %, 1-BUTENE 0.6%,CIS-2-BUTENE 0.3%, TRANS-2-BUTENE 0.3%, N PENTANE 3% , ISO PENTANE 3%, N HEXANE 0.9%, ISO HEXANE 0.6%, 1-HEXENE 0.6% | 47                            |
| 25 | 113-AT-1501 HYDROGEN 30 % METHANE 15 % ETHANE 20 % ETHYLENE 30 % PROPYLENE 3 % PROPANE 1 % 1,3 BUTADIENE 0.5 %, METHYL ACETYLENE 0.10% PROPADIENE 0.2%, ACETYLENE 0.2%                                                                                                        | 10                            |
| 26 | 113-AT-5501 ETHYLENE 5 PPM ETHANE 50 PPM PROPANE 5 % PROPYLENE 10 % METHYL ACETYLENE 2 % PROPADIENE 2 % HYDROGEN BALANCE                                                                                                                                                      | 10                            |
| 27 | 117-AT-1201 1,2 BUTADIENE 10 PPM 1,3 BUTADIENE 293 PPM PROPADIENE 123 PPM ETHYLENE 0.35 % C-2-BUTENE 0.74 % T-2-BUTENE 0.75 % 1-BUTENE BALANCE                                                                                                                                | 10                            |
| 28 | 117-AT-1602 1,2 BUTADIENE 50 PPM 1,3 BUTADIENE 50 PPM PROPADIENE 100 PPM 1-BUTENE 99.98 %                                                                                                                                                                                     | 10                            |
| 29 | 117-AT-1603 N-BUTANE 2.05 % 1-BUTENE 97.95 %                                                                                                                                                                                                                                  | 10 (3 liter Liquid)           |
| 30 | 113-AT-1201 HYDROGEN 0.5 % CARBON DIOXIDE 0.3 % METHANE 2 % ETHYLENE 0.5 % PROPANE 22 % PROPYLENE 0.4 % ISOBUTANE 6 % N-BUTANE 7% 1-BUTENE 0.30% ISO-PENTANE 1 % N-PENTANE 1 % N-HEXANE 0.33 % HEPTANE 0.33 % OCTANE 0.33 % ETHANE BALANCE                                    | 47                            |
| 31 | 118-AT- 2001 METHANE 200 PPM ETHYLENE 100 PPM PROPANE 0.4 % CO2 3 ppm CO 0.2 % BALANCE PROPYLENE                                                                                                                                                                              | 47                            |
| 32 | 118-AT- 4001(New) ETHANE 0.1 % METHANE 0.1 % HYDROGEN 25 % ETHYLENE 10 % PROPANE 5 % BALANCE PROPYLENE                                                                                                                                                                        | 47                            |
| 33 | 118-AT- 4001 ETHANE 0.1 % METHANE 0.1 % HYDROGEN 1 % ETHYLENE 10 % PROPANE 5 % PROPYLENE BALANCE                                                                                                                                                                              | 47                            |

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| 34 | 113-AT-9061 OCTANE 0.5 % HEPTANE 2 % HEXANE 5 %<br>PENTENE-1 0.2 % N-PENTANE 0.2 % ISO-PENTANE 0.2 %<br>TOLUENE 25 %                                                                                                                                                                        | 10 (4 liter Liquid Content with Dip<br>Stick and Nitrogen Pressurization) |
| 35 | 113-AT-6801 (STREAM 1) ETHYLENE 1 PPM ETHANE 10 PPM<br>METHYLACETYLENE 2 % PROPADIENE 2 % PROPANE 10 % N-<br>BUTANE 2 % ISOBUTANE 2 % Balance Propylene                                                                                                                                     | 47                                                                        |
| 36 | 117-AT-3201 &3202(HIGH Butene Cylinder) HYDROGEN 10 %<br>METHANE 5 % ETHANE 5 % ETHYLENE 30 % N-BUTANE 10 % 1-<br>BUTENE 20 % ISO-PENTANE 2.5 % N-PENTANE 2.5 % HEXANE<br>0.05 % 1-HEXENE 0.05 % CIS-2-HEXENE 300 PPM TRANS-2-<br>HEXENE 300 PPM TRANS-3-HEXENE 300 PPM Nitrogen<br>Balance | 47                                                                        |
| 37 | 117-AT-3201 &3202(Low Butene Cylinder) HYDROGEN 10 %<br>METHANE 5 % ETHANE 5 % ETHYLENE 30 % N-BUTANE 10 % 1-<br>BUTENE 0.5 % ISO-PENTANE 2.5 % N-PENTANE 2.5 % HEXANE<br>0.05 % 1-HEXENE 0.05 % CIS-2-HEXENE 300 PPM TRANS-2-<br>HEXENE 300 PPM TRANS-3-HEXENE 300 PPM Balance<br>Nitrogen | 47                                                                        |
| 38 | 117-AT-5301 METHANE 4 % ETHANE 3 % ETHYLENE 15 % 1-<br>BUTENE 2 % ISO-PENTANE 2 % N-BUTANE 0.5 % BALANCE<br>Nitrogen                                                                                                                                                                        | 10                                                                        |
| 39 | 117-AT-5302 METHANE 10 % ETHANE 5 % ETHYLENE 25 % 1-<br>BUTENE 0.5 % ISO-PENTANE 0.25 % N-BUTANE 0.5 %<br>BALANCE Nitrogen                                                                                                                                                                  | 10                                                                        |
| 40 | 113-AT-7403 HYDROGEN 1 ppm CARBON MONOXIDE 2 ppm<br>ACETYLENE 2 ppm CARBON DIOXIDE 2 ppm METHANE 10 ppm<br>ETHANE 300 ppm BALANCE ETHYLENE                                                                                                                                                  | 10                                                                        |
| 41 | 117-AT-3204 ETHYLENE 5 % BALANCE NITROGEN                                                                                                                                                                                                                                                   | 10                                                                        |
| 42 | 117-AT-8701/8603 CARBON MONOXIDE 0.5 PPM CARBON<br>DIOXIDE 0.5 PPM BALANCE NITROGEN                                                                                                                                                                                                         | 10                                                                        |
| 43 | 113-AT-9401(Zero Gas) METHANE 25 % NITROGEN BALANCE                                                                                                                                                                                                                                         | 10                                                                        |
| 44 | 117-AT-1101 H <sub>2</sub> S 0.45 PPM Methane 0.5 % ETHYLENE 99.5 %                                                                                                                                                                                                                         | 10                                                                        |
| 45 | 117-AT-1301A/C HYDROGEN 10 PPM ACETYLENE 1 PPM<br>CARBON MONOXIDE 1 PPM Acetone 1 ppm Methane 50<br>ppm CO <sub>2</sub> 1 PPM BALANCE ETHYLENE                                                                                                                                              | 10                                                                        |
| 46 | 113-AT-9401(Span Gas) METHANE 100 %                                                                                                                                                                                                                                                         | 10                                                                        |
| 47 | Analyser Shelter-01(Callidus) SO <sub>2</sub> 900 PPM BALANCE<br>NITROGEN                                                                                                                                                                                                                   | 10                                                                        |

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| 48 | Analyser Shelter-01(Callidus) Nox 450 PPM BALANCE NITROGEN                                                                                                                            | 10 |
| 49 | Analyser Shelter-01(Callidus) CO 2250 PPM BALANCE NITROGEN                                                                                                                            | 10 |
| 50 | C4H8 84 PPM BALANCE NITROGEN                                                                                                                                                          | 10 |
| 51 | C4H8 8200 PPM BALANCE NITROGEN                                                                                                                                                        | 10 |
| 52 | ETHYLENE 4250 PPM BALANCE NITROGEN                                                                                                                                                    | 10 |
| 53 | Oxygen 21.4 % BALANCE N2                                                                                                                                                              | 10 |
| 54 | Oxygen 8.2 % BALANCE N2                                                                                                                                                               | 10 |
| 55 | Oxygen 1.8 % BALANCE N2                                                                                                                                                               | 10 |
| 56 | Oxygen 0.42 % BALANCE N2                                                                                                                                                              | 10 |
| 57 | Oxygen 0.14 % BALANCE N2                                                                                                                                                              | 10 |
| 58 | Oxygen 80-90 % BALANCE N2                                                                                                                                                             | 10 |
| 59 | Oxygen 10 ppm BALANCE N2                                                                                                                                                              | 10 |
| 60 | Oxygen 0.7 ppm BALANCE N2                                                                                                                                                             | 10 |
| 61 | SO2 90-100 PPM BALANCE N2                                                                                                                                                             | 10 |
| 62 | NOX 100 PPM BALANCE N2                                                                                                                                                                | 10 |
| 63 | CO 100 PPM BALANCE N2                                                                                                                                                                 | 10 |
| 64 | CO 10 PPM BALANCE N2                                                                                                                                                                  | 10 |
| 65 | C3H8 IN N2 80 PPM BALANCE N2                                                                                                                                                          | 10 |
| 66 | Carbon Dioxide 50 PPM Balance nitrogen                                                                                                                                                | 10 |
| 67 | Carbon Dioxide 80 PPM Balance nitrogen                                                                                                                                                | 10 |
| 68 | Pure Nitrogen Grade 5.0                                                                                                                                                               | 10 |
| 69 | Tag 011-AT-1101 Components (for Rich gas) Methane 90.5 % Ethane 3.99 % Propane 1.498 % I-Butane 0.711 % N-Butane 0.12 % I-Petane 0.25 % N-Pentane 0.13 % Co2 1.5% N2 0.95% C6+ 0.351% | 10 |

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| 70 | 101-AT-3101 Components (for Lean gas) Ethane 0.45 %<br>Propane 0 % I-Butane 0 % N-Butane 0 % I-Petane 0 % N-<br>Pentane 0 % Co2 0 % N2 1.04% C6+ 0%                                                                                                                                                                                                                                                                                                                                                                      | 10 |
| 71 | PROPYLENE 1% Balance N2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10 |
| 72 | Ethylene 2% Balance N2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10 |
| 73 | Methane 2.5% Balance Air                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10 |
| 74 | Hydrogen 2% Balance Air                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10 |
| 75 | H2S 50 PPM Balance -Air                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10 |
| 76 | NITRIC OXIDE 20.000000 PPM Vol/Vol Gas<br>CARBON MONOXIDE 100.000000 PPM Vol/Vol Gas(for<br>Duliajan)                                                                                                                                                                                                                                                                                                                                                                                                                    | 10 |
| 77 | Replacement, testing and painting charges <b><i>(As per the break up of 8 items provided in the SCC &amp; SOW. These 8 items shall have to be performed only if required and the payment shall be done on actual basis. Bidders have to consider all these items as one (01) lot and quote for a single line item no. 77 as per the BOQ inclusive of all taxes, duties &amp; freight charges. Break up of the 1 lot as mentioned in the SCC &amp; SOW shall be sought from the L1 bidder after award of the job)</i></b> |    |