# APPENDIX A

## VOC Emissions Data – Tank Breathing

### A1. Daily VOC Emission Rate Calculations

### A2. Daily One-Minute Data

### A3. Daily Analyzer Calibrations and Data Sheets

### A4. Daily Equipment Checks

# A1. Daily VOC Emission Rate Calculations

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 07-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 07-May-13 |
| | **Start Time:** 18:00 |
| | **End Time:** 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 152 ppmvw |
| Average Flow Rate: | | 494 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **278.30** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **7.88** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.74E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.52** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.037** lb/hr |
| NMHC lb/hr = | | | **0.48** lb/hr |
| NMHC TPY = | | | **2.10** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 08-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 08-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 153 ppmvw |
| Average Flow Rate: | | 488 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **279.56** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **7.92** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.75E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.51** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.033** | lb/hr |
| NMHC lb/hr = | | | **0.48** | lb/hr |
| NMHC TPY = | | | **2.10** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 09-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 09-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 15:29 |

| | | |
|---|---|---|
| Average Concentration: | | 136 ppmvw |
| Average Flow Rate: | | 497 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **248.52** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **7.04** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.55E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.46** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.031** | lb/hr |
| NMHC lb/hr = | | | **0.43** | lb/hr |
| NMHC TPY = | | | **1.89** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 10-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 10-May-13 |
| | **Start Time:** 4:07 |
| | **End Time:** 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 179 ppmvw |
| Average Flow Rate: | | 485 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **327.84** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **9.28** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **2.05E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.60** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.035** lb/hr |
| NMHC lb/hr = | | | **0.56** lb/hr |
| NMHC TPY = | | | **2.46** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 11-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 11-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 108 ppmvw |
| Average Flow Rate: | | 500 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **197.52** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **5.59** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.23E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.37** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.026** lb/hr |
| NMHC lb/hr = | | | **0.34** lb/hr |
| NMHC TPY = | | | **1.51** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 12-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 12-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | | |
|---|---|---|---|
| Average Concentration: | | 102 | ppmvw |
| Average Flow Rate: | | 496 | scfm |
| Molecular Weight: | Propane | 44.09 | g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **187.16** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **5.30** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.17E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.35** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.022** | lb/hr |
| NMHC lb/hr = | | | **0.33** | lb/hr |
| NMHC TPY = | | | **1.43** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 13-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 13-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 179 ppmvw |
| Average Flow Rate: | | 514 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **328.97** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **9.32** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **2.05E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.63** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.042** lb/hr |
| NMHC lb/hr = | | | **0.59** lb/hr |
| NMHC TPY = | | | **2.59** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 14-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 14-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 363 ppmvw |
| Average Flow Rate: | | 497 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **665.20** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **18.84** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **4.15E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.24** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.089** | lb/hr |
| NMHC lb/hr = | | | **1.15** | lb/hr |
| NMHC TPY = | | | **5.04** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 15-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 15-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 381 ppmvw |
| Average Flow Rate: | | 505 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **697.65** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **19.76** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **4.36E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.32** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.093** lb/hr |
| NMHC lb/hr = | | | **1.23** lb/hr |
| NMHC TPY = | | | **5.37** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 16-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 16-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 474 ppmvw |
| Average Flow Rate: | | 485 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **868.32** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **24.59** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **5.42E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.58** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.100** | lb/hr |
| NMHC lb/hr = | | | **1.48** | lb/hr |
| NMHC TPY = | | | **6.48** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 17-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 17-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 396 ppmvw |
| Average Flow Rate: | | 498 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **726.46** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **20.57** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **4.54E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.36** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.096** | lb/hr |
| NMHC lb/hr = | | | **1.26** | lb/hr |
| NMHC TPY = | | | **5.52** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 18-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 18-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 410 ppmvw |
| Average Flow Rate: | | 494 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **750.85** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **21.26** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **4.69E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.39** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.111** | lb/hr |
| NMHC lb/hr = | | | **1.28** | lb/hr |
| NMHC TPY = | | | **5.60** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 19-May-13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 19-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 446 ppmvw |
| Average Flow Rate: | | 492 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **816.62** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **23.13** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **5.10E-05** | lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.50** | lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.108** | lb/hr |
| NMHC lb/hr = | | | **1.40** | lb/hr |
| NMHC TPY = | | | **6.11** | tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 20-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 20-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 452 ppmvw |
| Average Flow Rate: | | 491 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **828.07** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **23.45** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **5.17E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.52** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.098** lb/hr |
| NMHC lb/hr = | | | **1.43** lb/hr |
| NMHC TPY = | | | **6.25** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 21-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 21-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 460 ppmvw |
| Average Flow Rate: | | 495 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **842.59** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **23.86** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **5.26E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.56** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.107** lb/hr |
| NMHC lb/hr = | | | **1.46** lb/hr |
| NMHC TPY = | | | **6.38** tons/year |

# Emission Rate Calculation Sheet
## Total Hydrocarbon Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 22-May-13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 22-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 13:51 |

| | | |
|---|---|---|
| Average Concentration: | | 457 ppmvw |
| Average Flow Rate: | | 503 scfm |
| Molecular Weight: | Propane | 44.09 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) = | | **838.06** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **23.73** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **5.23E-05** lb/SCF |
| THC lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **1.58** lb/hr |
| CH4 lb/hr = | (lb/SCF * SCFM * 60 min/hr) | | **0.110** lb/hr |
| NMHC lb/hr = | | | **1.47** lb/hr |
| NMHC TPY = | | | **6.44** tons/year |

# Emission Rate Calculation Sheet
## Methane Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 05/07/13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 07-May-13 |
| | **Start Time:** 18:00 |
| | **End Time:** 23:59 |

| | |
|---|---|
| Average Concentration: | 30 ppmvw |
| Average Flow Rate: | 494 scfm |
| Molecular Weight: (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **19.86** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **0.56** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.23994E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.037** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/08/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 08-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | 27 | ppmvw |
| Average Flow Rate: | 488 | scfm |
| Molecular Weight: (Methane) | 16.04 | g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **17.99** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **0.51** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.12344E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.033** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/09/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 09-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 15:29 |

| | | |
|---|---|---|
| Average Concentration: | | 25 ppmvw |
| Average Flow Rate: | | 497 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **16.41** | $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **0.46** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.02462E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.031** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/10/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 10-May-13 |
| | | **Start Time:** | 4:07 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 29 ppmvw |
| Average Flow Rate: | | 485 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **19.30** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **0.55** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.20489E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.035** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/11/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 11-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 21 ppmvw |
| Average Flow Rate: | | 500 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **13.94** | $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **0.39** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **8.70316E-07** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.026** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/12/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 12-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 17 ppmvw |
| Average Flow Rate: | | 496 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **11.59** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **0.33** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **7.2389E-07** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.022** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 05/13/13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 13-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 23:59 |

| | |
|---|---|
| Average Concentration: | 33 ppmvw |
| Average Flow Rate: | 514 scfm |
| Molecular Weight: (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **21.74** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **0.62** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **1.35721E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.042** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/14/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 14-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 71 ppmvw |
| Average Flow Rate: | | 497 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **47.64** | $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **1.35** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **2.97466E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.089** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/15/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 15-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 74 ppmvw |
| Average Flow Rate: | | 505 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **49.41** | $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.40** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.0849E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.093** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 05/16/13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 16-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 23:59 |

| | |
|---|---|
| Average Concentration: | 83 ppmvw |
| Average Flow Rate: | 485 scfm |
| Molecular Weight: (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **55.10** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.56** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.44028E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.100** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/17/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 17-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 77 ppmvw |
| Average Flow Rate: | | 498 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **51.32** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.45** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.20429E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.096** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/18/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 18-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 90 ppmvw |
| Average Flow Rate: | | 494 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **59.85** | $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.69** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.73659E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.111** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/19/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 19-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 88 ppmvw |
| Average Flow Rate: | | 492 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **58.43** | $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.65** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.64778E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.108** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/20/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 20-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | 80 | ppmvw |
| Average Flow Rate: | 491 | scfm |
| Molecular Weight: (Methane) | 16.04 | g/mole |

| | | | | |
|---|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **53.31** | $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.51** | mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.32857E-06** | lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.098** | lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | | | |
|---|---|---|---|
| **Facility :** | Sprague Searsport | **Start Date:** | 05/21/13 |
| **Source/Location:** | Asphalt Tank #2 | **End Date** | 21-May-13 |
| | | **Start Time:** | 0:00 |
| | | **End Time:** | 23:59 |

| | | |
|---|---|---|
| Average Concentration: | | 86 ppmvw |
| Average Flow Rate: | | 495 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **57.52** $mg/m^3$ |
| mg/SCF = | $(mg/m^3)$ $(m^3/35.31$ SCF) | = | **1.63** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.59109E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.107** lb/hr |

# Emission Rate Calculation Sheet
## Methane Emissions

| | |
|---|---|
| **Facility :** Sprague Searsport | **Start Date:** 05/22/13 |
| **Source/Location:** Asphalt Tank #2 | **End Date** 22-May-13 |
| | **Start Time:** 0:00 |
| | **End Time:** 13:51 |

| | | |
|---|---|---|
| Average Concentration: | | 87 ppmvw |
| Average Flow Rate: | | 503 scfm |
| Molecular Weight: | (Methane) | 16.04 g/mole |

| | | | |
|---|---|---|---|
| $mg/m^3$ = | ( MW * PPM) / ( 24.055 l/mol. PPM) | = | **58.34** $mg/m^3$ |
| mg/SCF = | ($mg/m^3$) ($m^3$/35.31 SCF) | = | **1.65** mg/SCF |
| lb/SCF = | (1 lb/ 4.536E+5 mg) * (mg/SCF) | = | **3.64253E-06** lb/SCF |
| lb/hr = | (lb/SCF * SCFM * 60 min/hr) | = | **0.110** lb/hr |

# Volumetric Flow Calculations

**Facility/Site:** Sprague Searsport
**Source:** Asphalt Tank #2

**Start Date:** 05/07/13
**Stop Date:** 05/07/13
**Start Time:** 18:00
**Stop Time:** 23:59

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 70.4 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 70.4 |
| $B_{ws}$, (fractional water) | 0.010 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.73 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 30.95 | fps |
| $Q_s$ | 29,350 | dscfh |
| | 29,646 | scfh |
| | 494 | scfm |
| | 489 | dscfm |
| | 496 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s(\text{abs}))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/08/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/08/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.54 | 80.8 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 80.8 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.80 | |
| $V_s$ | 31.18 | fps |
| $Q_s$ | 27,826 | dscfh |
| | 29,291 | scfh |
| | 488 | scfm |
| | 464 | dscfm |
| | 500 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_a = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\,(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/09/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/09/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 15:29 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 72.0 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 72.0 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.22 | fps |
| $Q_s$ | 28,316 | dscfh |
| | 29,807 | scfh |
| | 497 | scfm |
| | 472 | dscfm |
| | 501 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\ (abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/10/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/10/13 |
| | **Start Time:** 4:07 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.29 | 0.54 | 83.8 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.29 |
| Average Stack Temp, (F) | 83.8 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.80 | |
| $V_s$ | 31.18 | fps |
| $Q_s$ | 27,672 | dscfh |
| | 29,129 | scfh |
| | 485 | scfm |
| | 461 | dscfm |
| | 500 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws})+18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/11/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/11/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 67.1 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 67.1 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.11 | fps |
| $Q_s$ | 28,487 | dscfh |
| | 29,986 | scfh |
| | 500 | scfm |
| | 475 | dscfm |
| | 499 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\ (abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/12/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/12/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 68.4 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 68.4 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 30.97 | fps |
| $Q_s$ | 28,283 | dscfh |
| | 29,772 | scfh |
| | 496 | scfm |
| | 471 | dscfm |
| | 497 | acfm |

Equations:

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/13/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/13/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.32 | 0.56 | 64.3 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.32 |
| Average Stack Temp, (F) | 64.3 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.85 | fps |
| $Q_s$ | 29,321 | dscfh |
| | 30,864 | scfh |
| | 514 | scfm |
| | 489 | dscfm |
| | 511 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/14/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/14/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 69.9 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 69.9 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.11 | fps |
| $Q_s$ | 28,328 | dscfh |
| | 29,819 | scfh |
| | 497 | scfm |
| | 472 | dscfm |
| | 499 | acfm |

Equations:

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\ (abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/15/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/15/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.31 | 0.55 | 66.1 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.31 |
| Average Stack Temp, (F) | 66.1 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.37 | fps |
| $Q_s$ | 28,772 | dscfh |
| | 30,286 | scfh |
| | 505 | scfm |
| | 480 | dscfm |
| | 503 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\,(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/16/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/16/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.29 | 0.54 | 76.6 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.29 |
| Average Stack Temp, (F) | 76.6 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.80 | |
| $V_s$ | 30.76 | fps |
| $Q_s$ | 27,664 | dscfh |
| | 29,120 | scfh |
| | 485 | scfm |
| | 461 | dscfm |
| | 493 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s(\text{abs}))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/17/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/17/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 69.4 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 69.4 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.15 | fps |
| $Q_s$ | 28,393 | dscfh |
| | 29,888 | scfh |
| | 498 | scfm |
| | 473 | dscfm |
| | 499 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/18/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/18/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 73.3 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 73.3 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.10 | fps |
| $Q_s$ | 28,144 | dscfh |
| | 29,625 | scfh |
| | 494 | scfm |
| | 469 | dscfm |
| | 499 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\,(\text{abs}))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/19/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/19/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.54 | 74.2 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 74.2 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.01 | fps |
| $Q_s$ | 28,016 | dscfh |
| | 29,490 | scfh |
| | 492 | scfm |
| | 467 | dscfm |
| | 497 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\,(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/20/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/20/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.29 | 0.54 | 72.4 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.29 |
| Average Stack Temp, (F) | 72.4 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 30.89 | fps |
| $Q_s$ | 28,002 | dscfh |
| | 29,476 | scfh |
| | 491 | scfm |
| | 467 | dscfm |
| | 495 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = \mathrm{Sqrt}(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(\text{Avg. Sqrt Delta P})$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\,(abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/21/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/21/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 23:59 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 69.0 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 69.0 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 30.94 | fps |
| $Q_s$ | 28,229 | dscfh |
| | 29,715 | scfh |
| | 495 | scfm |
| | 470 | dscfm |
| | 496 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\ (abs))$

# Volumetric Flow Calculations

| | |
|---|---|
| **Facility/Site:** Sprague Searsport | **Start Date:** 05/22/13 |
| **Source:** Asphalt Tank #2 | **Stop Date:** 05/22/13 |
| | **Start Time:** 0:00 |
| | **Stop Time:** 13:51 |

| Trav. Point | Delta P ("$H_2O$) | SQ Root Delta P | Stack Temp (F) |
|---|---|---|---|
| Average | 0.30 | 0.55 | 63.7 |

| | |
|---|---|
| Average Delta P, ("$H_2O$) | 0.30 |
| Average Stack Temp, (F) | 63.7 |
| $B_{ws}$, (fractional water) | 0.050 |
| $P_{bar}$, ("$H_g$) | 29.9 |
| $P_g$, ("$H_2O$) | 0.01 |
| $CO_2$, ($\%_{vd}$) | 0.00 |
| $O_2$, ($\%_{vd}$) | 20.90 |
| CO, ($\%_{vd}$) | 0 |
| $N_2$, ($\%_{vd}$) | 79.1 |
| Stack Dia (ft) | 0.58 |
| L, (ft) | |
| W, (ft) | |
| A, ($ft^2$) | 0.267 |
| $C_p$, (pitot coefficient) | 0.84 |
| $M_d$, (g/mole) | 28.84 |
| $M_s$, (g/mole) | 28.29 |

| | | |
|---|---|---|
| G | 0.79 | |
| $V_s$ | 31.12 | fps |
| $Q_s$ | 28,682 | dscfh |
| | 30,191 | scfh |
| | 503 | scfm |
| | 478 | dscfm |
| | 499 | acfm |

**Equations:**

$T_s$ = Temp Stack + 460

$P_s = P_g/13.6 + P_{bar}$

$M_d = .44\ CO_2 + .32\ O_2 + .28\ CO + .28\ N_2$

$M_s = M_d(1-B_{ws}) + 18(B_{ws})$

$G = Sqrt(T_s/P_s/M_s)$

$V_s = 85.9(C_p)(G)(Avg.\ Sqrt\ Delta\ P)$

A = either D^2(PI)/4 or (L)(W)

$Q_s = 3600(1-B_{ws})(V_s)(A)(T_{std}/P_{std})(P_s)/(T_s\ (abs))$

# A2. Daily One-Minute Data

# A3. Daily Analyzer Calibrations and Data Sheets

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 7-May-13 | End Date: | 07-May-13 |
| Start Time: | 18:00 | End Time: | 23:59 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 6.5 | | |
| Combustion Air Pressure - | 5.5 | | |
| Sample Pressure - | 1.5 | | |
| Range - | 0 | - | 1,000 |
| Calibrant (choose one, x in box) | Propane | | x |
| | Methane | | |
| **Cal Gas Molecular Weight:** | **44.09** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | M. Bruni |
| Date: | 08-May-13 |
| Time: | 9:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 8 | **0.30** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 300 | **0.40** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **152** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time =** **120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 8-May-13 | End Date: | 08-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 09-May-13 |
| Time: | 10:02 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 5 | **0.00** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 296 | **0.80** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **153** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 9-May-13 | End Date: | 09-May-13 |
| Start Time: | 0:00 | End Time: | 15:29 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 10-May-13 |
| Time: | 9:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 7 | **0.20** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 300 | **0.40** | < 3% of the measurement range |
| | | | | Test Avg. Conc. | **136** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 10-May-13 | End Date: | 10-May-13 |
| Start Time: | 4:07 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

| Initial Calibration Data (Mid / Low) | | | | | |
|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Predicted Response** | **Actual Response** | **Calibration Error** | **Acceptance Criteria** |
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Dean/Shannon/Buzz |
| Date: | 11-May-13 |
| Time: | 7:30 |

| Post Calibration Drift Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Initial Test Response** | **Final Test Response** | **Calibration Drift** | **Acceptance Criteria** | |
| Post Cal 1 Zero | 0 | 5 | 5 | **0.00** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 297.3 | 304 | 277 | **2.70** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **179** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

| Gas Cylinder Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Required % of Span** | **Cylinder Conc.** | **Cylinder Composition** | **Cylinder Number** | **Expiration Date** | **Actual % of Span** |
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 11-May-13 | End Date: | 11-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

| Initial Calibration Data (Mid / Low) | | | | | |
|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Predicted Response** | **Actual Response** | **Calibration Error** | **Acceptance Criteria** |
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Dean Hostus |
| Date: | 12-May-13 |
| Time: | 10:00 |

| Post Calibration Drift Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Initial Test Response** | **Final Test Response** | **Calibration Drift** | **Acceptance Criteria** | |
| Post Cal 1 Zero | 0 | 5 | -3 | **0.80** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 297.3 | 304 | 294 | **1.00** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **108** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

| Gas Cylinder Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Required % of Span** | **Cylinder Conc.** | **Cylinder Composition** | **Cylinder Number** | **Expiration Date** | **Actual % of Span** |
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 12-May-13 | End Date: | 12-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 6.5 | | |
| Combustion Air Pressure - | 5.5 | | |
| Sample Pressure - | 1.5 | | |
| Range - | 0 | - | 1,000 |
| Calibrant (choose one, x in box) | Propane | | x |
| | Methane | | |
| **Cal Gas Molecular Weight:** | **44.09** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 13-May-13 |
| Time: | 8:38 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 3 | **0.20** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 300 | **0.40** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **102** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 13-May-13 | End Date: | 13-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - | 1,000 |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

| Initial Calibration Data (Mid / Low) | | | | | |
|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Predicted Response** | **Actual Response** | **Calibration Error** | **Acceptance Criteria** |
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 14-May-13 |
| Time: | 10:20 |

| Post Calibration Drift Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Initial Test Response** | **Final Test Response** | **Calibration Drift** | **Acceptance Criteria** | |
| Post Cal 1 Zero | 0 | 5 | 7 | **0.20** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 297.3 | 304 | 299 | **0.50** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **179** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

| Gas Cylinder Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Required % of Span** | **Cylinder Conc.** | **Cylinder Composition** | **Cylinder Number** | **Expiration Date** | **Actual % of Span** |
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time =** **120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 14-May-13 | End Date: | 14-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 15-May-13 |
| Time: | 9:37 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 3 | **0.20** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 301 | **0.30** | < 3% of the measurement range |
| | | | | Test Avg. Conc. | **363** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time =** **120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 15-May-13 | End Date: | 15-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 16-May-13 |
| Time: | 9:42 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 9 | **0.40** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 299 | **0.50** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **381** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 16-May-13 | End Date: | 16-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 17-May-13 |
| Time: | 9:57 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 1 | **0.40** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 333 | **2.90** | < 3% of the measurement range |

Note: A. Stratton introduced 297.3 ppm @ 13:45 and got 304 analyzer response.
(With sample pressure at 1.5 psi. No recalibration performed.

Test Avg. Conc. **474**

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 17-May-13 | End Date: | 17-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

| Initial Calibration Data (Mid / Low) | | | | | |
|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Predicted Response** | **Actual Response** | **Calibration Error** | **Acceptance Criteria** |
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Bud |
| Date: | 18-May-13 |
| Time: | 13:30 |

| Post Calibration Drift Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Initial Test Response** | **Final Test Response** | **Calibration Drift** | **Acceptance Criteria** | |
| Post Cal 1 Zero | 0 | 5 | 9 | **0.40** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 297.3 | 304 | 295 | **0.90** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **396** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

| Gas Cylinder Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Required % of Span** | **Cylinder Conc.** | **Cylinder Composition** | **Cylinder Number** | **Expiration Date** | **Actual % of Span** |
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 18-May-13 | End Date: | 18-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Bud |
| Date: | 19-May-13 |
| Time: | 13:45 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 8 | **0.30** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 311 | **0.70** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **410** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 19-May-13 | End Date: | 19-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 6.5 | | |
| Combustion Air Pressure - | 5.5 | | |
| Sample Pressure - | 1.5 | | |
| Range - | 0 | - | 1,000 |
| Calibrant (choose one, x in box) | Propane | | x |
| | Methane | | |
| **Cal Gas Molecular Weight:** | **44.09** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 20-May-13 |
| Time: | 8:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria | |
|---|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 9 | **0.40** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 297.3 | 304 | 330 | **2.60** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **446** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time =** **120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 20-May-13 | End Date: | 20-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 21-May-13 |
| Time: | 14:15 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 8 | **0.30** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 324 | **2.00** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **452** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 21-May-13 | End Date: | 21-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 22-May-13 |
| Time: | 9:56 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 9 | **0.40** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 317 | **1.30** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **460** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 22-May-13 | End Date: | 22-May-13 |
| Start Time: | 0:00 | End Time: | 13:51 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1,000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| **Cal Gas Molecular Weight:** | **44.09** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | 0.997 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 22-May-13 |
| Time: | 13:52 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 5 | 13 | **0.80** | < 3% of the measurement range |
| Post Cal 1 Upscale | 297.3 | 304 | 314 | **1.00** | < 3% of the measurement range |
| | | | | Test Avg. Conc. | **457** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297 | Propane/Air | CC350652 | 3/12/2015 | 30% |
| Mid Gas | 45-55 | 515 | Propane/Air | CC248679 | 3/26/2015 | 52% |
| High Gas | 80-90 | 867 | Propane/Air | CC50868 | 3/26/2015 | 87% |

**System Response Time = 120 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 7-May-13 | End Date: | 07-May-13 |
| Start Time: | 18:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | M. Bruni |
| Date: | 08-May-13 |
| Time: | 9:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 30.0 | **0.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **30** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 8-May-13 | End Date: | 08-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

| Initial Calibration Data (Mid / Low) | | | | | |
|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Predicted Response** | **Actual Response** | **Calibration Error** | **Acceptance Criteria** |
| Low Gas | 30.5 | 30.5 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 51.8 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 09-May-13 |
| Time: | 10:02 |

| Post Calibration Drift Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Initial Test Response** | **Final Test Response** | **Calibration Drift** | **Acceptance Criteria** | |
| Post Cal 1 Zero | 0 | 0 | 1 | **1.0** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | **1.0** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **27** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

| Gas Cylinder Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Required % of Span** | **Cylinder Conc.** | **Cylinder Composition** | **Cylinder Number** | **Expiration Date** | **Actual % of Span** |
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time =** **180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 9-May-13 | End Date: | 09-May-13 |
| Start Time: | 0:00 | End Time: | 15:29 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 7.0 | | |
| Combustion Air Pressure - | 5.5 | | |
| Carrier Gas Pressure - | 22.0 | | |
| Range - | 0 | - | 100 |
| Calibrant (choose one, x in box) | Propane | | |
| | Methane | | x |
| **Cal Gas Molecular Weight:** | **16.039** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 10-May-13 |
| Time: | 9:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 1 | **1.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | **1.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **25** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 10-May-13 | End Date: | 10-May-13 |
| Start Time: | 4:07 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Dean/Shannon/Buzz |
| Date: | 11-May-13 |
| Time: | 7:30 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 1 | **1.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 28.0 | **2.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **29** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 11-May-13 | End Date: | 11-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Dean Hostus |
| Date: | 12-May-13 |
| Time: | 10:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria | |
|---|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 1 | 1.0 | < 3% of the measurement range | |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | 1.0 | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | 21 |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 12-May-13 | End Date: | 12-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 7.0 | | |
| Combustion Air Pressure - | 5.5 | | |
| Carrier Gas Pressure - | 22.0 | | |
| Range - | 0 | - | 100 |
| Calibrant (choose one, x in box) | Propane | | |
| | Methane | | x |
| **Cal Gas Molecular Weight:** | **16.039** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 13-May-13 |
| Time: | 8:38 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | **1.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **17** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time =** **180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 13-May-13 | End Date: | 13-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 14-May-13 |
| Time: | 10:20 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 1 | 1.0 | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 30.0 | 0.0 | < 3% of the measurement range |
| | | | | | Test Avg. Conc. 33 |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time =** **180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 14-May-13 | End Date: | 14-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 15-May-13 |
| Time: | 9:37 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 31.0 | **1.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **71** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 15-May-13 | End Date: | 15-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 16-May-13 |
| Time: | 9:42 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 1 | **1.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | **1.0** | < 3% of the measurement range |
| | | | | Test Avg. Conc. | **74** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 16-May-13 | End Date: | 16-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 17-May-13 |
| Time: | 9:57 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 3 | **3.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 30.0 | **0.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **83** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 17-May-13 | End Date: | 17-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Bud |
| Date: | 18-May-13 |
| Time: | 13:30 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 30.0 | **0.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **77** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 18-May-13 | End Date: | 18-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Bud |
| Date: | 19-May-13 |
| Time: | 13:45 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 32.0 | **2.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **90** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time =** **180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 19-May-13 | End Date: | 19-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 7.0 | | |
| Combustion Air Pressure - | 5.5 | | |
| Carrier Gas Pressure - | 22.0 | | |
| Range - | 0 | - | 100 |
| Calibrant (choose one, x in box) | Propane | | |
| | Methane | | x |
| **Cal Gas Molecular Weight:** | **16.039** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 20-May-13 |
| Time: | 8:00 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 3 | **3.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 30.0 | **0.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **88** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 20-May-13 | End Date: | 20-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200 / 2660406 | |
| Fuel Pressure - | 7.0 | |
| Combustion Air Pressure - | 5.5 | |
| Carrier Gas Pressure - | 22.0 | |
| Range - | 0 - 100 | |
| Calibrant (choose one, x in box) | Propane | |
| | Methane | x |
| **Cal Gas Molecular Weight:** | **16.039** | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

**Initial Calibration Data (Hi / Zero)**

| Calibration Gas | Cylinder Conc. | Actual Response |
|---|---|---|
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 21-May-13 |
| Time: | 14:15 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 30.0 | **0.0** | < 3% of the measurement range |
| | | | | Test Avg. Conc. | **80** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 21-May-13 | End Date: | 21-May-13 |
| Start Time: | 0:00 | End Time: | 23:59 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 7.0 | | |
| Combustion Air Pressure - | 5.5 | | |
| Carrier Gas Pressure - | 22.0 | | |
| Range - | 0 | - | 100 |
| Calibrant (choose one, x in box) | Propane | | |
| | Methane | | x |
| **Cal Gas Molecular Weight:** | **16.039** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

| Initial Calibration Data (Mid / Low) | | | | | |
|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Predicted Response** | **Actual Response** | **Calibration Error** | **Acceptance Criteria** |
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | Buzz |
| Date: | 22-May-13 |
| Time: | 9:56 |

| Post Calibration Drift Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Cylinder Conc.** | **Initial Test Response** | **Final Test Response** | **Calibration Drift** | **Acceptance Criteria** | |
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range | |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | **1.0** | < 3% of the measurement range | |
| | | | | | Test Avg. Conc. | **86** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

| Gas Cylinder Data | | | | | | |
|---|---|---|---|---|---|---|
| **Calibration Gas** | **Required % of Span** | **Cylinder Conc.** | **Cylinder Composition** | **Cylinder Number** | **Expiration Date** | **Actual % of Span** |
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time = 180 seconds**

# Method 25A Calibration Data Sheet - Methane

| Source Summary | | | |
|---|---|---|---|
| Facility: | Sprague Searsport | | |
| Source/Location: | Asphalt Tank #2 | | |
| Start Date | 22-May-13 | End Date: | 22-May-13 |
| Start Time: | 0:00 | End Time: | 13:51 |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200 / 2660406 | | |
| Fuel Pressure - | 7.0 | | |
| Combustion Air Pressure - | 5.5 | | |
| Carrier Gas Pressure - | 22.0 | | |
| Range - | 0 | - | 100 |
| Calibrant (choose one, x in box) | Propane | | |
| | Methane | | x |
| **Cal Gas Molecular Weight:** | **16.039** | | **g/mol** |

| Initial Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 07-May-13 |
| Time: | 17:00 |

| Initial Calibration Data (Hi / Zero) | | |
|---|---|---|
| Calibration Gas | Cylinder Conc. | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | 0.999 | |

**Where:** Response Line = (Ha-Za)/(Hc-Zc)

**Initial Calibration Data (Mid / Low)**

| Calibration Gas | Cylinder Conc. | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 52 | 52.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

| Post Calibration Summary | |
|---|---|
| Operator: | A. Stratton |
| Date: | 22-May-13 |
| Time: | 13:52 |

**Post Calibration Drift Data**

| Calibration Gas | Cylinder Conc. | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | 0 | 0 | 2 | **2.0** | < 3% of the measurement range |
| Post Cal 1 Upscale | 30.5 | 30.0 | 29.0 | **1.0** | < 3% of the measurement range |
| | | | | | Test Avg. Conc. **87** |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Conc. | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/2014 | 31% |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/2015 | 52% |
| High Gas | 80-90 | 88.1 | CH4/Air | SGAL1691 | 11/9/2014 | 88% |

**System Response Time =** **180 seconds**

# Method 25A Calibration Data Sheet - Total Hydrocarbons

| Source Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Test Date: | May 7, 2015 @ 17:00 |

| Operator Summary | |
|---|---|
| Initial Calibration: | A. Stratton |
| Post Calibration 1: | |
| Post Calibration 2: | |
| Post Calibration 3: | |

| THC Analyzer Data | | |
|---|---|---|
| Manufacturer - | VIG | |
| Model/Serial Number - | 200/2660406 | |
| Fuel Pressure - | 6.5 | |
| Combustion Air Pressure - | 5.5 | |
| Sample Pressure - | 1.5 | |
| Range - | 0 - 1000 | |
| Calibrant (choose one, x in box) | Propane | x |
| | Methane | |
| Program Molecular Weight: | 44.09 | g/mol |

| Initial Calibration Test Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Actual Response |
| Zero Gas | 0 | 5 |
| High Gas | 866.9 | 869 |
| Response Line | | |

Response Line = (Ha-Za)/(Hc-Zc)

| Post Calibration Summary | | | |
|---|---|---|---|
| Post Calibration No. | 1 | 2 | 3 |
| Date | | | |
| Time | | | |

| Calibration Gas | Cylinder Concentration | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 297.3 | 296 | 304.0 | 2.6 | < 5% of cylinder concentration |
| Mid Gas | 515.4 | 514 | 520.0 | 1.2 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

**Post Calibration Drift Test Data**

| Calibration Gas | Cylinder Concentration | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria |
|---|---|---|---|---|---|
| Post Cal 1 Zero | | | | | < 3% of the measurement range |
| Post Cal 1 Upscale | | | | | < 3% of the measurement range |
| | | | | | Test Run 1 Avg. Conc. |
| Post Cal 2 Zero | | | | | < 3% of the measurement range |
| Post Cal 2 Upscale | | | | | < 3% of the measurement range |
| | | | | | Test Run 2 Avg. Conc. |
| Post Cal 3 Zero | | | | | < 3% of the measurement range |
| Post Cal 3 Upscale | | | | | < 3% of the measurement range |
| | | | | | Test Run 3 Avg. Conc. |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100 / Measurement Range

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Concentration | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 297.3 | Propane/Air | CC350032 | 3/12/15 | |
| Mid Gas | 45-55 | 515.4 | Propane/Air | CC298679 | 3/26/15 | |
| High Gas | 80-90 | 866.9 | Propane/Air | CC508668 | 3/26/15 | |

**CEMS System Response Time =** **seconds**

# Method 18 Calibration Data Sheet - Methane

| Source Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Tank #2 Asphalt |
| Test Date: | May 7, 2013 |

| Operator Summary | |
|---|---|
| Initial Calibration: | A. Stratton |
| Post Calibration 1: | |
| Post Calibration 2: | |
| Post Calibration 3: | |

| THC Analyzer Data | | | |
|---|---|---|---|
| Manufacturer - | VIG | | |
| Model/Serial Number - | 200/2660406 | | |
| Fuel Pressure - | 7.0 | | |
| Combustion Air Pressure - | 5.5 | | |
| Carrier Gas Pressure | 22 | | |
| Range - | 0 | - | 100 |
| Calibrant (choose one, x in box) | Propane | | |
| | Methane | | x |
| Program Molecular Weight: | 16.039 | g/mol | |

| Initial Calibration Test Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Actual Response |
| Zero Gas | 0.0 | 0 |
| High Gas | 88.1 | 88.0 |
| Response Line | | |

Response Line = (Ha-Za)/(Hc-Zc)

| Post Calibration Summary | | | |
|---|---|---|---|
| Post Calibration No. | 1 | 2 | 3 |
| Date | | | |
| Time | | | |

| Calibration Gas | Cylinder Concentration | Predicted Response | Actual Response | Calibration Error | Acceptance Criteria |
|---|---|---|---|---|---|
| Low Gas | 30.5 | 30.5 | 30.0 | 1.5 | < 5% of cylinder concentration |
| Mid Gas | 51.9 | 51.8 | 51.0 | 0.3 | < 5% of cylinder concentration |

**Where:**

Predicted Response = (Cylinder Concentration) x (Response Line)

Calibration Error = (Actual Response - Predicted Response) / Cylinder Concentration x 100

**Post Calibration Drift Test Data**

| Calibration Gas | Cylinder Concentration | Initial Test Response | Final Test Response | Calibration Drift | Acceptance Criteria | |
|---|---|---|---|---|---|---|
| Post Cal 1 Zero | | | | | < 3% of the measurement range | |
| Post Cal 1 Upscale | | | | | < 3% of the measurement range | |
| | | | | | Test Run 1 Avg. Conc. | |
| Post Cal 2 Zero | | | | | < 3% of the measurement range | |
| Post Cal 2 Upscale | | | | | < 3% of the measurement range | |
| | | | | | Test Run 2 Avg. Conc. | |
| Post Cal 3 Zero | | | | | < 3% of the measurement range | |
| Post Cal 3 Upscale | | | | | < 3% of the measurement range | |
| | | | | | Test Run 3 Avg. Conc. | |

**Where:**

Calibration Drift = ( Final Test Response - Initial Test Response) * 100 / Measurement Range

**Gas Cylinder Data**

| Calibration Gas | Required % of Span | Cylinder Concentration | Cylinder Composition | Cylinder Number | Expiration Date | Actual % of Span |
|---|---|---|---|---|---|---|
| Fuel | N/A | | UHP H2 | | N/A | N/A |
| Combustion Air | | | UHP Air | | N/A | |
| Zero Gas | <0.1% | 0 | UHP Air | | N/A | 0% |
| Low Gas | 25-35 | 30.5 | CH4/Air | CC80798 | 8/26/14 | |
| Mid Gas | 45-55 | 51.9 | CH4/Air | CC86223 | 5/21/15 | |
| High Gas | 80-90 | 88.1 | CH4/Air | [illegible] | 11/9/14 | |

**CEMS System Response Time =** **seconds** SGA1691

EASTMOUNT ENVIRONMENTAL SERVICES
*Air Quality Specialists*

# EPA Method 2 Field Data Sheet

| | |
|---|---|
| Client: | Sprague |
| Site Location: | Searport, ME |
| Source: | Tank #2 |
| Test Location: | |
| Duct Diameter: | 7" |
| Test Number: | Prelims |
| Test Time: | 1558-16 |
| Test Date: | 5/7/13 |
| Testers: | MB, AMS |
| | |
| Pitot Number: | |
| Pitot Coefficient: | 0.84 |
| | |
| Ambient Temperature: | |
| Wet Bulb Temp: | |
| Barometric Pressure: | |
| Duct Static Pressure: | |
| | Pre / Post |
| Leak Checks: | ✓✓ / ✓✓ |

| Pump Calibration | Initial | Final |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |

| Impinger Volume | | |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |

| Port Number | Traverse Point | Velocity Pressure | Stack Temp. | Cyclonic Angle |
|---|---|---|---|---|
| A | 1 | 0.22 | 80 | |
| | 2 | 0.27 | 90 | |
| | 3 | 0.30 | 93 | |
| | 4 | 0.23 | 96 | |
| B | 1 | 0.22 | 83 | |
| | 2 | 0.26 | 82 | |
| | 3 | 0.31 | 91 | |
| | 4 | 0.26 | 94 | |

2 NEW PASTURE ROAD / UNIT 5 / NEWBURYPORT, MASSACHUSETTS 01950
tel 978.499.9399 / fax 978.499.9393 / www.eastmount.com

An Eastmount Company

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | MB |
| Date: | May 8, 2013 |
| Time: | 0958 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at ~~2 psi~~ 1.5 |
| Carrier Gas Pressure - | Maintain at 22 psi |

| Total Hydrocarbon Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 8 |
| Propane | 297.3 | 300.0 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 2 |
| Methane | 30.5 | 30.0 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BUZZ |
| Date: | 5/9/13 |
| Time: | 10:02 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 5 |
| Propane | 297.3 | 296 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 1 |
| Methane | 30.5 | 29 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | A. Stratton |
| Date: | May 10, 2013 |
| Time: | 09:00 |

≈ 5 hours after Vessel Transfer

Vessel Transfer Period on May 9-10, 2013
15:30 → 04:06

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 7 |
| Propane | 297.3 | 300 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 1 |
| Methane | 30.5 | 29 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | DEAN / SHANNON / BUZZ |
| Date: | 5-11-13 |
| Time: | 0730 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

**THC (Propane) Daily Calibration Data**

| Calibration Gas | Cylinder Concentration | Monitor Response |
|---|---|---|
| Zero Air | 0 | 5 |
| Propane | 297.3 | 277 |

**Methane Daily Calibration Data**

| Calibration Gas | Cylinder Concentration | Monitor Response |
|---|---|---|
| Zero Air | 0 | 1 |
| Methane | 30.5 | 28 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | Dean Hustus |
| Date: | 5/12/2013 |
| Time: | 1000 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | ~~-2~~ 3 |
| Propane | 297.3 | 294 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | ~~[illegible]~~ 1 |
| Methane | 30.5 | 29 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BOZZ |
| Date: | 5/13/13 |
| Time: | 0838 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

**THC (Propane) Daily Calibration Data**

| Calibration Gas | Cylinder Concentration | Monitor Response |
|---|---|---|
| Zero Air | 0 | 3 |
| Propane | 297.3 | 300 |

**Methane Daily Calibration Data**

| Calibration Gas | Cylinder Concentration | Monitor Response |
|---|---|---|
| Zero Air | 0 | 2 |
| Methane | 30.5 | 29 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BUZZ |
| Date: | 5/14/13 |
| Time: | 10:20 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 7 |
| Propane | 297.3 | ~~296~~ 299 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 1 |
| Methane | 30.5 | 30 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BWZZ |
| Date: | 5/15/13 |
| Time: | 0937 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 3 |
| Propane | 297.3 | 301 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 2 |
| Methane | 30.5 | 31 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BOZZ |
| Date: | 5/16/13 |
| Time: | 0942 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 9 |
| Propane | 297.3 | 299 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 1 |
| Methane | 30.5 | 29 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | Buzz |
| Date: | 5/17/13 |
| Time: | 0957 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 1 |
| Propane | 297.3 | 333 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 3 |
| Methane | 30.5 | 30 |

Note: AMS introduced 297.3 ppm @ 1345 and got 304 PPM analyzer response (sample press. @ 1.5 psi). Therefore, no recal was conducted. AMS

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BuD |
| Date: | May 18-13 |
| Time: | 1330 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 9 |
| Propane | 297.3 | 295 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 2 |
| Methane | 30.5 | 30 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BuD |
| Date: | ~~May 18-15~~ May 19 2015 |
| Time: | 1345 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 8 |
| Propane | 297.3 | 311 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 2 |
| Methane | 30.5 | 32 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | Buzz |
| Date: | 5/20/13 |
| Time: | 0800 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 9 |
| Propane | 297.3 | 330 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 3 |
| Methane | 30.5 | 30 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | Buzz |
| Date: | 5/21/13 |
| Time: | 1415 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 8 |
| Propane | 297.3 | 324 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 2 |
| Methane | 30.5 | 30 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | BUZZ |
| Date: | 5/22/13 |
| Time: | 0956 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

**THC (Propane) Daily Calibration Data**

| Calibration Gas | Cylinder Concentration | Monitor Response |
|---|---|---|
| Zero Air | 0 | 9 |
| Propane | 297.3 | 317 |

**Methane Daily Calibration Data**

| Calibration Gas | Cylinder Concentration | Monitor Response |
|---|---|---|
| Zero Air | 0 | 2 |
| Methane | 30.5 | 29 |

# VIG Monitor Daily Calibration Data Sheet

| Daily Calibration Summary | |
|---|---|
| Facility: | Sprague Searsport |
| Source/Location: | Asphalt Tank #2 |
| Technician Initials: | [illegible] |
| Date: | 5/22/13 |
| Time: | 13:52 |

| VIG Monitor Summary | |
|---|---|
| Manufacturer - | VIG |
| Model/Serial Number - | 200 / 2660406 |
| THC Monitor Hydrogen Fuel Pressure - | Maintain at 6.5 psi |
| Methane Monitor Hydrogen Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

| THC (Propane) Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 13 |
| Propane | 297.3 | 314 |

| Methane Daily Calibration Data | | |
|---|---|---|
| Calibration Gas | Cylinder Concentration | Monitor Response |
| Zero Air | 0 | 2 |
| Methane | 30.5 | 29 |

# A4. Daily Equipment Checks

# VIG Monitor Peridodic Check Sheet

| VIG Monitor Set Points | |
|---|---|
| THC Monitor Hydrogen (H2) Fuel Pressure - | Maintain at 6.5 psi. |
| Methane Monitor Hydrogen (H2) Fuel Pressure - | Maintain at 7.0 psi |
| Combustion Air Pressure - | Maintain at 5.5 psi |
| Sample Pressure - | Maintain at 1.5 psi |
| Carrier Gas Pressure - | Maintain at 22 psi |

This is an "evening" check. Fill it out every evening.

| Date | Time | Initials | THC $H_2$ PSI | Methane $H_2$ psi | Comb Air psi | Sample psi | Carrier Gas psi | |
|---|---|---|---|---|---|---|---|---|
| 5/8/13 | 1547 | DMS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | OK |
| 5/9/13 | 0945 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/9/13 | 1728 | DMS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | (vessel) |
| 5/10/13 | 1730 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/11/13 | 1700 | DH | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/12/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/13/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/14/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/15/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/16/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/17/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5-18-13 | 1330 | BJD | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| May 19-13 | 1345 | BJD | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/20/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/21/13 | 1500 | BFS | 6.5 | 7.0 | 5.5 | 1.5 | 22 | |
| 5/22/13 | | | | | | | | |
| | | | | | | | | |

Questions or problems, call Anthony Stratton 508-989-8996

## SPRAGUE SEARSPORT VOC TEST PROGRAM - DAILY CAL/CHECK LIST

Operator: A. Stratton

Time: 1500

Date: 5/7/13

Tank ID: 2

**The following information should be recorded and post THC/methane calibrations conducted prior to making any adjustments.**

---

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.015 Adjusted? ✓ New Reading (in. W.C.): ✓

---

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7.0 Carrier Gas (PSI): 22

---

Hydrogen Cylinder Pressure (PSI): 2100 Air Cylinder Pressure (PSI): 2000+ Nitrogen Cylinder Pressure (PSI): 1900

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 276 Filter Hot? Y

---

Pitot Condition (check weekly) Clear? _____ Clogged? _____ If clogged, is it now clear? _____

Pitot Leak Check (check weekly): Positive Side Leak Check OK?: _____ Negative Side Leak Check OK? _____

**Note: If any of the criteria listed above or on the THC/Methane calibration sheets failed, please call Anthony Stratton/Eastmount at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT VOC TEST PROGRAM - DAILY CAL/CHECK LIST

Operator: A. Stratton

Time: 0900

Date: 5/8/13

Tank ID: #2

**The following information should be recorded and post THC/methane calibrations conducted prior to making any adjustments.**

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.024 Adjusted? no New Reading (in. W.C.): —

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7.0 Carrier Gas (PSI): 22

Hydrogen Cylinder Pressure (PSI): 2100 Air Cylinder Pressure (PSI): 2000+ Nitrogen Cylinder Pressure (PSI): 1900

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275 Filter Hot? _____

Pitot Condition (check weekly) Clear? YES Clogged? no If clogged, is it now clear? —

Pitot Leak Check (check weekly): Positive Side Leak Check OK? OK AHS Negative Side Leak Check OK? OK AHS

**Note: If any of the criteria listed above or on the THC/Methane calibration sheets failed, please call Anthony Stratton/Eastmount at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5/9/13

Time: 0945

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.041 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? NO Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? NO Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? Y Oil / Water? N How Much? _____

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7.0 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2200 Air Cylinder Pressure (PSI): 2200+ Nitrogen (N2) Cylinder Pressure (PSI): 1850

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: A. Stratton

Date: May 10, 2013 (5 hours after Vessel Transfer)

Time: 0853

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.024 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? Yes - Clear Moisture (about 1 ml) Please Change Filter Daily. Filter Changed? Yes

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? no Please Change Filter Every 3 Days. Filter Changed? Yes

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? yes

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? no Oil / Water? — How Much? —

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7.0 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): ~~2050~~ 2100 Air Cylinder Pressure (PSI): 1900 Nitrogen (N2) Cylinder Pressure (PSI): 1800

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): ~~275~~ 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: BUZZ / SHANNON / DEAN

Time: 0715

Date: 5/11/13

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.023 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7.0 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2100 Air Cylinder Pressure (PSI): 1900 Nitrogen (N2) Cylinder Pressure (PSI): 1800

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Dean Hunter

Date: 5/12/2013

Time: 1000

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.023 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? No Please Change Filter Daily. Filter Changed? Yes

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? No Please Change Filter Every 3 Days. Filter Changed? No

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Yes

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7.0 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2100 Air Cylinder Pressure (PSI): 1760 Nitrogen (N2) Cylinder Pressure (PSI): 1750

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

# SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5/13/13

Time: 0825

Tank ID: Asphalt Tank #2

## Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.054 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? Y

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? _____

## VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

## Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1650 Nitrogen (N2) Cylinder Pressure (PSI): 1700

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

# SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5-14-13

Time: 10:00

Tank ID: Asphalt Tank #2

## Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.027 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? _____

## VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 3.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

## Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1550 Nitrogen (N2) Cylinder Pressure (PSI): 1650

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

# SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5/15/13

Time: 0925

Tank ID: Asphalt Tank #2

## Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.026 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much?

## VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

## Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1450 Nitrogen (N2) Cylinder Pressure (PSI): 1600

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5/16/13

Time: 0930

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.013 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? Y

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1350 Nitrogen (N2) Cylinder Pressure (PSI): 1600

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5/17/13

Time: 0800

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.058 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1250 Nitrogen (N2) Cylinder Pressure (PSI): 1500

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Earl Clement

Date: May 18-13

Time: 1330

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -.028 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? no Please Change Filter Daily. Filter Changed? ✓

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? no Please Change Filter Every 3 Days. Filter Changed? no

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Yes

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? n Oil / Water? _____ How Much? _____

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1150 Nitrogen (N2) Cylinder Pressure (PSI): 1500

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Earl Clement

Date: May 19 '13

Time: 1345

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -.023 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? no Please Change Filter Daily. Filter Changed? Yes

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? no Please Change Filter Every 3 Days. Filter Changed? no

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Yes

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? n Oil / Water? _____ How Much? _____

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 2000 Air Cylinder Pressure (PSI): 1050 Nitrogen (N2) Cylinder Pressure (PSI): 1450

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5-20-13

Time: 0743

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.011 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 1900 Air Cylinder Pressure (PSI): 950 Nitrogen (N2) Cylinder Pressure (PSI): 1400

Sample Line 1 Temperature (°F): 275°F Sample Line 2 Temperature (°F): 275°F

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Date: 5/21/13

Time: 1408

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.044 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? N

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 1900 Air Cylinder Pressure (PSI): 800 Nitrogen (N2) Cylinder Pressure (PSI): ~~1900~~ 1350

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**

## SPRAGUE SEARSPORT ASPHALT TANK #2 TEST PROGRAM - DAILY CHECK LIST

Operator: Buzz

Time: 0953

Date: 5/22/13

Tank ID: Asphalt Tank #2

### Tank Roof Checks

TTE Static Pressure: (should be -0.007 or more negative) Pressure (in. W.C.): -0.065 (Call Anthony if readings are not more negative tham -0.007)

Coalescing (Red) Filter #1: Oil and/or Moisture Visible? N Please Change Filter Daily. Filter Changed? Y

Coalescing (Red) Filter #2: Oil and/or Moisture Visible? N Please Change Filter Every 3 Days. Filter Changed? Y

**NOTE: IF EXCESSIVE OIL AND/OR WATER ARE VISIBLE IN EITHER COALESCING (RED) FILTER , CALL ANTHONY IMMEDIATELY**

Black Filter: Filter Feels Hot? Y

Exhaust Duct Drain: After Removing Drain Plug, Did Any Liquid Come Out? N Oil / Water? N How Much? N/A

### VIG Analyzer Checks in Trailer

THC Analyzer Conditions: H2 (PSI): 6.5 Air (PSI): 5.5 Sample Pressure (PSI): 1.5

Methane Analyzer Conditions: H2 (PSI): 7 Carrier Gas (PSI): 22

### Cylinder Pressure / Heated Line Temperature Checks in Trailer

Hydrogen (H2) Cylinder Pressure (PSI): 1850 Air Cylinder Pressure (PSI): 700 Nitrogen (N2) Cylinder Pressure (PSI): 1300

Sample Line 1 Temperature (°F): 275 Sample Line 2 Temperature (°F): 275

**Note: If any of the criteria listed above or on the THC/Methane calibrations failed, please call Anthony Stratton at 508-989-8996 (cell)**