

Larsen, Thurman



From: Larsen, Thurman
Sent: Thursday, June 30, 2011 9:31 AM
To: 'VanHorn, Kristen, NMENV'; 'Chavez, Carl J, EMNRD'
Subject: SEMI-ANNUAL REPORT (#2)- Passive Bio-venting Project for remediating ULSD
Attachments: COVER LETTER 070111.doc; BIOVENTING MONITORING LOG.xls; QaQc-062811.pdf; CAL 011411.pdf; CAL 012111.pdf; CAL 021711.pdf; CAL 120710.pdf; CAL 122710.pdf; QaQc-032211.pdf; QaQc-042711.pdf; QaQc-052711.pdf



Dear Kristen and Carl,

The above attachments includes the cover letter for the semi-annual report (#2) for the passive bio-venting and remediation project of the ULSD tanks (T-115/T-116) area, the Bio-venting Monitoring Log, and Qa/Qc Data for your review. If you should have any questions regarding this report, please either call me directly or send me an e-mail.

Regards,

Beck Larsen; CHMM, REM, RPG
Environmental Engineer

Western Refining Company- Gallup Refinery
Route 3, Box 7
Gallup, NM 87301
Office:(505) 722-0258
Fax: (505) 722-0210
Cell: (505) 862-1749
Email: thurman.larsen@wnr.com

July 1, 2011

✓ New Mexico Environmental Department
Hazardous Waste Bureau (HWB)
1301 Siler Road, Building B
Santa Fe, NM 87507
Attn: Kristen Van Horn

New Mexico Energy, Minerals and Natural Resources
Oil Conservation Division (OCD)
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Mr. Carl Chavez

Re: **REPORT #2:**
Semi-annual Report submittal for Passive Bioremediation (Bio-venting)
Project for remediating Ultra Low Sulfur Diesel (ULSD) in accordance with
(NSR Permit No. 0633-M8-R3, Part A.214)

Dear Ms Van Horn and Mr. Chavez:

Western Refining (Gallup Refinery) was granted the new NSR Permit 0633-M8-R3 that was signed on October 6, 2010. Under Part A.214 of the new permit, Western Refining is allowed to install a Passive Bioremediation (bio-ventilation) System for any Ultra Low Sulfur Diesel (ULSD) fuel spills that may occur at our facility. This report will include monitoring data based on nine events extending from December 7, 2010 through June 28, 2011.

Western Refining previously addressed the preliminary layout, pipe manufacturing, boring and pipe installation, and pipe survey in the letter to the Agency of March 11, 2011. Therefore, any reference to or detailed discussions of these issues will be omitted from this report unless changes or modifications are made to the bio-ventilation system such as addition or subtraction will be mentioned if required.

The Agency will find an excel workbook included as an attachment. The workbook includes the "Bio-venting Monitoring Log", graphs of "Daily Overall Average VOC Concentration", "Daily Maximum vs Daily Average", "Daily Minimum vs Daily Average", and (C(1) through C 16). A detailed discussion of each will follow below.

VOC Monitoring and Qa/Qc Procedures- As indicated in the letter to the Agency, LDAR (Leak-Detection and Repair) personnel will conduct the VOC monitoring using a Flame Ionizing Detector (FID) (TVA-1000). As previously stated, Method 21 uses a portable instrument to detect VOC leaks from sources. The regulations do not specify a

model or type of VOC instrument. However, the type of instrument does have to adhere to certain guidelines and requirements as specified in the regulations. One of the requirements for the instrument is that the detector either should be a catalytic oxidation, flame ionization, infrared absorption, or photo-ionization type of detector. Specific instrument methodology is addressed under Method 21. LDAR personnel use the proper Qa/Qc procedures for Volatile Organic Compounds (VOC) monitoring as prescribed by EPA in accordance with Method 21. This document specifies all guidelines for Qa/Qc procedures and detection of VOC leaks from process equipment. Daily Qa/Qc must be performed prior to VOC monitoring.

Monitoring Schedule- Initially VOC monitoring was conducted on a bi-monthly basis from December through January in order to establish a VOC base line. In February 2011, VOC monitoring frequency was changed from a bi-monthly to a monthly basis. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. Western has conducted monthly VOC monitoring through June 2011 in order to collect enough historical data on the bio-venting system. Beginning on July 1, 2011, Western will commence a quarterly VOC monitoring schedule. The sampling events or monitoring will occur during October-December (4th qtr), January-March (1st qtr), April-June (2nd qtr), and July-September (3rd qtr).

Discussion of Semi-annual Monitoring Period Results- (Refer to "Bio-venting Monitoring Log", and graphs "Daily Overall Average VOC Concentration", "Average vs Maximum Concentration", "Average vs Minimum Concentration", "Average VOC Concentration by Sample Point", and individual standpipes (C (1) through 16).

1. Bio-venting Monitoring Logs vs Daily Overall Average VOC Concentration-

Nine sampling periods were conducted and included in this semi-annual report as indicated from the Bio-venting Monitoring Log. The average was calculated for each sampling event as reflected at the bottom of each column in the Bio-venting Monitoring Log. The VOC concentration over time is shown to have decreased from the initial event (December 7, 2010) to the latest sampling event (June 28, 2011). The initial overall daily average from December 7, 2010 was measured and found to be 27847 ppm. The overall daily average from June 28, 2011 was found to be 7881 ppm. If one views the graph of the "Daily Overall Average VOC Concentration", one can ascertain a definite reduction in VOC concentration over time. An exponential decrease is indicated by the "Trend Line" as shown. In order to determine the effectiveness of the Bio-venting System, it will have to be evaluated over a time dependant variable. Therefore, the daily overall concentration is expected to have a high initial concentration with an exponential decay over time. A Mathematical Model for this type of differential equation and decay function will be of the following general format: $dC/dt=k*C$, where C is the VOC concentration. The coefficient (k), which is a negative value, includes the dampening coefficient for the exponential function as the generalized solution that should theoretically approach an asymptotical value over a time (t). The General Solution to

this differential equation will take the following general format: $C=C_0 \cdot e^{(kt)}$, where C is the VOC concentration (ppm) at time (t) and C_0 is the initial VOC concentration. The coefficient (k) is same coefficient as mentioned above and provides a constant for the exponential function for the general solution to the differential equation. Once again, the solution to this generalized equation should also theoretically approach an asymptotical value over a time (t).

Please note that the relative outside temperature has been plotted in conjunction with the daily overall average VOC concentration as a comparison. It appears that there is a slight correlation between the outside temperature and the VOC concentration; however, several variables may contribute to any deviation from the average. The temperature is base on the average daily outside temperature and does not reflect the gas temperature. Also, the VOC concentration is taken at the sample point near top of pipe. Vapor concentration is not uniform and will vary due to the vapor pressure of the material and due to the permeability of the soil matrix.

2. Comparative Analysis between the “Daily Overall VOC Concentration”; “Daily Maximum vs Daily Average Concentration”, and “Daily Minimum vs Daily Average Concentration” graphs–

The “Daily Overall VOC Concentration” graph is divided into two distinct sections that will be analyzed separately. The graph is drawn from data collected during sampling events and put into the cells of the “Bio-venting Monitoring Log” as shown. Daily average from each column was first calculated as an initial baseline for comparative analysis in order to determine an exponential decay constant that will be eventually utilized to determine the time require to cease monitoring. The accuracy of this constant will improve as the data is collected. The overall VOC reduction is the primary goal for the Bio-venting System.

The daily maximum and daily minimum are both components of the “Bio-venting Monitoring Log” daily columns. Each day has a maximum and minimum value that is shown in each column; however, when they are averaged over the sampling time period, they tend to normalize each other through cancellation. Individually however, they are apparent.

3. “Daily Maximum vs Daily Average Concentration” graph –

If one refers to the graph designated as “Daily Maximum vs Daily Average Concentration”, one finds there is a correlation between the maximum concentration values and average daily values. On the days that there is a high concentration one will find that the daily average will also increase. This is due to this high concentration value numerically increasing the daily average.

4. “Daily Minimum vs Daily Average Concentration” graph –

If one refers to the graph designated as “Daily Minimum vs Daily Average Concentration”, one also finds that there is a similar correlation between the minimum

concentration values and average daily values. On the days that there is a high or low minimum concentration value one will also find a similar reflective image. These lower concentration values will tend to normalize the overall daily averages in order to produce an exponential VOC concentration reduction per unit of time.

5. "Standpipe Graph (C (1) through C16)

Sixteen standpipes (C(1) through C16) were monitored from December 7, 2010 through June 30, 2011 for VOC concentration. These values are indicated in the Bio-venting Monitoring Log. A graph was prepared for each standpipe in order to determine the effectiveness of each standpipe. Based on individual standpipe data, it was determined that each standpipe has been effective in reducing the amount of VOC concentration. A "Trend Line" for each standpipe clearly reflects a theoretical reduction over time.

Report Submittals- Passive bioremediation (bio-ventilation) of ultra low sulfur diesel (ULSD) for spill material in order to augment reduction of VOC concentration is a time dependent process. In February 2011, VOC monitoring frequency was changed from a bi-monthly to a monthly basis. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. Western has conducted monthly VOC monitoring through June 2011 in order to collect enough historical data on the bio-venting system. Beginning on July 1, 2011, Western will commence a quarterly VOC monitoring schedule. The sampling events or monitoring will occur during October-December (4th qtr), January-March (1st qtr), April-June (2nd qtr), and July-September (3rd qtr).

Western Refining (Gallup Refinery) will continue to provide the Agency with semi-annual progress report on or about July 1st and January 1st based on the prior semi-annual sampling results.

If you should require any additional information or assistance in this matter, please contact me at the number listed below or via e-mail.

Sincerely,



Beck Larsen, CHMM/REM/PG
Environmental Engineer
Western Refining Southwest

Direct Line: (505) 722-0258
e-mail: Thurman.larsen@wnr.com

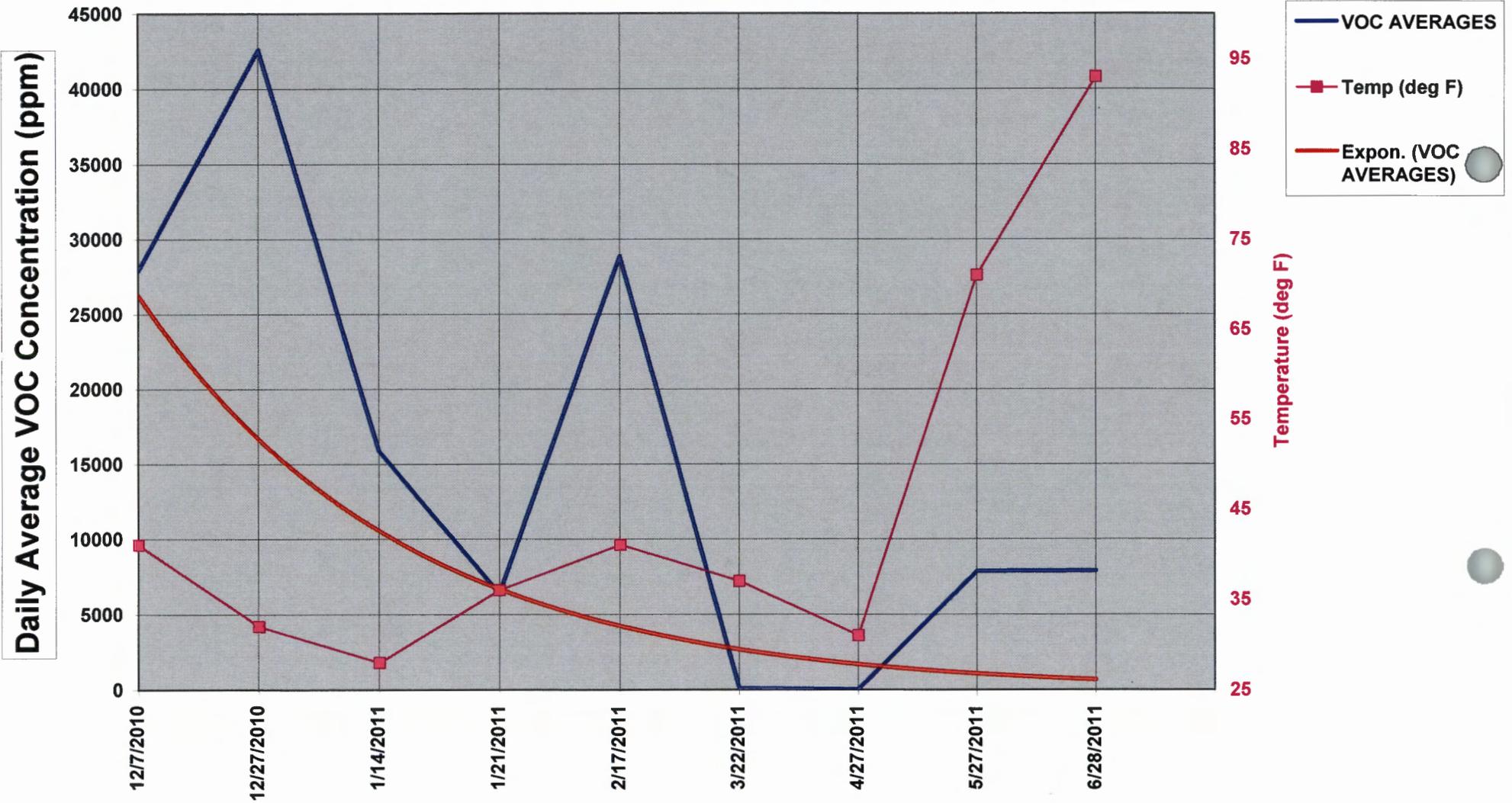
Cc: File
Attachment: Excel File
Qa/Qc Data

BIOVENTING Monitoring Log for T-115/T-116 Tank Area

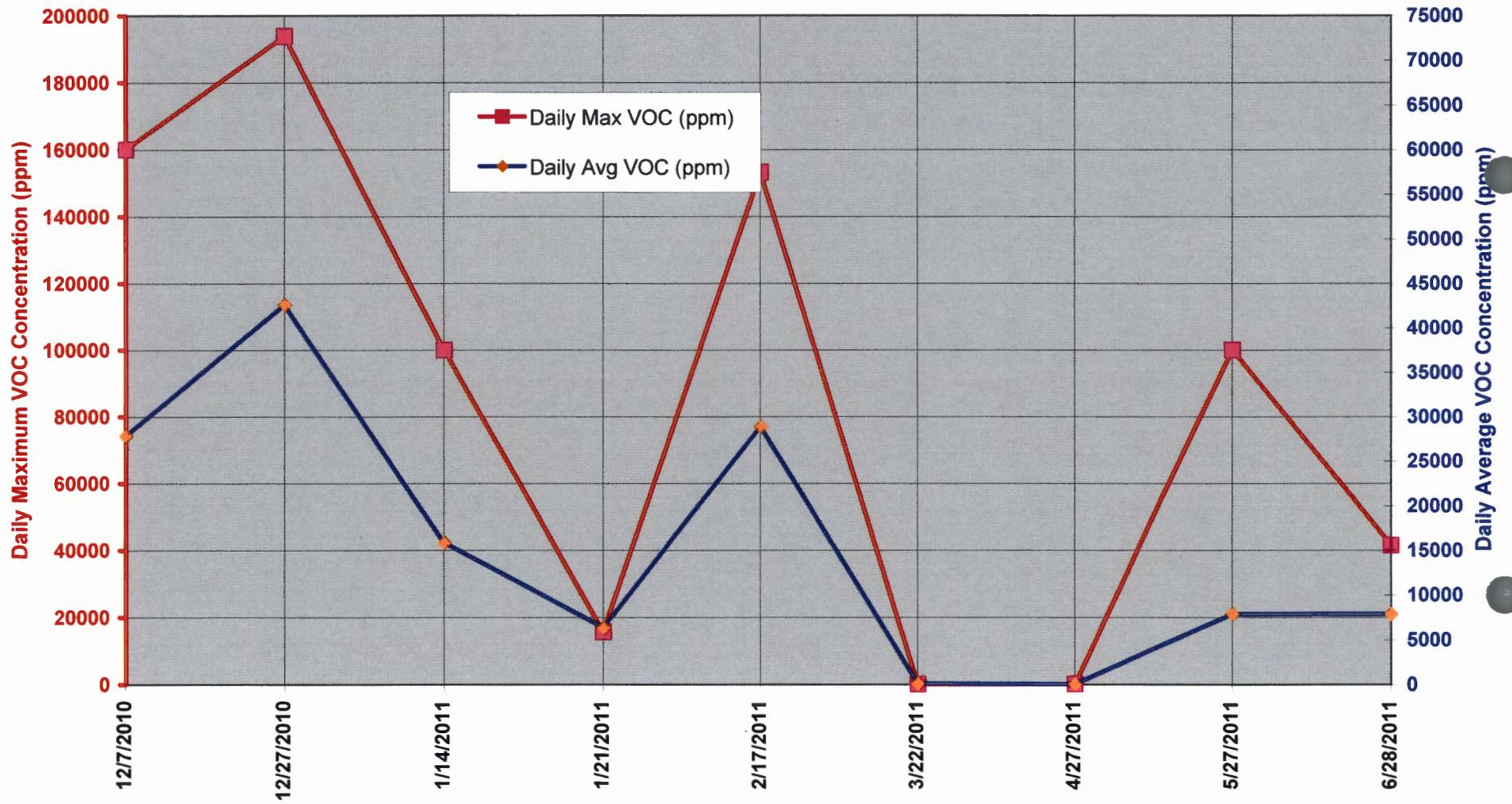
		READING (PPM)												
		DATE												
Map Location	Date ----> Temp (deg F)	12/7/2010	12/27/2010	1/14/2011	1/21/2011	2/17/2011	3/22/2011	4/27/2011	5/27/2011	6/28/2011		AVERAGE	MAXIMUM	MINIMUM
Number	Tag #	41	32	28	36	41	37	31	71	93				
C(1)	22723	2190	6836	2466	4982	2203	91	17	297	1571		2294.8	6836.0	7.0
2	22724	10006	9963	5444	7731	9991	96	19	992	164		4934.0	10006.0	19.0
3	22725	20031	51033	14990	12694	18993	77	43	779	8105		14082.8	51033.0	43.0
4	22726	20025	62111	100000	9916	25103	52	7	1098	41555		28874.1	100000.0	7.0
5	22727	10064	12163	4290	4014	10223	44	12	208	1623		4737.9	12163.0	12.0
6	22728	2340	2750	324	108	2119	55	8	35	193		881.3	2750.0	8.0
7	22729	4012	5006	1148	401	3954	76	8	60	27		1632.4	5006.0	8.0
8	22730	20093	67115	10066	6510	23145	72	13	17006	11087		17234.1	67115.0	13.0
9	22731	19072	57336	1583	15	17663	106	31	99999	35767		25730.2	99999.0	15.0
10	22732	70093	89037	11998	10143	74873	91	8	29	6313		29176.1	89037.0	8.0
11	22733	30031	31144	7977	9991	37603	112	59	1295	2005		13357.4	37603.0	59.0
12	22734	10056	16600	7079	15699	14002	101	38	412	579		7174.0	16600.0	38.0
13	22735	160080	193826	44112	8652	153216	100	30	66	12774		63650.7	193826.0	30.0
14	22736	8252	3406	2392	199	9116	101	39	312	996		2757.0	9116.0	39.0
15	22737	50094	72116	38849	10341	49660	107	48	3065	3318		25288.7	72116.0	48.0
16	22738	9112	986	579	123	9731	32	7	20	22		2290.2	9731.0	7.0
Daily Avg		27847	42589	15831	6345	28850	82	24	7855	7881	Average	15256.0	48933.6	23.2
Daily Max		160080	193826	100000	15699	153216	112	59	99999	41555	Maximum	63650.7	193826.0	59.0
Daily Min		2190	986	324	15	2119	32	7	20	22	Minimum	881.3	2750.0	7.0

NOTE- Coordinates for C (1)- Lat: 35 deg, 29 min, 23.82285 sec; Long: 108 deg, 25 min, 35.48146 sec

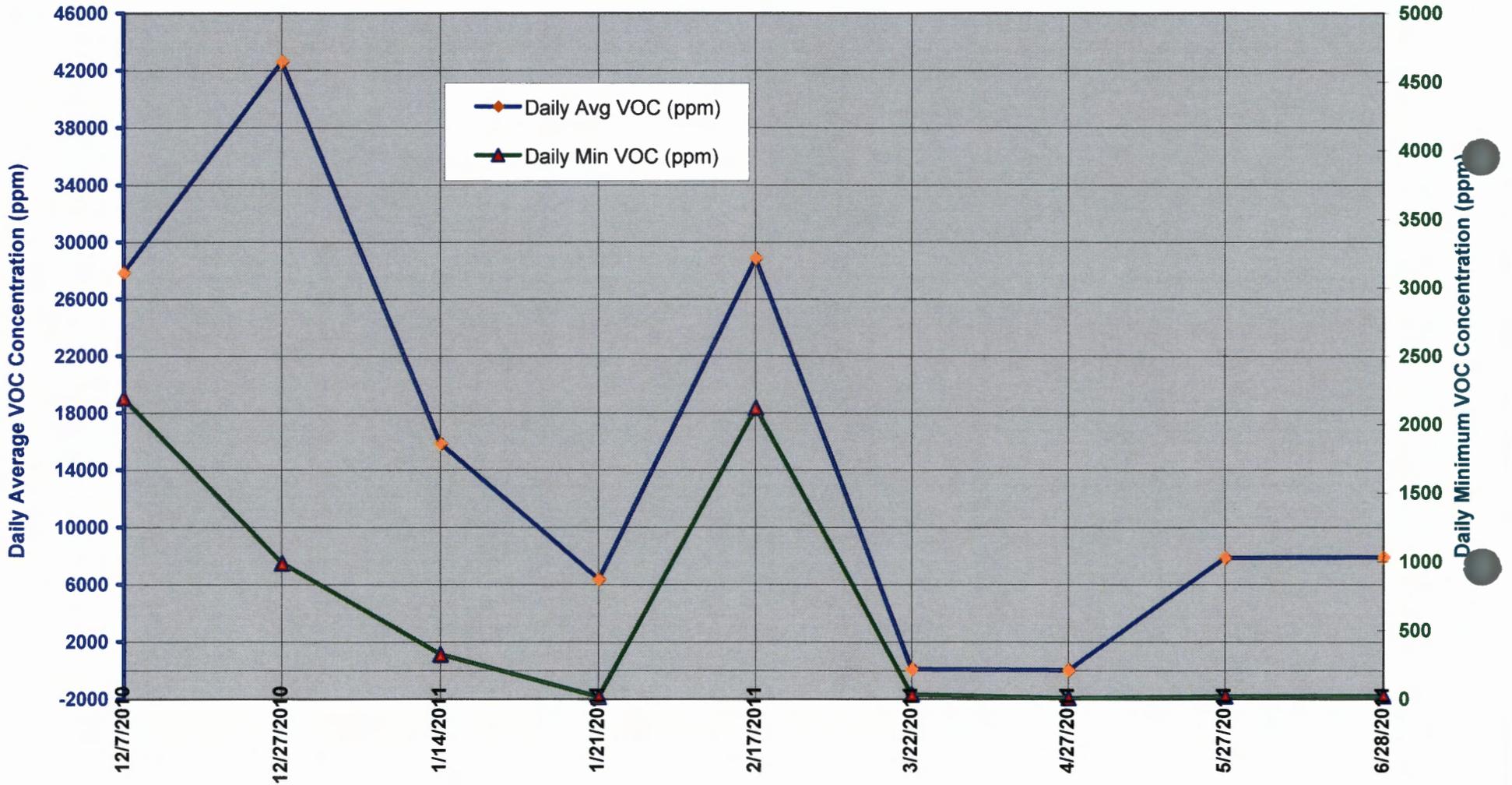
Daily Overall Average VOC Concentration-by Daily Sampling Event vs Temperature (deg F)



DAILY MAXIMUM vs DAILY AVERAGE CONCENTRATION



DAILY MINIMUM vs DAILY AVERAGE CONCENTRATION



WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 8:44

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.983	9.913
READING #2	1.992	9.922
READING #3	1.990	9.919
ERROR PRECISION	1.97	3.10
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 8:44

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	498	9.913
READING #2	491	9.922
READING #3	495	9.919
ERROR PRECISION	1.85	3.10
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	2.017	9.991
READING #2	2.017	9.991
READING #3	2.017	9.991
ERROR PRECISION	3.44	3.86
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	482	9.991
READING #2	482	9.991
READING #3	482	9.991
ERROR PRECISION	4.37	3.86
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 14:50

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	475	9.671
READING #2	475	9.671
READING #3	475	9.671
ERROR PRECISION	5.75	0.53
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 14:52

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.971	9.671
READING #2	1.971	9.671
READING #3	1.971	9.671
ERROR PRECISION	1.08	0.53
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY
CALIBRATION DRIFT ASSESSMENT REPORT

1008240826 - TVA-1000

DATE: 05/27/2011

<u>TIME</u>	<u>LOW GAS CONCENTRTN</u>	<u>LOW GAS AVE RDG</u>	<u>LOW GAS PRECISN</u>	<u>HIGH GAS CONCENTRTN</u>	<u>HIGH GAS AVE RDG</u>	<u>HIGH GAS PRECISN</u>	<u>NOTE</u>
8:13:04 am	1,950	1,971	1.09 %	9,620	9,722	1.06 %	CALIBRATION
8:13:25 am	504	511	1.39 %	9,620	9,722	1.06 %	
11:17:06 am	1,950	2,001	2.62 %	9,620	9,772	1.58 %	
11:17:52 am	504	525	4.17 %	9,620	9,772	1.58 %	

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 8:37

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	519	9.955
READING #2	518	9.953
READING #3	520	9.951
ERROR PRECISION	2.98	3.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 16:40

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	2.001	9.900
READING #2	2.001	9.900
READING #3	2.001	9.900
ERROR PRECISION	2.62	2.91
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 16:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	503	9.900
READING #2	503	9.900
READING #3	503	9.900
ERROR PRECISION	0.20	2.91
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 9:11

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PC	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCU ME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.899	9.401
READING #2	1.898	9.409
READING #3	1.904	9.400
ERROR PRECISION	2.55	2.25
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 9:18

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	520	9.401
READING #2	519	9.409
READING #3	517	9.400
ERROR PRECISION	2.91	2.25
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 12:55

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PC	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.941	9.490
READING #2	1.941	9.490
READING #3	1.941	9.490
ERROR PRECISION	0.46	1.35
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 12:55

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	523	9.490
READING #2	523	9.490
READING #3	523	9.490
ERROR PRECISION	3.77	1.35
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 9:44

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.902	9.499
READING #2	1.908	9.495
READING #3	1.907	9.491
ERROR PRECISION	2.27	1.30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 9:46

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	504	9.499
READING #2	508	9.495
READING #3	509	9.491
ERROR PRECISION	0.60	1.30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 11:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.919	9.513
READING #2	1.919	9.513
READING #3	1.919	9.513
ERROR PRECISION	1.59	1.11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 11:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	511	9.513
READING #2	511	9.513
READING #3	511	9.513
ERROR PRECISION	1.39	1.11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.899	9.406
READING #2	1.899	9.406
READING #3	1.899	9.406
ERROR PRECISION	2.62	2.22
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	500	9.406
READING #2	500	9.406
READING #3	500	9.406
ERROR PRECISION	0.79	2.22
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 9:46

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.950	9.597
READING #2	1.949	9.591
READING #3	1.952	9.593
ERROR PRECISION	0.02	0.27
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 9:47

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	501	9.597
READING #2	499	9.591
READING #3	498	9.593
ERROR PRECISION	0.93	0.27
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 11:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	506	9.581
READING #2	506	9.581
READING #3	506	9.581
ERROR PRECISION	0.40	0.41
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 11:50

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.959	9.581
READING #2	1.959	9.581
READING #3	1.959	9.581
ERROR PRECISION	0.46	0.41
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.980	9.613
READING #2	1.980	9.613
READING #3	1.980	9.613
ERROR PRECISION	1.54	0.07
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 16:14

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	511	9.613
READING #2	511	9.613
READING #3	511	9.613
ERROR PRECISION	1.39	0.07
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 9:14

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.895	9.541
READING #2	1.896	9.530
READING #3	1.898	9.533
ERROR PRECISION	2.75	0.89
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	3	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 9:15

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	515	9.541
READING #2	511	9.530
READING #3	512	9.528
ERROR PRECISION	1.72	0.90
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	3	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 12:47

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.899	9.518
READING #2	1.899	9.518
READING #3	1.899	9.518
ERROR PRECISION	2.62	1.06
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 12:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	519	9.518
READING #2	519	9.518
READING #3	519	9.518
ERROR PRECISION	2.98	1.06
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 16:38

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.905	9.525
READING #2	1.905	9.525
READING #3	1.905	9.525
ERROR PRECISION	2.31	0.99
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 16:39

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	522	9.525
READING #2	522	9.525
READING #3	552	9.525
ERROR PRECISION	5.56	0.99
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 9:19

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.930	9.390
READING #2	1.934	9.392
READING #3	1.939	9.387
ERROR PRECISION	0.80	2.39
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 9:19

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	499	9.390
READING #2	498	9.392
READING #3	499	9.387
ERROR PRECISION	1.06	2.39
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 12:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.940	9.395
READING #2	1.940	9.395
READING #3	1.940	9.395
ERROR PRECISION	0.51	2.34
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	5	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 12:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	491	9.395
READING #2	491	9.395
READING #3	491	9.395
ERROR PRECISION	2.58	2.34
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	5	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 16:39

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.945	9.399
READING #2	1.945	9.399
READING #3	1.945	9.399
ERROR PRECISION	0.26	2.30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	5	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 16:40

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	489	9.399
READING #2	489	9.399
READING #3	489	9.399
ERROR PRECISION	2.98	2.30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	5	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 10:32

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.940	9.720
READING #2	1.943	9.716
READING #3	1.943	9.715
ERROR PRECISION	0.41	1.01
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 10:32

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	507	9.720
READING #2	506	9.716
READING #3	501	9.715
ERROR PRECISION	0.13	1.01
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 13:06

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.980	9.920
READING #2	1.980	9.920
READING #3	1.980	9.920
ERROR PRECISION	1.54	3.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 13:06

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	501	9.920
READING #2	501	9.920
READING #3	501	9.920
ERROR PRECISION	0.60	3.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 15:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.955	9.631
READING #2	1.955	9.631
READING #3	1.955	9.631
ERROR PRECISION	0.26	0.11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 15:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	496	9.631
READING #2	496	9.631
READING #3	496	9.631
ERROR PRECISION	1.59	0.11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 9:26

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.957	9.699
READING #2	1.953	9.703
READING #3	1.959	9.709
ERROR PRECISION	0.32	0.87
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 9:27

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	511	9.699
READING #2	507	9.703
READING #3	508	9.709
ERROR PRECISION	0.93	0.87
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.968	9.711
READING #2	1.968	9.711
READING #3	1.968	9.711
ERROR PRECISION	0.92	0.95
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	517	9.711
READING #2	517	9.711
READING #3	517	9.711
ERROR PRECISION	2.58	0.95
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 15:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.974	9.718
READING #2	1.974	9.718
READING #3	1.974	9.718
ERROR PRECISION	1.23	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 15:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	523	9.718
READING #2	523	9.718
READING #3	523	9.718
ERROR PRECISION	3.77	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 9:27

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.929	9.506
READING #2	1.923	9.521
READING #3	1.913	9.509
ERROR PRECISION	1.45	1.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 9:28

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	499	9.506
READING #2	501	9.521
READING #3	503	9.509
ERROR PRECISION	0.60	1.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.931	9.553
READING #2	1.931	9.553
READING #3	1.931	9.553
ERROR PRECISION	0.97	0.70
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	508	9.553
READING #2	508	9.553
READING #3	508	9.553
ERROR PRECISION	0.79	0.70
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 15:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.938	9.564
READING #2	1.938	9.564
READING #3	1.938	9.564
ERROR PRECISION	0.62	0.58
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 15:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	523	9.718
READING #2	523	9.718
READING #3	523	9.718
ERROR PRECISION	3.77	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 8:58

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.963	9.634
READING #2	1.967	9.631
READING #3	1.952	9.621
ERROR PRECISION	0.55	0.09
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 8:58

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	509	9.634
READING #2	510	9.631
READING #3	515	9.621
ERROR PRECISION	1.46	0.09
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	3	3	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	2.015	9.901
READING #2	2.015	9.901
READING #3	2.015	9.901
ERROR PRECISION	3.33	2.92
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	520	9.901
READING #2	520	9.901
READING #3	520	9.901
ERROR PRECISION	3.17	2.92
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 15:53

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.999	9.816
READING #2	1.999	9.816
READING #3	1.999	9.816
ERROR PRECISION	2.51	2.04
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 15:53

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	518	9.816
READING #2	518	9.816
READING #3	518	9.816
ERROR PRECISION	2.78	2.04
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTH-WEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 9:03

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.977	9.668
READING #2	1.971	9.663
READING #3	1.973	9.661
ERROR PRECISION	1.21	0.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	3	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 9:04

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	516	9.668
READING #2	517	9.663
READING #3	516	9.661
ERROR PRECISION	2.45	0.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.996	9.769
READING #2	1.996	9.769
READING #3	1.996	9.769
ERROR PRECISION	2.36	1.55
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	527	9.769
READING #2	527	9.769
READING #3	527	9.769
ERROR PRECISION	4.56	1.55
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 15:54

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	2.005	9.769
READING #2	2.005	9.769
READING #3	2.005	9.769
ERROR PRECISION	2.82	1.55
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)

WESTERN REFINING SOUTHWEST GALLUP REFINERY

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 15:55

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	535	9.799
READING #2	535	9.799
READING #3	535	9.799
ERROR PRECISION	6.15	1.86
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

$$\% \text{ERROR PRECISION} = \left| \frac{(\text{METER READING}) - (\text{KNOWN VALUE OF CALIBRATION GAS})}{(\text{KNOWN VALUE OF THE CALIBRATION GAS})} \right| * 100$$

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

ACCEPTABLE RESPONSE TIME SHOULD BE 30 SECONDS OR LESS FROM THE TIME THE CALIBRATION GAS IS INTRODUCED, TO THE TIME THE INSTRUMENT IS EQUAL TO OR LESS THAN +/- TEN PERCENT (<=10%)