

INFORME MENSUAL SOBRE LAS ESPECIFICACIONES DEL GAS NATURAL

(Valores promedio diarios)



| | |
|---------------------------|---|
| PERMISIONARIO: | TERMINAL KMS DE GNL S. DE R.L DE C.V |
| PUNTO DE MEDICIÓN: | ESTACION DE MEDICION MANZANILLO |
| ZONA DE MEDICIÓN: | RESTO DEL PAÍS |

| FECHA: (dd/mm/aa) | Metano (% vol) | Bióxido de Carbono (% vol) | Nitrógeno (% vol) | Total Inertes (% vol) | Etano (% vol) | Temperatura de Rocío (K) | Humedad (mg/m ³) | Poder Calorífico (MJ/m ³) | Índice Wobbe (MJ/m ³) | Acido Sulfhídrico (mg/m ³) | Azufre total* (mg/m ³) | Oxígeno* (% vol) |
|----------------------|-------------------|-------------------------------|----------------------|--------------------------|------------------|-----------------------------|---------------------------------|--|--------------------------------------|---|---------------------------------------|---------------------|
| 4/1/2018 | 95.5567 | 0.0000 | 0.0543 | 0.0543 | 4.0480 | 204.8432 | 7.1797 | 39.1390 | 51.4567 | 0.0000 | 0.0000 | 0.0000 |
| 4/2/2018 | 95.5640 | 0.0000 | 0.0551 | 0.0551 | 4.0405 | 203.3849 | 7.0530 | 39.1364 | 51.4551 | 0.0000 | | |
| 4/3/2018 | 95.5143 | 0.0000 | 0.0492 | 0.0492 | 4.0927 | 205.0287 | 7.2891 | 39.1520 | 51.4667 | 0.0000 | | |
| 4/4/2018 | 95.5130 | 0.0000 | 0.0473 | 0.0473 | 4.0944 | 203.8831 | 6.5474 | 39.1580 | 51.4710 | 0.0000 | | |
| 4/5/2018 | 95.4972 | 0.0000 | 0.0453 | 0.0453 | 4.1110 | 205.2153 | 7.1158 | 39.1644 | 51.4750 | 0.0000 | | |
| 4/6/2018 | 95.4918 | 0.0000 | 0.0447 | 0.0447 | 4.1165 | 203.6770 | 6.8695 | 39.1660 | 51.4766 | 0.0000 | | |
| 4/7/2018 | 95.4773 | 0.0000 | 0.0427 | 0.0427 | 4.1317 | 204.2272 | 6.6422 | 39.1721 | 51.4803 | 0.0000 | | |
| 4/8/2018 | 95.4768 | 0.0000 | 0.0430 | 0.0430 | 4.1320 | 204.6672 | 6.7337 | 39.1719 | 51.4804 | 0.0000 | | |
| 4/9/2018 | 95.5468 | 0.0000 | 0.0559 | 0.0559 | 4.0548 | 203.9066 | 7.2717 | 39.1414 | 51.4569 | 0.0000 | | |
| 4/10/2018 | 95.5347 | 0.0000 | 0.0545 | 0.0545 | 4.0662 | 203.5211 | 7.0450 | 39.1466 | 51.4603 | 0.0000 | | |
| 4/11/2018 | 95.5223 | 0.0000 | 0.0512 | 0.0512 | 4.0806 | 203.5715 | 7.2221 | 39.1518 | 51.4656 | 0.0000 | | |
| 4/12/2018 | 95.5142 | 0.0000 | 0.0490 | 0.0490 | 4.0904 | 203.6107 | 7.1927 | 39.1568 | 51.4694 | 0.0000 | | |
| 4/13/2018 | 95.4758 | 0.0000 | 0.0440 | 0.0440 | 4.1301 | 203.7629 | 6.7113 | 39.1724 | 51.4801 | 0.0000 | | |
| 4/14/2018 | 95.4661 | 0.0000 | 0.0422 | 0.0422 | 4.1407 | 203.8473 | 6.8354 | 39.1767 | 51.4831 | 0.0000 | | |
| 4/15/2018 | 95.4755 | 0.0000 | 0.0433 | 0.0433 | 4.1317 | 203.8255 | 7.0240 | 39.1731 | 51.4807 | 0.0000 | | |
| 4/16/2018 | 95.5077 | 0.0000 | 0.0466 | 0.0466 | 4.0986 | 203.6561 | 6.9265 | 39.1605 | 51.4723 | 0.0000 | | |
| 4/17/2018 | 95.4903 | 0.0000 | 0.0449 | 0.0449 | 4.1160 | 203.7698 | 6.7112 | 39.1673 | 51.4876 | 0.0000 | | |
| 4/18/2018 | 95.6324 | 0.0000 | 0.0547 | 0.0547 | 3.9769 | 203.2025 | 6.9933 | 39.1161 | 51.4424 | 0.0000 | | |
| 4/19/2018 | 95.7658 | 0.0000 | 0.0603 | 0.0603 | 3.8493 | 202.8093 | 7.1066 | 39.0707 | 51.4159 | 0.0000 | | |
| 4/20/2018 | 95.7619 | 0.0000 | 0.0579 | 0.0579 | 3.8548 | 202.7894 | 7.1741 | 39.0737 | 51.4193 | 0.0000 | | |
| 4/21/2018 | 95.7467 | 0.0000 | 0.0538 | 0.0538 | 3.8727 | 202.8511 | 7.2610 | 39.0813 | 51.4248 | 0.0000 | | |
| 4/22/2018 | 95.7323 | 0.0000 | 0.0518 | 0.0518 | 3.8877 | 203.5282 | 7.0786 | 39.0872 | 51.4296 | 0.0000 | | |
| 4/23/2018 | 95.6989 | 0.0000 | 0.0473 | 0.0473 | 3.9226 | 203.2149 | 7.2854 | 39.1009 | 51.4395 | 0.0000 | | |
| 4/24/2018 | 95.6464 | 0.0000 | 0.0408 | 0.0408 | 3.9769 | 203.2613 | 7.1292 | 39.1219 | 51.4542 | 0.0000 | | |
| 4/25/2018 | 95.6305 | 0.0000 | 0.0394 | 0.0394 | 3.9930 | 203.3167 | 7.1269 | 39.1280 | 51.4578 | 0.0000 | | |
| 4/26/2018 | 95.6102 | 0.0000 | 0.0378 | 0.0378 | 4.0126 | 203.3995 | 6.8914 | 39.1355 | 51.4626 | 0.0000 | | |
| 4/27/2018 | 95.5976 | 0.0000 | 0.0372 | 0.0372 | 4.0251 | 203.4575 | 7.0313 | 39.1399 | 51.4654 | 0.0000 | | |
| 4/28/2018 | 95.6465 | 0.0000 | 0.0442 | 0.0442 | 3.9797 | 203.1727 | 7.1969 | 39.1179 | 51.4473 | 0.0000 | | |
| 4/29/2018 | 95.7655 | 0.0000 | 0.0605 | 0.0605 | 3.8621 | 203.0462 | 7.2098 | 39.0663 | 51.4150 | 0.0000 | | |
| 4/30/2018 | 95.7457 | 0.0000 | 0.0532 | 0.0532 | 3.8860 | 203.0363 | 7.1698 | 39.0772 | 51.4236 | 0.0000 | | |

* / Los valores trimestrales se deberán reportar en los meses de enero, abril, julio y octubre de cada año, respecto del trimestre inmediato anterior.

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|------------------|------------|--------|------------|------------|------------|-----------|------------|------------|------------|--------|--|--|
| Mínimo | 95.4661 | 0.0000 | 0.0372 | 0.0372 | 3.8493 | 202.7894 | 6.5474 | 39.0663 | 51.4150 | 0.0000 | | |
| Promedio | 95.5868 | 0.0000 | 0.0484 | 0.0484 | 4.0258 | 203.6494 | 7.0342 | 39.1341 | 51.4572 | 0.0000 | | |
| Máximo | 95.7658 | 0.0000 | 0.0605 | 0.0605 | 4.1407 | 205.2153 | 7.2891 | 39.1767 | 51.4876 | 0.0000 | | |
| Dev. Est. | 0.10386753 | 0 | 0.00655352 | 0.00655352 | 0.09725498 | 0.6235632 | 0.20634519 | 0.03512238 | 0.02179523 | 0 | | |

Observaciones: 1.- Para los días 01, 03, 04, 05, 07, 08, 09, 22, 23, 29 & 30 se detectaron ligeras desviaciones en el parámetro de Temperatura de rocío, ello a consecuencia de posibles inconsistencias en el cromatógrafo de gas, sin embargo mencionadas desviaciones no quedan fuera de especificación.
 2.- A partir del día 07 de Mayo se iniciaran las labores de mantenimiento preventivo al cromatógrafo de gas para tren Manzanillo.
 3.- No se presentaron paros por emergencias operativas o por mantenimiento.

INFORME MENSUAL SOBRE LAS ESPECIFICACIONES DEL GAS NATURAL

(Registros máximos diarios)



PERMISIONARIO: TERMINAL KMS DE GNL S. DE R.L DE C.V
PUNTO DE MEDICIÓN: ESTACION DE MEDICION MANZANILLO
ZONA DE MEDICIÓN: RESTO DEL PAÍS

| FECHA: (dd/mm/aa) | Metano (% vol) | Bióxido de Carbono (% vol) | Nitrógeno (% vol) | Total Inertes (% vol) | Etano (% vol) | Temperatura de Rocio (K) | Humedad (mg/m ³) | Poder Calorífico (MJ/m ³) | Índice Wobbe (MJ/m ³) | Acido Sulfhídrico (mg/m ³) |
|----------------------|-------------------|----------------------------------|----------------------|--------------------------|------------------|--------------------------------|---------------------------------|--|--------------------------------------|---|
| 4/1/2018 | 95.5462 | 0.0000 | 0.0556 | 0.0556 | 4.0562 | 225.0998 | 8.1984 | 39.1422 | 51.4596 | 0.0000 |
| 4/2/2018 | 95.5299 | 0.0000 | 0.0653 | 0.0653 | 4.0620 | 203.4871 | 8.0978 | 39.1461 | 51.4628 | 0.0000 |
| 4/3/2018 | 95.2019 | 0.0000 | 0.0564 | 0.0564 | 4.3978 | 226.1661 | 8.2591 | 39.1559 | 51.4708 | 0.0000 |
| 4/4/2018 | 95.4999 | 0.0000 | 0.0531 | 0.0531 | 4.1006 | 210.2229 | 7.7146 | 39.1617 | 51.4730 | 0.0000 |
| 4/5/2018 | 95.4899 | 0.0000 | 0.0460 | 0.0460 | 4.1168 | 225.8111 | 7.9150 | 39.1673 | 51.4789 | 0.0000 |
| 4/6/2018 | 95.4795 | 0.0000 | 0.0451 | 0.0451 | 4.1270 | 203.7545 | 8.1011 | 39.1704 | 51.4802 | 0.0000 |
| 4/7/2018 | 95.4697 | 0.0000 | 0.0438 | 0.0438 | 4.1373 | 215.7305 | 7.8025 | 39.1758 | 51.4841 | 0.0000 |
| 4/8/2018 | 95.4493 | 0.0000 | 0.0479 | 0.0479 | 4.1523 | 226.3183 | 7.7825 | 39.1807 | 51.4883 | 0.0000 |
| 4/9/2018 | 95.4550 | 0.0000 | 0.0811 | 0.0811 | 4.1167 | 213.9737 | 7.7607 | 39.1692 | 51.4775 | 0.0000 |
| 4/10/2018 | 95.5164 | 0.0000 | 0.0661 | 0.0661 | 4.0723 | 203.8034 | 7.8139 | 39.1498 | 51.4650 | 0.0000 |
| 4/11/2018 | 95.5128 | 0.0000 | 0.0522 | 0.0522 | 4.0878 | 203.6348 | 7.9119 | 39.1566 | 51.4679 | 0.0000 |
| 4/12/2018 | 95.5071 | 0.0000 | 0.0500 | 0.0500 | 4.0958 | 203.7016 | 8.1303 | 39.1593 | 51.4762 | 0.0000 |
| 4/13/2018 | 95.4702 | 0.0000 | 0.0449 | 0.0449 | 4.1340 | 203.8685 | 7.7345 | 39.1740 | 51.4813 | 0.0000 |
| 4/14/2018 | 95.4599 | 0.0000 | 0.0429 | 0.0429 | 4.1456 | 205.0847 | 7.9932 | 39.1788 | 51.4857 | 0.0000 |
| 4/15/2018 | 95.4581 | 0.0000 | 0.0438 | 0.0438 | 4.1466 | 205.4032 | 8.1034 | 39.1789 | 51.4834 | 0.0000 |
| 4/16/2018 | 95.4726 | 0.0000 | 0.0491 | 0.0491 | 4.1282 | 203.9551 | 7.9290 | 39.1728 | 51.4825 | 0.0000 |
| 4/17/2018 | 95.4598 | 0.0000 | 0.0461 | 0.0461 | 4.1424 | 205.2933 | 7.7945 | 39.1781 | 51.7433 | 0.0000 |
| 4/18/2018 | 95.4126 | 0.0000 | 0.0776 | 0.0776 | 4.1571 | 204.0130 | 8.0286 | 39.1892 | 51.4949 | 0.0000 |
| 4/19/2018 | 95.7553 | 0.0000 | 0.0624 | 0.0624 | 3.8565 | 204.1830 | 8.3644 | 39.0741 | 51.4208 | 0.0000 |
| 4/20/2018 | 95.7385 | 0.0000 | 0.0615 | 0.0615 | 3.8727 | 202.8622 | 8.2579 | 39.0799 | 51.4248 | 0.0000 |
| 4/21/2018 | 95.7285 | 0.0000 | 0.0588 | 0.0588 | 3.8844 | 202.9439 | 8.4021 | 39.0871 | 51.4299 | 0.0000 |
| 4/22/2018 | 95.7229 | 0.0000 | 0.0538 | 0.0538 | 3.8941 | 217.6261 | 8.4252 | 39.0901 | 51.4330 | 0.0000 |
| 4/23/2018 | 95.6779 | 0.0000 | 0.0529 | 0.0529 | 3.9365 | 206.6693 | 8.1022 | 39.1074 | 51.4460 | 0.0000 |
| 4/24/2018 | 95.6264 | 0.0000 | 0.0453 | 0.0453 | 3.9908 | 203.3602 | 8.3061 | 39.1281 | 51.4590 | 0.0000 |
| 4/25/2018 | 95.6210 | 0.0000 | 0.0400 | 0.0400 | 4.0007 | 203.4129 | 8.3603 | 39.1309 | 51.4620 | 0.0000 |
| 4/26/2018 | 95.5991 | 0.0000 | 0.0391 | 0.0391 | 4.0213 | 203.4679 | 8.3943 | 39.1391 | 51.4650 | 0.0000 |
| 4/27/2018 | 95.5896 | 0.0000 | 0.0379 | 0.0379 | 4.0314 | 203.6242 | 8.3918 | 39.1426 | 51.4679 | 0.0000 |
| 4/28/2018 | 95.5443 | 0.0000 | 0.0697 | 0.0697 | 4.0442 | 203.9316 | 8.2122 | 39.1497 | 51.4725 | 0.0000 |
| 4/29/2018 | 95.7208 | 0.0000 | 0.0925 | 0.0925 | 3.8732 | 212.6949 | 8.1802 | 39.0729 | 51.4199 | 0.0000 |
| 4/30/2018 | 95.6974 | 0.0000 | 0.0600 | 0.0600 | 3.8984 | 209.5427 | 8.3946 | 39.0833 | 51.4293 | 0.0000 |
| Máximo | 95.7553 | 0.0000 | 0.0925 | 0.0925 | 4.3978 | 226.3183 | 8.4252 | 39.1892 | 51.7433 | 0.0000 |

Observaciones:

- 1.- Para los días 01, 03, 04, 05, 07, 08, 09, 22, 23, 29 & 30 se detectaron ligeras desviaciones en el parámetro de Temperatura de rocío, ello a consecuencia de posibles inconsistencias en el cromatógrafo de gas, sin embargo mencionadas desviaciones no quedan fuera de especificación.
- 2.- A partir del día 07 de Mayo se iniciaran las labores de mantenimiento preventivo al cromatógrafo de gas para tren Manzanillo.
- 3.- No se presentaron paros por emergencias operativas o por mantenimiento.

INFORME MENSUAL SOBRE LAS ESPECIFICACIONES DEL GAS NATURAL

(Registros mínimos diarios)



| | |
|---------------------------|---|
| PERMISIONARIO: | TERMINAL KMS DE GNL S. DE R.L DE C.V |
| PUNTO DE MEDICIÓN: | ESTACION DE MEDICION MANZANILLO |
| ZONA DE MEDICIÓN: | RESTO DEL PAÍS |

| FECHA: (dd/mm/aa) | Metano (% vol) | Bióxido de Carbono (% vol) | Nitrógeno (% vol) | Total Inertes (% vol) | Etano (% vol) | Temperatura de Rocío (K) | Humedad (mg/m ³) | Poder Calorífico (MJ/m ³) | Índice Wobbe (MJ/m ³) | Acido Sulfhídrico (mg/m ³) |
|----------------------|-------------------|----------------------------------|----------------------|--------------------------|------------------|--------------------------------|---------------------------------|--|--------------------------------------|---|
| 4/1/2018 | 95.5659 | 0.0000 | 0.0529 | 0.0529 | 4.0411 | 203.3662 | 5.8453 | 39.1360 | 51.4538 | 0.0000 |
| 4/2/2018 | 95.6460 | 0.0000 | 0.0515 | 0.0515 | 3.9748 | 203.0918 | 5.6311 | 39.1083 | 51.4324 | 0.0000 |
| 4/3/2018 | 95.5822 | 0.0000 | 0.0477 | 0.0477 | 4.0324 | 203.2976 | 5.7226 | 39.1317 | 51.4504 | 0.0000 |
| 4/4/2018 | 95.5568 | 0.0000 | 0.0463 | 0.0463 | 4.0550 | 203.3880 | 5.6440 | 39.1415 | 51.4558 | 0.0000 |
| 4/5/2018 | 95.5127 | 0.0000 | 0.0447 | 0.0447 | 4.0967 | 203.6026 | 5.7385 | 39.1617 | 51.4710 | 0.0000 |
| 4/6/2018 | 95.4965 | 0.0000 | 0.0435 | 0.0435 | 4.1136 | 203.6332 | 5.9122 | 39.1647 | 51.4747 | 0.0000 |
| 4/7/2018 | 95.4873 | 0.0000 | 0.0420 | 0.0420 | 4.1234 | 203.6842 | 5.8904 | 39.1685 | 51.4716 | 0.0000 |
| 4/8/2018 | 95.5236 | 0.0000 | 0.0406 | 0.0406 | 4.0914 | 203.5163 | 5.8332 | 39.1549 | 51.4673 | 0.0000 |
| 4/9/2018 | 95.6162 | 0.0000 | 0.0423 | 0.0423 | 4.0030 | 203.2250 | 5.7213 | 39.1191 | 51.4188 | 0.0000 |
| 4/10/2018 | 95.5600 | 0.0000 | 0.0525 | 0.0525 | 4.0448 | 203.4534 | 5.8194 | 39.1343 | 51.4385 | 0.0000 |
| 4/11/2018 | 95.5283 | 0.0000 | 0.0502 | 0.0502 | 4.0765 | 203.5181 | 5.7202 | 39.1269 | 51.4626 | 0.0000 |
| 4/12/2018 | 95.5192 | 0.0000 | 0.0481 | 0.0481 | 4.0873 | 203.5623 | 5.9616 | 39.1549 | 51.4668 | 0.0000 |
| 4/13/2018 | 95.4815 | 0.0000 | 0.0435 | 0.0435 | 4.1257 | 203.7275 | 5.6607 | 39.1704 | 51.4786 | 0.0000 |
| 4/14/2018 | 95.4723 | 0.0000 | 0.0416 | 0.0416 | 4.1358 | 203.7451 | 5.5529 | 39.1746 | 51.4815 | 0.0000 |
| 4/15/2018 | 95.4907 | 0.0000 | 0.0417 | 0.0417 | 4.1278 | 203.7152 | 5.8895 | 39.1708 | 51.4782 | 0.0000 |
| 4/16/2018 | 95.5381 | 0.0000 | 0.0431 | 0.0431 | 4.0742 | 203.5232 | 5.6486 | 39.1502 | 51.4656 | 0.0000 |
| 4/17/2018 | 95.5128 | 0.0000 | 0.0423 | 0.0423 | 4.0980 | 203.5950 | 5.7520 | 39.1598 | 51.4700 | 0.0000 |
| 4/18/2018 | 95.8351 | 0.0000 | 0.0396 | 0.0396 | 3.8050 | 202.5140 | 6.0431 | 39.0469 | 51.3782 | 0.0000 |
| 4/19/2018 | 95.7810 | 0.0000 | 0.0589 | 0.0589 | 3.8390 | 202.6772 | 5.8253 | 39.0661 | 51.4103 | 0.0000 |
| 4/20/2018 | 95.7981 | 0.0000 | 0.0560 | 0.0560 | 3.8232 | 202.6087 | 5.7745 | 39.0611 | 51.4071 | 0.0000 |
| 4/21/2018 | 95.7955 | 0.0000 | 0.0519 | 0.0519 | 3.8321 | 202.6147 | 5.9247 | 39.0645 | 51.4087 | 0.0000 |
| 4/22/2018 | 95.7499 | 0.0000 | 0.0508 | 0.0508 | 3.8730 | 202.8178 | 5.8083 | 39.0810 | 51.4236 | 0.0000 |
| 4/23/2018 | 95.7476 | 0.0000 | 0.0454 | 0.0454 | 3.8796 | 202.9270 | 6.0386 | 39.0832 | 51.4297 | 0.0000 |
| 4/24/2018 | 95.6861 | 0.0000 | 0.0393 | 0.0393 | 3.9418 | 203.0508 | 5.8018 | 39.1074 | 51.4422 | 0.0000 |
| 4/25/2018 | 95.6362 | 0.0000 | 0.0390 | 0.0390 | 3.9886 | 203.2582 | 5.8919 | 39.1259 | 51.4549 | 0.0000 |
| 4/26/2018 | 95.6229 | 0.0000 | 0.0373 | 0.0373 | 4.0018 | 203.3088 | 5.9031 | 39.1308 | 51.4582 | 0.0000 |
| 4/27/2018 | 95.6058 | 0.0000 | 0.0364 | 0.0364 | 4.0186 | 203.3854 | 5.7322 | 39.1371 | 51.4629 | 0.0000 |
| 4/28/2018 | 95.7506 | 0.0000 | 0.0349 | 0.0349 | 3.8998 | 202.5680 | 5.5512 | 39.0727 | 51.3507 | 0.0000 |
| 4/29/2018 | 95.8181 | 0.0000 | 0.0558 | 0.0558 | 3.8180 | 202.4336 | 5.9367 | 39.0477 | 51.4011 | 0.0000 |
| 4/30/2018 | 95.7922 | 0.0000 | 0.0506 | 0.0506 | 3.8469 | 202.6206 | 6.0863 | 39.0600 | 51.4126 | 0.0000 |

| | | | | | | | | | | |
|---------------|---------|--------|--------|--------|--------|----------|--------|---------|---------|--------|
| Mínimo | 95.4723 | 0.0000 | 0.0349 | 0.0349 | 3.8050 | 202.4336 | 5.5512 | 39.0469 | 51.3507 | 0.0000 |
|---------------|---------|--------|--------|--------|--------|----------|--------|---------|---------|--------|

Observaciones:

- 1.- Para los días 01, 03, 04, 05, 07, 08, 09, 22, 23, 29 & 30 se detectaron ligeras desviaciones en el parámetro de Temperatura de rocío, ello a consecuencia de posibles inconsistencias en el cromatógrafo de gas, sin embargo mencionadas desviaciones no quedan fuera de especificación.
- 2.- A partir del día 07 de Mayo se iniciaran las labores de mantenimiento preventivo al cromatógrafo de gas para tren Manzanillo.
- 3.- No se presentaron paros por emergencias operativas o por mantenimiento.