## SOURCE TEST METHOD DETAILED VALIDATION CHECKLIST

Test Method: EPA 306
Substance: Chromium

Report ID Number: _____
Reviewer: _____
Review Date: _____

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*Method Description and Applicability*

This method applies to the determination of chromium (Cr) in emissions from decorative and hard chrome electroplating facilities and anodizing operations. A sample is extracted isokinetically from the source and collected in an alkaline solution. Samples with high Cr concentrations may be analyzed using inductively coupled plasma emission spectrometry (ICP). If improved detection limits are required, a portion of the alkaline impinger solution is digested with nitric acid and analyzed by graphite furnace atomic absorption spectroscopy (GFAAS). If it desirable to determine hexavalent chromium ($Cr^{+6}$) emissions, the samples may be analyzed using an ion chromatograph equipped with a post-column reactor (IC/PCR).

*Quality Assurance/Quality Control Checks*

Before preceding with the validation checklist, the method allows alternative procedures and analysis to be performed. The following questions will indicate which alternatives the contractor chose in order to perform the source test (circle correct answers).

1) Was hexavalent chromium quantified with this method? Yes No (if no, disregard all questions involving $Cr^{+6}$)

2) Was the $Cr^{+6}$ sample recovery option used? Yes No (if no, disregard questions 3 and 4)

3) Was the pH of the absorbing solution > 8.5 for NaOH or > 8.0 for $NaHCO_3$? Yes No

4) Were samples shipped and stored at 4°C? Yes No

5) How was the total chromium analyzed? ICP GFAAS

Please complete the detailed checklist provided in the attached Table. If the statements are true, please circle "a"s or the corresponding run numbers; and if they are not reported, circle "b"s.

*Other Comments*

Device ID:

| | | | | |
|---|---|---|---|---|
| **SAMPLE LOCATION** | | | | |
| ** Swirl Check* | | | | |
| 1.) Not conducted? | sc1a | | sc1b | M |
| 2.) Average absolute value of angles > 10%? | sc2a | | sc2b | M |
| ** Stack Size* | | | | |
| 1.) Enter stack diameter (inches). | | | | |
| 2.) Stack diameter < 12 inch ? or | st2a | | st2b | M |
| 3.) Area <113 inch squared? | st3a | | st3b | M |
| ** Number of Sample Points* | | | | |
| 1.) Enter total number of points. | | | | |
| 2.) Method 1 not used? | ns2a | | ns2b | M |
| **SAMPLING EQUIPMENT** | | | | |
| ** Nozzle Size Check* | | | | |
| 1.) Not conducted prior to test? | nz1a | | nz1b | M |
| 2.) Variation in diameter > 0.004 inch? | nz2a | | nz2b | M |
| ** Field Gas Dry Meter* | | | | |
| 1.) Not checked pre- and post-test? | gm1a | | gm1b | M |
| 2.) Pre- and post-test Y not within (+/-) 5%? | gm2a | | gm2b | M |
| ** Pitot Tube* | | | | |
| 1.) Semi-annual calibration sheet not included? | pt1a | | pt1b | M |
| **SAMPLING PROCEDURES** | | | | |
| ** Leak Check* | | | | |
| 1.) Not conducted? | lc1a | | lc1b | M |
| 2.) Values not reported? | lc2a | | | M |
| 3.) Pretest >0.02 cfm or 4% of average? | lc3a | lc3a | lc3a | R |
| 4.) Post-test >0.02 cfm or 4% of average? | lc4a | lc4a | lc4a | R |
| ** Isokinetic Variation* | | | | |
| 1.) Sample not taken isokinetically? | is1a | | is1b | M |
| 2.) Isokinetic variation not reported? | is2a | | | M |
| 3.) Isokinetic <90 or >110%? | is3a | is3a | is3a | R |
| ** Probe Proof* | | | | |
| 1.) Not conducted per prob? | pp1a | | pp1b | M |
| 2.) Value not reported ? | pp2a | | | M |
| 3.) Total chrome > DL ? | pp3a | pp3a | pp3a | S |
| ** Reagent Blank* | | | | |
| 1.) Not conducted one per sample batch? | rb1a | | rb1b | M |
| 2.) Not used to correct sample? | rb2a | | rb2b | M |
| **ANALYSIS (Hexavalent Chromium)** | | | | |
| ** Matrix Spike* | | | | |
| 1.) Not conducted per test? | ms1a | | ms1b | M |
| 2.) Percent recovery not reported? | ms2a | | | M |
| 3.) Percent recovery > 10%? | | | | |
| Hexavalent Chromium | ms3a | ms3a | ms3a | S |
| **ANALYSIS (Total Chromium)** | | | | |
| ** Duplicates* | | | | |
| 1.) Not conducted for every 10 samples? | du1a | | du1b | M |
| ** Spikes* | | | | |
| 1.) Not conducted daily? | ms4a | | ms4b | M |

M-Method
R-Run
S-Substance

a-True
b-Not reported

CALCULATION CHECK FOR EPA METHOD 306

Device ID:

| DATA ENTRY-SAMPLING | SYMBOL | UNITS | DATA |
|---|---|---|---|
| RUN NUMBER | - | - | |
| ROUND STACK, DIAMETER<br>RECTANGULAR STACK, LENGTH<br>WIDTH | ds<br>L<br>W | inches<br>inches<br>inches | |
| NOZZLE DIAMETER | dn | inches | |
| AVERAGE STACK TEMPERATURE | Fs | degrees F | |
| AVERAGE METER TEMPERATURE | Fm | degrees F | |
| BAROMETRIC PRESSURE | Pbar | in. Hg | |
| STACK STATIC PRESSURE | Pg | in. H20 | |
| AVG. DELTA H | dH | in. H20 | |
| AVG. RMS VELOCITY HEAD | dP | in. H20 | |
| PITOT COEFFICIENT | Cp | - | |
| GAS SAMPLE VOLUME | Vm | cubic ft. | |
| METER CALIBRATION FACTOR | Y | - | |
| TOTAL SAMPLING TIME | min | minutes | |
| STACK GAS OXYGEN CONTENT | Co2,m | % | |
| STACK GAS CARBON DIOXIDE CONTENT | Cco2,m | % | |
| TOTAL IMPINGER GAIN (WATER & PARTICULATE) | Ww | grams | |
| CALCULATED DATA-SAMPLING | | | |
| RUN NUMBER | - | - | 0 |
| NOZZLE AREA, An = 3.14(dn)**2/4 | An | sq. in. | 0.000 |
| STACK AREA, As = 3.14*(ds)**2/576 (ROUND)<br>= L * W/144 (RECTANGULAR) | As | sq. feet | 0.000 |
| AVG. STACK TEMPERATURE, Ts = Fs + 460 | Ts | degrees R | 460.0 |
| AVG. METER TEMPERATURE, Tm = Fm + 460 | Tm | degrees R | 460.0 |
| GAS SAMPLE VOLUME AT STANDARD CONDITIONS,<br>VmStd = 17.64*Y*(Vm/Tm)*(Pbar + dH/13.6) | VmStd | cubic ft. | 0.0 |
| VOLUME OF WATER VAPOR, VwStd = 0.04707*Ww | VwStd | cubic ft. | 0.0 |
| MOISTURE FRACTION, Bws = VwStd/(VmStd + VwStd) | Bws | - | #DIV/0! |
| DRY STACK GAS MOL. WEIGHT, Md = 0.32(Co2,m)+<br>0.44(Cco2,m)+0.28{100-(Co2,m)-(Cco2,m)] | Md | g/g-mole | 28.00 |
| WET STACK GAS MOLECULAR WEIGHT,<br>Mw = Md(1-Bws)+18.0(Bws) | Mw | g/g-mole | #DIV/0! |
| ABSOLUTE STACK PRESSURE, Ps = Pbar + Pg/13.6 | Ps | in. Hg | 0.00 |
| STACK GAS VELOCITY<br>vs = 85.49 Cp { sqrt[(dP*Ts) /(Ps*Mw)] } | vs | ft/s | #DIV/0! |
| ACTUAL STACK GAS FLOW RATE, Q = 60*vs*As | Q | acf/min | #DIV/0! |
| DRY GAS STACK FLOW RATE (DRY,STP)<br>Qsd = 17.64*Q*(1-Bws)*(Ps/Ts) | Qsd | dscf/min | #DIV/0! |
| ISOKINETIC RATE,<br>I = 13.61*Ts*VmStd/[Ps*vs*An*min*(1-Bws)] | I | % | #DIV/0! |
| DATA ENTRY-ANALYTICAL | | | |
| TOTAL MASS OF HEXAVELENT CHROMIUM IN SAMPLE TRAIN | Mcr6 | ug | |
| TOTAL MASS OF TOTAL CHROMIUM IN SAMPLE TRAIN | Mcr | ug | |
| CALCULATED DATA-OVERALL | | | |
| CONCENTRATION OF HEXAVELENT CHROMIUM<br>Ccr6 = (35.31*Mcr6)/Vmstd | Ccr6 | ug/dscm | #DIV/0! |
| CONCENTRATION OF TOTAL CHROMIUM<br>Ccr = (35.31*Mcr)/Vmstd | Ccr | ug/dscm | #DIV/0! |
| HEXAVALENT CHROMIUM MASS EMISSION RATE<br>Ecr6 = ((Qsd*Mcr6)/Vmstd)*1.32e-7 | Ecr6 | lb/hr | #DIV/0! |
| TOTAL CHROMIUM MASS EMISSION RATE<br>Ecr = ((Qsd*Mcr)/Vmstd)*1.32e-7 | Ecr | lb/hr | #DIV/0! |

ATTACHMENT 4
VALIDATION PARAMETERS SUMMARY TABLES

VALIDATION PARAMETERS SUMMARY FOR CARB 11 (1983)
HYDROGEN SULFIDE

| VALIDATION PARAMETERS | Stack ID | | | | |
|---|---|---|---|---|---|
| | 20210 | 21610 | 21710 | 21910 | 22810 |
| **SAMPLING EQUIPMENT** | | | | | |
| Field gas meter pre- and post-test Y not within (+/-) 5%? | | V | V | | |
| **SAMPLING PROCEDURES** | | | | | |
| Sample time < 10 minutes? | | | | | 2RF |
| Indication of leaks? | | | | | V |
| Reagent blank not conducted daily? | | R | R | | R |
| **IMPINGER SOLUTIONS** | | | | | |
| Hydrogen peroxide (H2O2) not used? | | R | | | R |
| Cadmium sulfate (CdS) not used? | | | | | |
| **ANALYSIS METHOD** | | | | | |
| 0.01n sodium thiosulfate solution not used for titration? | | R | R | | |
| Iodine solution not used? | R | R | R | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 12 (1986)
INORGANIC LEAD

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 21110 | 21810 | 22110 | 25010 | 25110 | 28010 | 28110 | 28210 | 45110 | 45210 |
| **SAMPLE LOCATION** | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | V | V | | V | V | V | V | V | V | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | | | | | | | |
| Method 1 not used? | R | R | | R | R | | | | | |
| **SAMPLING EQUIPMENT** | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | V | V | | V | V | | | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | V | | | | | | | | | |
| Pitot tube semi-annual calibration sheet included? | P | | | | | P | P | P | P | P |
| **SAMPLING PROCEDURES** | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | V<br>V | | | | | <br>1RN | | <br>3RN | | |
| Isokinetic variation <90 or >110%? | | | | | | | | | | |
| **FIELD REAGENT BLANK** | | | | | | | | | | |
| Not conducted on 2 filters & 0.1N HNO3?<br>Not used to correct samples? | R | <br>R | R | | <br>Y | R | R | R | <br>Y | <br>Y |
| **ANALYSIS METHOD** | | | | | | | | | | |
| Atomic absorption spectrometry not used? | R | | | Y | Y | R | R | R | R | R |
| Analysis not conducted in triplicate? | R | | | | | R | R | R | R | R |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 15 (1983)
HYDROGEN SULFIDE

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22510 | 25910 | 26010 | 26110 | 26210 | 29010 | 43710 | 43810 | 44410 | 50510 | 50610 | 50710 | 50810 | 50910 | 51010 | 64210 | 64310 | 64410 | 64610 |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | | | | | | |
| Indication of leaks? | V | V | V | | | V | | | | | | | | | | | | | |
| Sample line loss not conducted for post-test? | R | R | R | | R | R | | | | | | | | | | | | | |
| Sample not corrected for < 20% loss? | | | | | | | | | | | | | | | | | | | |
| Sample corrected for > 20% loss? | | | | | | | | | | | | | | | | | | | |
| **ANALYSIS METHOD** | | | | | | | | | | | | | | | | | | | |
| GC/FPD not used? | | | | | | | | | | | | | | | | | | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 101A (1986)
MERCURY

| VALIDATION PARAMETERS | Stack ID | | |
|---|---|---|---|
| | 45110 | 51010 | 64410 |
| **SAMPLE LOCATION** | | | |
| Average absolute value of swirl angles >10%? | V | V | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | |
| Method 1 not used? | | R | |
| **SAMPLING EQUIPMENT** | | | |
| Variation in nozzle diameter > 0.004 inch? | Y | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | N | N |
| Pitot tube semi-annual calibration sheet included? | P | P | P |
| **SAMPLING PROCEDURES** | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | 1RN | | |
| Isokinetic variation <90 or >110%? | | | |
| Filter temperature not between 106 and 134 degrees? | R | | R |
| Flow rate > 28 liter per minute (1 cfm)? | | | |
| **FIELD REAGENT BLANK** | | | |
| Not conducted once per test?<br>Not used to correct samples? | Y | Y | Y |
| **ANALYSIS METHOD** | | | |
| Atomic absorption spectrometry not used? | R | | |
| Combined analysis not used? | Y | Y | Y |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 104 (1986)
BERYLLIUM

| VALIDATION PARAMETERS | Stack ID | | |
|---|---|---|---|
| | 21810 | 25010 | 25110 |
| **SAMPLE LOCATION** | | | |
| Average absolute value of swirl angles >10%? | V | V | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | |
| Method 1 not used? | R | R | R |
| **SAMPLING EQUIPMENT** | | | |
| Variation in nozzle diameter > 0.004 inch? | V | V | V |
| Pre- and post-test meter Y not within (+/-) 5%? | | | |
| Pitot tube semi-annual calibration sheet included? | | | |
| **SAMPLING PROCEDURES** | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | | | |
| Isokinetic variation <90 or >110%? | | | |
| Flow rate < 0.5 or > 1 cfm? | V | V | V |
| **FIELD REAGENT BLANK** | | | |
| Not conducted for acetone?<br>Not used to correct samples? | R | | R<br>Y |
| **ANALYSIS METHOD** | | | |
| Atomic absorption spectrometry not used? | | Y | Y |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 106 (1983)
VINYL CLORIDE

| VALIDATION PARAMETERS | Stack ID | | | |
|---|---|---|---|---|
| | 20112 | 23010 | 23810 | 24510 |
| **ANALYSIS METHOD** | | | | |
| GC/FID not used? | Y | R | Y | R |
| Analysis date not within 72 hours from collection? | | | | |
| 3-point calibration curve not conducted daily or before and after test? Percent difference > 5%? | R | R | R | R |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 410A (1986)

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16810 | 17010 | 17110 | 20010 | 20112 | 20210 | 20410 | 21410 | 21510 | 22310 | 22410 | 22510 | 22810 | 23010 | 23210 | 23810 | 24510 | 25410 | 25510 |
| **TEDLAR BAG CONTAMINATION CHECK** | | | | | | | | | | | | | | | | | | | |
| Not conducted for all bags? | R | R | R | | | | R | | | R | R | | R | | | | | | R |
| **LEAK CHECK** | | | | | | | | | | | | | | | | | | | |
| Not conducted before and after each test? | Y | Y | Y | R | | R | R | | R | R | R | R | R | R | R | | | | R |
| **ANALYSIS METHOD** | | | | | | | | | | | | | | | | | | | |
| FID not used for high concentrations (60ppb to .01)? | Y | Y | Y | R | R | R | R | | R | | | | | R | R | | R | | |
| PID not used for low concentrations (1.0 to 1000 ppb)? | Y | Y | Y | R | R | R | R | | R | | | | | R | R | | | | |
| Analysis date not within 96 hours from collection? | | | | | | | | | | | Y | | | | | | | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 421 (1987)
HYDROGEN CHLORIDE

| VALIDATION PARAMETERS | Stack ID | | | | | |
|---|---|---|---|---|---|---|
| | 20112 | 20310 | 21310 | 23310 | 23810 | 28310 |
| **SAMPLE LOCATION** | | | | | | |
| Average absolute value of swirl angles >10%? | | | V | V | | V |
| Stack diameter < 12 inch? | | | | | | |
| Stack area < 113 inch squared? | | | | | | |
| Method 1 not used? | | | | | | R |
| **SAMPLING EQUIPMENT** | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | V | V | V | V | V |
| Pre- and post-test meter Y not within (+/-) 5%? | | | | | | V |
| Pitot tube semi-annual calibration sheet included? | | | P | P | | P |
| **SAMPLING PROCEDURES** | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | | | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | | | | | |
| Isokinetic variation <90 or >110%? | | | | 1RN | | V |
| **FIELD REAGENT BLANK** | | | | | | |
| Not collected once per test? | | R | R | | R | R |
| Not used to correct sample peaks on the chromatograph? | | | | | | |
| **IMPINGER SOLUTIONS** | | | | | | |
| Biocarbonate (NaHCO3) not used? | | | | | | R |
| Sodium carbonate (Na2CO3) not used? | | | | | | R |
| Water not used? | | | R | | | R |
| **ANALYSIS METHOD** | | | | | | |
| Ion chromatography not used? | | | | R | | R |
| Lab spike not conducted for 10% of samples? | R | R | R | | R | R |
| Duplicate not conducted for each sample? | R | R | R | | | R |
| Percent difference > 5%? | | | | 1PN | V | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 421 (1991)
HYDROGEN CHLORIDE

| VALIDATION PARAMETERS | Stack ID | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 22710 | 23010 | 24710 | 25910 | 26010 | 26110 | 26210 | 27910 | 28410 |
| **SAMPLE LOCATION** | | | | | | | | | |
| Average absolute value of swirl angles >10%? | V | V | V | V | V | V | V | V | |
| Stack diameter < 12 inch? | | Y | | | | | | | |
| Stack area < 113 inch squared? | | | | | | | | | |
| Method 1 not used? | | | | | | | | | |
| **SAMPLING EQUIPMENT** | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | V | | | | | | V |
| Pre- and post-test meter Y not within (+/-) 5%? | | | V | | | | | | |
| Pitot tube semi-annual calibration sheet included? | | | P | | | | | P | |
| **SAMPLING PROCEDURES** | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | V | V | | | | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | V | V | | | | | | |
| Isokinetic variation <90 or >110%? | | | | | | | | | N |
| Number of sample runs < 3? | | Y | Y | | | | | | |
| Sample time not reported for each run? | | | | | | | | | |
| Sample time < 60 minutes? | | 2RF | | | | | | | |
| **FIELD BLANK** | | | | | | | | | |
| Not collected per test? | R | | | | R | R | R | | |
| Used to correct sample peaks on the chromatograph? | | R | | | | | | | |
| Contamination > 20% of any run? | R | | | | R | R | R | | |
| **IMPINGER SOLUTIONS** | | | | | | | | | |
| Biocarbonate (NaHCO3) not used? | | | | | | | | | |
| Sodium carbonate (Na2CO3) not used? | | | | | | | | | |
| Water not used? | | | R | R | R | R | R | R | |
| **ANALYSIS METHOD** | | | | | | | | | |
| Ion chromatography not used? | | R | R | | | | | | |
| Lab spike not conducted prior, daily, and after every 40 samples? | R | R | R | | | | | R | R |
| Percent recovery < 95% or > 105%? | | | | | | | | | |
| Duplicate not conducted for 10% of all samples? | R | | R | | | | | | |
| Percent difference > 5% STD? | | V | | | | V | | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 422 (1987)
VOLTILE HALOGENATED ORGANIC COMPOUNDS

| VALIDATION PARAMETERS | Stack ID | | | | |
|---|---|---|---|---|---|
| | 20310 | 21310 | 21810 | 25010 | 25110 |
| **TEDLAR BAG CONTAMINATION CHECK** | | | | | |
| Not conducted for all bags? | | | | | R |
| Levels not reported? | | | | | Y |
| **LEAK CHECK** | | | | | |
| Not conducted before and after each test? | | R | | | |
| Leak rate > 5% of sample rate? | | | | | |
| **ANALYSIS METHOD** | | | | | |
| GC not used? | | | | | |
| Analysis date not within 24 hours of collection? | | | | | Y |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 422 (1991)
VOLTILE HALOGENATED ORGANIC COMPOUNDS

| VALIDATION PARAMETERS | Stack ID | | | | | | |
|---|---|---|---|---|---|---|---|
| | 20210 | 23010 | 26110 | 26210 | 28410 | 29010 | 64510 |
| **TEDLAR BAG CONTAMINATION CHECK** | | | | | | | |
| Not conducted for all bags? | | R | | | R | | R |
| Levels not reported? | | | | | | | R |
| **FIELD BLANK** | | | | | | | |
| Not conducted once per test? | R | | | | | | R |
| Used to correct sample? | | | | | | | R |
| Blank > 20% of the stack samples? | R | | | | | | 1PN |
| **LEAK CHECK** | | | | | | | |
| Not conducted before and after each test? | R | R | | | R | | R |
| Leak rate > 5% of sample rate? | | | R | | | | R |
| **FIELD SPIKE** | | | | | | | |
| Not collected once per source? | R | R | R | R | R | | Y |
| **ANALYSIS METHOD** | | | | | | | |
| GC not used? | | R | | | | | |
| Analysis date not within 72 hours from collection? | | | | | | | |
| Duplicates not conducted once per sample? | R | R | | | | | Y |
| Values > 3 x RSD? | | | | | | | V |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 423 (1987)
INORGANIC ARSENIC

| VALIDATION PARAMETERS | Stack ID | | | | | | |
|---|---|---|---|---|---|---|---|
| | 20112 | 21510 | 21810 | 23310 | 25010 | 25110 | 28110 |
| **SAMPLE LOCATION** | | | | | | | |
| Average absolute value of swirl angles >10%? | | | V | V | | V | |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | | | | |
| Method 1 not used? | | | R | | R | R | |
| **SAMPLING EQUIPMENT** | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | V | V | V | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | | | | | |
| Pitot tube semi-annual calibration sheet included? | | | | P | | | |
| **SAMPLING PROCEDURES** | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | | | | | | | 1RN |
| Isokinetic variation <90 or >110%? | | | | | | | |
| Filter temperature not between 107 and 135 degrees? | R | Y | R | R | Y | R | |
| Flow rate > 28 liter per minute (1 cfm)? | V | | 3RF | V | V | V | |
| **FIELD REAGENT BLANK** | | | | | | | |
| Not conducted for two filters and 0.1N NAOH? | | R | | R | | | |
| Not used to correct sample? | Y | | | R | | Y | |
| **ANALYSIS METHOD** | | | | | | | |
| Atomic absorption spectrometry not used? | | | R | R | | | |
| Combined analysis used? | R | R | | R | R | Y | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 424 (1987)
INORGANIC CADMIUM

| VALIDATION PARAMETERS | Stack ID | | | |
|---|---|---|---|---|
| | 21410 | 23510 | 24510 | 45210 |
| **SAMPLE LOCATION** | | | | |
| Average absolute value of swirl angles >10%? | | V | | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | |
| Method 1 not used? | | R | | |
| **SAMPLING EQUIPMENT** | | | | |
| Variation in nozzle diameter > 0.004 inch? | | V | | N |
| Pre- and post-test meter Y not within (+/-) 5%? | | V | | |
| Pitot tube semi-annual calibration sheet included? | | | | P |
| **SAMPLING PROCEDURES** | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | V | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | V | | |
| Isokinetic variation <90 or >110%? | | | | |
| **FIELD REAGENT BLANK** | | | | |
| Not conducted for two filters and 0.1N HNO3? | R | R | | R |
| Not used to correct sample? | | | | Y |
| **ANALYSIS METHOD** | | | | |
| Atomic absorption spectrometry not used? | | | | R |
| Not conducted in triplicate? | R | R | | R |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 425 (1987)
TOTAL AND HEXAVALENT CHROMIUM

| VALIDATION PARAMETERS | Stack ID | | | |
|---|---|---|---|---|
| | 20010 | 22710 | 51010 | 64410 |
| **SAMPLE LOCATION** | | | | |
| Average absolute value of swirl angles >10%? | V | | V | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | |
| Method 1 not used? | R | | R | |
| **SAMPLING EQUIPMENT** | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | N | N |
| Pitot tube semi-annual calibration sheet included? | P | | P | P |
| **SAMPLING PROCEDURES** | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | 2RN<br>1RN | | | |
| Isokinetic variation <90 or >110%? | 1RF | | | |
| **REAGENT BLANK** | | | | |
| Not conducted once per sample batch?<br>Used to correct sample? | Y | | | |
| **ANALYSIS METHOD** | | | | |
| Matrix spike not conducted once per test (Hexavalent Chromium)?<br>Percent recovery > 10%? | | | R<br>V | R<br>V |
| Matrix spike not conducted daily (Total Chromium)? | | | R | R |
| Duplicates not conducted for every 10 samples (Total Chromium)? | | | R | R |

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N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 425 (1990)
TOTAL AND HEXAVALENT CHROMIUM

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 45110 | 45510 | 45610 | 45710 | 45810 | 46110 | 46111 | 47410 | 47510 | 47511 | 47610 | 47810 | 47811 | 47812 | 47813 | 47911 | 64610 |
| **SAMPLE LOCATION** | | | | | | | | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | V | V | V | | | V | V | V | | | | | | V | | Y | V |
| Stack diameter < 12 inch? | | | | | | | | | | | | | | | | | |
| Stack area < 113 inch squared? | | | | | | | | | | | | | | | | | |
| Method 1 not used? | | | | | | | | | | | | | | | | | R |
| **SAMPLING EQUIPMENT** | | | | | | | | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | V | V | V | V | | | V | V | V | V | | | | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | N | | N | N | V | V | N | N | N | N | | | Y | | | |
| Pitot tube semi-annual calibration sheet included? | P | | | | | P | P | | | | | P | P | P | P | | |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | V | | | V | | | V | | | V | | | | | 1RF | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | V | | | V | | | V | | | V | | | | | | |
| Isokinetic variation <90 or >110%? | | | 1RF | | | | | | | | | | | | | | |
| **PROBE PROOF** | | | | | | | | | | | | | | | | | |
| Not conducted per probe? | R | | | | | R | R | | R | R | | R | R | R | R | Y | R |
| Total chrome > detection limit? | V | 5PF | 3PF | | | V | V | 3PF | V | V | 3PF | V | V | V | V | V | V |
| **REAGENT BLANK** | | | | | | | | | | | | | | | | | |
| Not conducted once per sample batch? | | Y | | Y | | | | Y | | | | | | | | | |
| Not used to correct sample? | Y | Y | Y | Y | Y | Y | Y | Y | | | Y | Y | Y | Y | Y | Y | |
| **ANALYSIS METHOD** | | | | | | | | | | | | | | | | | |
| Matrix spike not conducted once per test (Hexavalent Chromium)? | Y | Y | | Y | | Y | Y | | | | | | | | | | |
| Percent recovery > 10%? | 1PF,2PN | V | | V | | V | V | | | | | | | | | | |
| Matrix spike not conducted daily (Total Chromium)? | R | Y | | Y | | | | | | | | | | | | | R |
| Duplicates not conducted for every 10 samples (Total Chromium)? | | Y | | Y | | | | | | | | | | | | | Y |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 428 (1988)
PCDD/PCDF

| VALIDATION PARAMETERS | Stack ID | | |
|---|---|---|---|
| | 20010 | 21810 | 22710 |
| **SAMPLE LOCATION** | | | |
| Average absolute value of swirl angles >10%? | V | V | |
| Stack diameter < 12 inch? | | | |
| Stack area < 113 inch squared? | | | |
| Method 1 not used? | | R | |
| **SAMPLING EQUIPMENT** | | | |
| Variation in nozzle diameter > 0.004 inch? | V | V | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | |
| Pitot tube semi-annual calibration sheet included? | P | | |
| **SAMPLING PROCEDURES** | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | | |
| Isokinetic variation <90 or >110%? | | | |
| Sample runs < 3? | | | |
| Sample time < 3 hours? | | | |
| **FIELD BLANK** | | | |
| Not conducted once per test? | | | |
| Used to correct sample? | | | |
| **SURROGATE STANDARDS** | | | |
| Not conducted once per run? | R | | |
| Percent recovery < 60 or > 140% (37C1-2,3,7,8-TCDD)? | R | 3RN | |
| Percent recovery < 60 or > 140% (13C-1,2,3,4,6,7,8-HpCDF)? | R | 3RN | |
| **LABORATORY CONTROL SPIKE** | | | |
| Percent accuracy < 60 or > 140 %? | | V | V |
| **INTERNAL STANDARDS** | | | |
| Not conducted once per sample? | | | |
| Percent recovery < 60 or > 120%? | 7PF | 9PF,6PN | 18PN |

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V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 428 (1990)
PCDD/PCDF

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20112 | 20210 | 20810 | 22610 | 23010 | 23310 | 23610 | 23810 | 24810 | 27910 | 29010 | 45010 | 45011 |
| **SAMPLE LOCATION** | | | | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | | | V | V | V | V | V | | V | V | | | |
| Stack diameter < 12 inch? | | | | | Y | | | | | | | Y | Y |
| Stack area < 113 inch squared? | | | | | | | | | | | | Y | Y |
| Method 1 not used? | | | | | | | R | | | | | | |
| **SAMPLING EQUIPMENT** | | | | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | V | V | | V | V | V | V | | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | | | | | V | | V | | | | |
| Pitot tube semi-annual calibration sheet included? | | | | P | | P | | | P | P | | P | P |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | | V | | V | | V | | V | | | 3RN | 2RN |
| Post-test leak rate > 0.02 cfm or 4% of average? | | | V | | V | | V | 3RN | V | | | | |
| Isokinetic variation <90 or >110%? | | | 1RF | | | | 1RF | | | | | 1RF | |
| Sample runs < 3? | | | | | | | | | Y | | | | |
| Sample time < 3 hours? | | | | | 3RF | 3RF | | 3RF | | | | | |
| **FIELD BLANK** | | | | | | | | | | | | | |
| Not conducted once per test? | | | | | | | R | R | | | | | |
| Used to correct sample? | | | | | | | | | | | | | |
| **SURROGATE STANDARDS** | | | | | | | | | | | | | |
| Not conducted once per run? | | | | | | | | | | | | | |
| Percent recovery < 60 or > 140% (LRMS)? | | | | | | | V | | | | | | |
| Percent recovery < 60 or > 140% (HRMS)? | | | 6PN | 6PN | 6PN | 6PN | | 6PN | 10PN | 6PN | 6PN | 6PN | 6PN |
| **LABORATORY CONTROL SPIKE** | | | | | | | | | | | | | |
| Laboratory control spike percent accuracy < 60 or > 140%? | 48PN | 47PN | 24PN | | 24PN | | V | 24PN | V | 24PN | | 24PN | 24PN |
| **INTERNAL STANDARDS** | | | | | | | | | | | | | |
| Not conducted once per sample (LRMS)? | | | | | | | | | | | | | |
| Percent accuracy < 40 or >120%? | | | | | | | | | | | | | |
| Not conducted once per sample (HRMS)? | | | | | | | R | | | | | | |
| Percent accuracy < 40 or > 120%? | 12PN | | 3PN | 6PN | 6PN | 3PF,6PN | | 6PN | 16PN | 3PN | 3PN | 5PF,6PN | 2PF,6PN |

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N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 429 (1989)
PAH

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 43910 | 44010 | 44110 | 44210 | 44310 | 44410 | 44510 | 45110 | 50510 | 50610 | 50710 | 50810 | 50910 | 51010 | 64210 | 64310 | 64410 | 64510 | 64610 |
| **SAMPLE LOCATION** | | | | | | | | | | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | | Y | | | | V | | V | V | V | V | V | V | V | V | V | V | V | V |
| Stack diameter < 12 inch? | | | | | | | | | | | | | | | | | | | |
| Stack area < 113 inch squared? | | | | | | | | | | | | | | | | | | | |
| Method 1 not used? | | | | | | R | R | | R | R | R | R | R | R | | | | | R |
| **SAMPLING EQUIPMENT** | | | | | | | | | | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | | | | V | V | | | | | | | | | V | | V | |
| Pre- and post-test meter Y not within (+/-) 5%? | N | | | | | N | N | | N | N | N | N | N | N | N | N | N | N | |
| Pitot tube semi-annual calibration sheet included? | P | P | P | P | P | P | P | P | P | P | P | | P | P | P | P | P | P | |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | | | | | | V | | | | | | | | | | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | | | | 1RF | | V | | | | | | 1RN | | | | | | |
| Isokinetic variation <90 or >110%? | | | | | | | | | | | | | | | | | | | |
| Sample runs < 3? | | | | | | | | | | | | | | | | | | | |
| **FIELD BLANK** | | | | | | | | | | | | | | | | | | | |
| Not conducted once per test? | | | | | | | | | | | | | | | | | | | |
| Used to correct sample? | | | | | | | | | | | | | | | | | | | |
| **SURROGATE STANDARDS** | | | | | | | | | | | | | | | | | | | |
| Not conducted once per run? | | | | | | Y | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | | |
| Percent recovery < 50 or > 150%? | V | V | V | V | V | 2RN | V | V | 2RN | 2RN | 2RN | V | 1RF,2RN | 1RF | 2RN | 2RN | 2RN | V | V |
| **LABORATORY CONTROL SPIKE** | | | | | | | | | | | | | | | | | | | |
| Percent accuracy < 50 or > 150%? | | | | | | V | | V | V | V | V | V | V | V | V | V | V | | |
| **INTERNAL STANDARDS** | | | | | | | | | | | | | | | | | | | |
| Not conducted once per run? | | | | | | Y | | | Y | Y | Y | Y | Y | Y | Y | Y | Y | | |
| Percent accuracy < 50 or > 150%? | | | | | | V | 6PF | 37PF | V | V | V | V | V | V | V | V | V | 12PF | 7PF |
| **ANALYSIS/EXTRACTION DATES** | | | | | | | | | | | | | | | | | | | |
| Analysis date not within 40 days of extraction? | R | R | R | R | R | R | | R | R | R | R | R | R | R | R | R | R | | |
| Extraction date not within 7 days of collection? | | | | | | R | | R | R | R | R | R | R | R | R | R | R | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 430 (1989)
ALDEHYDES

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 27710 | 28510 | 43710 | 43810 | 44410 | 44910 | 50510 | 50610 | 50710 | 50810 | 50910 | 51010 | 64210 | 64310 | 64410 | 64610 |
| **FIELD DRY GAS METER CHECK** | | | | | | | | | | | | | | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | V | | N | N | N | V | N | N | N | N | N | N | N | N | N | |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | | | |
| Sample flow not checked per run? | | | | | | | | | | | | | | | | |
| Sample flow > 1.0 L/min? | | 3RF | 3RF | 3RF | 6RF | | 3RF | 3RF | 3RF | 3RF | 3RF | 3RF | 3RF | 3RF | 3RF | 3RF |
| Pre-test and post-test sample flow not within 15%? | | | 3RN | 3RN | 6RN | 3RN | 3RN | 3RN | 3RN | 3RN | 3RN | 3RN | 3RN | 3RN | 3RN | 3RN |
| Indication of leaks? | V | V | | | | | | | | | | | | | | |
| **FIELD BLANK** | | | | | | | | | | | | | | | | |
| Not conducted once per test? | | | | | | | | | | | | | | | | |
| Not conducted on 2 impingers? | | | | | | R | | | | | R | | | | | |
| Used to correct samples? | Y | Y | | | | | | | | | | | | | | R |
| **FIELD SPIKE** | | | | | | | | | | | | | | | | |
| Not conducted per run? | | | | | | | | | | | | | | | | |
| **ANALYSIS METHOD** | | | | | | | | | | | | | | | | |
| Extraction date not within 7 days of collection? | | R | R | | R | R | | | | R | R | | R | R | R | R |
| Analysis date not within 30 days of extraction? | | | R | | R | R | | | | | R | | R | R | R | |
| Reverse phase HPLC not used? | | | R | R | R | | | R | R | R | R | R | | | | R |
| Matrix spike not conducted per test? | | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| Not reported? | | | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 430 (1991)
ALDEHYDES

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20210 | 22410 | 22510 | 24710 | 25310 | 25910 | 26010 | 26110 | 26210 | 26310 | 26410 | 26510 | 26610 | 26710 |
| **CALIBRATION CHECK** | | | | | | | | | | | | | | |
| Not conducted for each rotometer? | R | R | R | R | R | R | R | R | R | R | R | R | | R |
| Calibration sheet not included? | | | | | | | | | | | | | | |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | |
| Sample flow not checked per run? | | R | R | R | | | | | | | | R | | R |
| Sample flow > 1.0 L/min? | | | | | | | | | | | | | | |
| Pre-test and post-test sample flow not within 15%? | | | | | | | | | | | | | | |
| Indication of leaks? | | V | | V | V | V | V | | | V | V | | | V |
| Number of sample runs < 3? | | | | Y | | | | | | | | | | |
| **FIELD BLANK** | | | | | | | | | | | | | | |
| Three blanks not collected per test? | R | | R | R | | | | | | Y | Y | R | | R |
| Reporting limit not given (sample /field blank < 5)? | | | | | | | | | 6PN | | | | | |
| Sample not corrected (sample/field blank > 5)? | | | | | | | | 5PN | | | | | | |
| **ANALYSIS METHOD** | | | | | | | | | | | | | | |
| Sampling date not within 2 days of reagent blank check? | R | R | R | R | R | R | R | R | R | R | R | R | | R |
| Extraction date not within 7 days of collection? | | R | | R | | R | | | | | | R | | R |
| Analysis date not within 30 days of extraction? | | | | R | | R | | | | | | R | | R |
| Reverse phase HPLC not used? | | | | R | | | | | | | | R | | |
| Impingers not analyzed seperately? | | | | R | | | | | | | | R | | |
| Matrix spike not conducted per test? | R | | | R | | | | | | | R | R | | R |
| Recovery not reported? | | | | | | | | | | | | | | |

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V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 433 (1989)
NICKEL

| VALIDATION PARAMETERS | Stack ID | | | | |
|---|---|---|---|---|---|
| | 23810 | 23910 | 25210 | 45210 | 64610 |
| **SAMPLE LOCATION** | | | | | |
| Average absolute value of swirl angles >10%? | | | V | V | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | | |
| Method 1 not used? | | | | | R |
| **SAMPLING EQUIPMENT** | | | | | |
| Variation in nozzle diameter > 0.004 inch? | V | V | V | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | | | |
| Pitot tube semi-annual calibration sheet included? | | | | P | |
| **SAMPLING PROCEDURES** | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | 1RF | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | 1RF | | | |
| Isokinetic variation <90 or >110%? | | | | | |
| **FIELD REAGENT BLANK** | | | | | |
| Not conducted for two filters and 0.1N HNO3? | R | R | | R | |
| Not used to correct sample? | | | | Y | Y |
| **ANALYSIS METHOD** | | | | | |
| Atomic absorption spectrometry not used? | | | | R | R |
| Not conducted in triplicate? | | | | R | R |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR CARB 436 (1992)
TRACE METALS

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 21310 | 23010 | 23310 | 23510 | 24710 | 25910 | 26010 | 26110 | 26210 | 26310 | 26410 | 27910 | 43610 |
| **SAMPLE LOCATION** | | | | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | V | V | V | V | V | V | V | V | V | | | V | V |
| Stack diameter < 12 inch? | | Y | | | | | | | | | | | |
| Stack area < 113 inch squared? | | | | | | | | | | | | | |
| Method 1 not used? | | | | R | | | | | | | | | |
| **SAMPLING EQUIPMENT** | | | | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | V | | V | V | V | | | | | V | V | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | | V | V | | | | | | | | N |
| Pitot tube semi-annual calibration sheet included? | P | | P | | P | | | | | | | P | |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | 1RN | V | | V | V | | | | | | 1RN | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | V | | V | V | | | | | | 1RN | | |
| Isokinetic variation <90 or >110%? | | 1RF | | | | | | | | | | | |
| Number of Sample runs < 3? | R | | | | Y | | | | | | | | |
| **FIELD BLANK** | | | | | | | | | | | | | |
| Not collected once per test? | | | | R | | | | | | | | | |
| Used to correct samples? | | | | | | | | | | | | | |
| Sample/field blank < 5? | 2PF | 26PF | 27PN | R | 3PF | 18PN | | 3PF | 15PF | 42PN | 24PF | 11PF | 35PF |
| **FIELD REAGENT BLANK** | | | | | | | | | | | | | |
| Not collected once per test? | R | | R | R | | | | | R | | | | |
| Not used to correct samples? | | | | | | | | | | R | R | | |
| **ANALYSIS DATES** | | | | | | | | | | | | | |
| Not within 2 months (ICAP)? | | | | R | R | | | | | | | | R |
| Not within 2 months (GFAAS)? | | | | R | R | | | | | | | | |
| Not within 28 days (CVAAS)? | | | | R | R | | | | | | | Y | |
| **DUPLICATES** | | | | | | | | | | | | | |
| Percent difference > 10% (ICAP)? | 12PN | 1PF,6PN | | 27PN | V | | | | | 1PF,3PN | 6PN | 3PN | V |
| Not conducted per run (GFAAS)? | R | | | R | R | | | | | | | R | |
| Not conducted per run (CVAAS)? | | | | R | R | | R | | | | | R | 3RF |
| **MATRIX SPIKES** | | | | | | | | | | | | | |
| Not conducted on front- and back-half (GFAAS)? | R | | | R | R | | R | | | | | R | |
| Percent recovery < 75 or > 125%? | 2PN | | | 15PN | | | | | | | | 9PN | |
| Not conducted on one nitric impinger (CVAAS)? | | | | R | R | | | | R | | | | R |
| Percent recovery < 75 or > 125%? | | | | | | | | | | | | | V |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR EPA MMT (1989)
TRACE METALS

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20010 | 20112 | 21210 | 21410 | 21510 | 21910 | 22010 | 22110 | 22210 | 23810 | 23910 | 24510 | 51010 | 64410 | 64610 |
| **SAMPLE LOCATION** | | | | | | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | V | | V | | | | | | | | | V | V | V | V |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | | | | | | | | | | | | |
| Method 1 not used? | R | | | | | | | | | | | R | R | | R |
| **SAMPLING EQUIPMENT** | | | | | | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | V | | | | | | | V | V | V | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | V | | | | | | | | | V | N | N | |
| Pitot tube semi-annual calibration sheet included? | P | | P | | | | | | | | | P | P | P | |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | | | | 1RN | | | | | | 1RF | | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | | | | 1RN | | | | | | 1RF | | | | |
| Isokinetic variation <90 or >110%? | | | V | | | | | | | | | | | | |
| **FIELD REAGENT BLANK** | | | | | | | | | | | | | | | |
| Not collected once per test? | | | R | | R | | | | | R | R | R | | | |
| Not used to correct samples? | | Y | | Y | | | | | Y | | | | Y | Y | Y |
| **DUPLICATES** | | | | | | | | | | | | | | | |
| Percent difference > 5% (ICAP)? | 1PF | 8PF | 13PN | V | V | V | V | V | V | | V | V | V | V | 30PN |
| Not conducted per run (GFAAS)? | R | | R | 2RF | | | | | R | | R | | | | |
| Not conducted per run (CVAAS)? | Y | | R | R | R | R | R | R | R | | | R | | | 3RF |
| **MATRIX SPIKES** | | | | | | | | | | | | | | | |
| Not conducted on front- and back-half (GFAAS)? | R | | R | | R | | | | | | R | | | | |
| Percent recovery < 75 or > 125%? | V | | | | | | | | | | | | | | |
| Not conducted on one nitric impinger (CVAAS)? | | | R | | | R | R | R | R | R | | | | | R |
| Percent recovery < 75 or > 125%? | | | | V | | | | | | | | | | | V |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR EPA 306 (1990)

| VALIDATION PARAMETERS | Stack ID | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 45910 | 46010 | 46210 | 46310 | 46410 | 46510 | 46610 | 46710 | 46810 | 46910 | 47010 | 47110 | 47210 | 47310 | 47710 |
| **SAMPLE LOCATION** | | | | | | | | | | | | | | | |
| Average absolute value of swirl angles >10%? | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V |
| Stack diameter < 12 inch? | | | | | | | | | | | | Y | | | Y |
| Stack area < 113 inch squared? | | | | | | | | | | | | | | | |
| Method 1 not used? | | | R | | | | | | | | | | | | |
| **SAMPLING EQUIPMENT** | | | | | | | | | | | | | | | |
| Variation in nozzle diameter > 0.004 inch? | N | | | | N | V | V | | | | N | | | | V |
| Field gas dry meter not checked pre-test | | | | | | | | | | | | | | | Y |
| Pitot tube semi-annual calibration sheet included? | | | | | | | P | | | | | | | | P |
| **SAMPLING PROCEDURES** | | | | | | | | | | | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average? | | | | | | | | | | | | | | | |
| Post-test leak rate > 0.02 cfm or 4% of average? | | | | | | | | | | | | | | | |
| Sample time < 2 hours? | | | | | | | | | | | | | | | |
| Isokinetic variation <90 or >110%? | | | | | | | | | | | | | | | |
| **FIELD REAGENT BLANK** | | | | | | | | | | | | | | | |
| Not conducted once per test? | | | | | | | | | | | | | | | |
| 0.1 N NaOH or 0.1 N NaHCO3 not used? | | | | | | | | | | | | | | | |
| **ANALYSIS DATES** | | | | | | | | | | | | | | | |
| Not within 2 months (ICP)? | | | | | | | | | | | | | | | |
| Not within 2 months (GFAAS)? | | | | | | | | | | | | | | | |
| Not within 14 days (IC/PCR)? | | | | | | | | | | | | | | | |
| **DUPLICATES** | | | | | | | | | | | | | | | |
| Percent difference > 10% (ICP)? | | | | | | | | | | | | 1PF | | | |
| Percent difference > 10% (GFAAS)? | | | | | | | | | | | | | | | |
| Percent difference > 10% (IC/PCR)? | | | | | | | | | | | | | | | 1PF |
| **MATRIX SPIKES** | | | | | | | | | | | | | | | |
| Percent recovery <75 or >125% (ICP)? | | | | | | | | | | | | | | | |
| Percent recovery <75 or >125% (GFAAS)? | | | | | | | | | | | | | | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR BAAQMD ST1B (1982)

| VALIDATION PARAMETERS | Stack ID |
|---|---|
| | 28810 |
| **SAMPLE LOCATION** | |
| Average absolute value of swirl angles >10%? | |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | |
| Method 1 not used? | |
| **SAMPLING EQUIPMENT** | |
| Variation in nozzle diameter > 0.004 inch? | V |
| Pre- and post-test meter Y not within (+/-) 5%? | V |
| Pitot tube semi-annual calibration sheet included? | P |
| **SAMPLING PROCEDURES** | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | |
| Isokinetic variation <90 or >110%? | V |
| HCl not used? | |
| **ANALYSIS METHOD** | |
| Analytical procedure Lab-1 not used? | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

VALIDATION PARAMETERS SUMMARY FOR SCAQMD 207.1 (1990)

| VALIDATION PARAMETERS | Stack ID | | | | |
|---|---|---|---|---|---|
| | 25910 | 26010 | 26110 | 26210 | 26310 |
| **SAMPLE LOCATION** | | | | | |
| Average absolute value of swirl angles >10%? | V | V | V | V | |
| Stack diameter < 12 inch?<br>Stack area < 113 inch squared? | | | | | |
| Method 1 not used? | | | | | |
| **SAMPLING EQUIPMENT** | | | | | |
| Variation in nozzle diameter > 0.004 inch? | | | | | |
| Pre- and post-test meter Y not within (+/-) 5%? | | | | | |
| Pitot tube semi-annual calibration sheet included? | | | | | |
| **SAMPLING PROCEDURES** | | | | | |
| Pre-test leak rate > 0.02 cfm or 4% of average?<br>Post-test leak rate > 0.02 cfm or 4% of average? | | | | | |
| Isokinetic variation <90 or >110%? | | | | | |
| **ANALYSIS METHOD** | | | | | |
| Colorimetric method not used? | | | | | |

R-Not reported
V-Values not provided
N-Not conducted
P-Not provided
Y-Failed check
Blank Cells - Indicates check passed

RF-Runs do not pass check
RN-Runs could not be checked
PF-Points do not pass check
PN-Points could not be checked

ATTACHMENT 5
SUBSTANCE SPECIFIC QA FAILURE FREQUENCY

ATTACHMENT 5 - SUBSTANCE SPECIFIC QA FAILURE FREQUENCY.

| Method | Version | Flags | Substance | Count |
|---|---|---|---|---|
| CARB 425 | 90 | Matrix spike percent recovery > 10% | Chromium (Hex) | 1 |
| CARB 425 | 90 | Probe proof total chrome > DL | Chromium (Total) | 16 |
| CARB 428 | 88 | Internal standard percent recovery <60 or >120% | Dioxin:4D 2378 | 3 |
| CARB 428 | 88 | | Dioxin:4D Total | 1 |
| CARB 428 | 88 | | Dioxin:5D Total | 1 |
| CARB 428 | 88 | | Dioxin:6D Total | 2 |
| CARB 428 | 88 | | Dioxin:7D Total | 1 |
| CARB 428 | 88 | | Dioxin:8D | 3 |
| CARB 428 | 88 | | Furan:4F 2378 | 3 |
| CARB 428 | 88 | | Furan:4F Total | 2 |
| CARB 428 | 90 | Internal standard percent accuracy <40 or >120% | Dioxin:5D 12378 | 3 |
| CARB 428 | 90 | | Dioxin:6D 123678 | 1 |
| CARB 428 | 90 | | Dioxin:8D | 3 |
| CARB 428 | 90 | | Furan:5F 12378 | 3 |
| CARB 429 | 89 | Laboratory control percent accuracy <50 or >150% | Naphthalene | 2 |
| CARB 429 | 89 | | Phenanthrene | 2 |
| CARB 429 | 89 | Internal standard percent accuracy <50 or >150% | Acenaphthene | 17 |
| CARB 429 | 89 | | Acenaphthylene | 18 |
| CARB 429 | 89 | | Anthracene | 20 |
| CARB 429 | 89 | | Benzo(a)anthracene | 11 |
| CARB 429 | 89 | | Benzo(a)pyrene | 13 |
| CARB 429 | 89 | | Benzo(b)fluoranthene | 9 |
| CARB 429 | 89 | | Benzo(g,h,i)perylene | 8 |
| CARB 429 | 89 | | Benzo(k)fluoranthene | 9 |
| CARB 429 | 89 | | Chrysene | 10 |
| CARB 429 | 89 | | Fluoranthene | 8 |
| CARB 429 | 89 | | Fluorene | 19 |
| CARB 429 | 89 | | Naphthalene | 27 |
| CARB 429 | 89 | | Phenanthrene | 12 |
| CARB 429 | 89 | | Pyrene | 10 |
| CARB 430 | 91 | Sample/field blank ratio <5 and reporting limit not given | Acetaldehyde | 3 |
| CARB 430 | 91 | | Acrolein | 3 |
| CARB 430 | 91 | | Formaldehyde | 3 |
| CARB 436 | 92 | Sample / field blank ratio <5 | Antimony | 6 |
| CARB 436 | 92 | | Arsenic | 6 |
| CARB 436 | 92 | | Barium | 6 |
| CARB 436 | 92 | | Beryllium | 4 |
| CARB 436 | 92 | | Cadmium | 7 |
| CARB 436 | 92 | | Chromium (Total) | 13 |
| CARB 436 | 92 | | Copper | 10 |
| CARB 436 | 92 | | Lead | 14 |
| CARB 436 | 92 | | Manganese | 11 |
| CARB 436 | 92 | | Nickel | 12 |
| CARB 436 | 92 | | Phosphorus | 3 |
| CARB 436 | 92 | | Selenium | 8 |

ATTACHMENT 5 - SUBSTANCE SPECIFIC QA FAILURE FREQUENCY.

| Method | Version | Flags | Substance | Count |
|---|---|---|---|---|
| CARB 436 | 92 | | Silver | 4 |
| CARB 436 | 92 | | Thallium | 6 |
| CARB 436 | 92 | | Zinc | 16 |
| EPA MMT | 89 | Duplicate percent difference > 5%? | Arsenic | 1 |
| EPA MMT | 89 | | Cadmium | 2 |
| EPA MMT | 89 | | Chromium (Total) | 1 |
| EPA MMT | 89 | | Copper | 2 |
| EPA MMT | 89 | | Lead | 2 |
| EPA MMT | 89 | | Nickel | 2 |
| EPA MMT | 89 | | Zinc | 1 |

ATTACHMENT 6
STATISTICAL ANALYSIS OF GROUPS

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | 10100401 | 9 | 1.06E-03 | 5.51E-04 | 1.00 | 10200401 | 18 | 5.07E-04 | 8.89E-04 | 0.79 | No |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | 10100401 | 9 | 1.06E-03 | 5.51E-04 | 1.00 | 10200402 | 3 | 2.29E-04 | 5.83E-05 | 0.31 | Yes |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | 10100401 | 9 | 1.06E-03 | 5.51E-04 | 1.00 | 10200403 | 3 | 1.44E-03 | 2.44E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | 10200401 | 18 | 5.07E-04 | 8.89E-04 | 0.79 | 10200402 | 3 | 2.29E-04 | 5.83E-05 | 0.31 | No |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | 10200401 | 18 | 5.07E-04 | 8.89E-04 | 0.79 | 10200403 | 3 | 1.44E-03 | 2.44E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | 10200402 | 3 | 2.29E-04 | 5.83E-05 | 0.31 | 10200403 | 3 | 1.44E-03 | 2.44E-04 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | 10100401 | 9 | 1.48E-05 | 1.50E-05 | 0.62 | 10200401 | 17 | 5.48E-04 | 1.18E-03 | 0.97 | No |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | 10100401 | 9 | 1.48E-05 | 1.50E-05 | 0.62 | 10200402 | 3 | 5.12E-05 | 1.48E-06 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | 10100401 | 9 | 1.48E-05 | 1.50E-05 | 0.62 | 10200403 | 3 | 6.29E-05 | 7.69E-06 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | 10200401 | 17 | 5.48E-04 | 1.18E-03 | 0.97 | 10200402 | 3 | 5.12E-05 | 1.48E-06 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | 10200401 | 17 | 5.48E-04 | 1.18E-03 | 0.97 | 10200403 | 3 | 6.29E-05 | 7.69E-06 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | 10200402 | 3 | 5.12E-05 | 1.48E-06 | 0.00 | 10200403 | 3 | 6.29E-05 | 7.69E-06 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | 10100401 | 9 | 2.23E-04 | 2.32E-04 | 1.00 | 10200401 | 16 | 3.88E-04 | 6.93E-04 | 0.80 | No |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | 10100401 | 9 | 2.23E-04 | 2.32E-04 | 1.00 | 10200402 | 3 | 2.23E-02 | 2.45E-02 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | 10100401 | 9 | 2.23E-04 | 2.32E-04 | 1.00 | 10200403 | 3 | 8.56E-04 | 3.52E-04 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | 10200401 | 16 | 3.88E-04 | 6.93E-04 | 0.80 | 10200402 | 3 | 2.23E-02 | 2.45E-02 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | 10200401 | 16 | 3.88E-04 | 6.93E-04 | 0.80 | 10200403 | 3 | 8.56E-04 | 3.52E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | 10200402 | 3 | 2.23E-02 | 2.45E-02 | 1.00 | 10200403 | 3 | 8.56E-04 | 3.52E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | 10100401 | 9 | 1.81E-04 | 1.72E-04 | 0.90 | 10200401 | 12 | 1.50E-04 | 8.63E-05 | 0.56 | No |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | 10100401 | 9 | 1.81E-04 | 1.72E-04 | 0.90 | 10200402 | 3 | 3.48E-04 | 5.15E-05 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | 10100401 | 9 | 1.81E-04 | 1.72E-04 | 0.90 | 10200403 | 3 | 1.15E-03 | 5.70E-05 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | 10200401 | 12 | 1.50E-04 | 8.63E-05 | 0.56 | 10200402 | 3 | 3.48E-04 | 5.15E-05 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | 10200401 | 12 | 1.50E-04 | 8.63E-05 | 0.56 | 10200403 | 3 | 1.15E-03 | 5.70E-05 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | 10200402 | 3 | 3.48E-04 | 5.15E-05 | 0.00 | 10200403 | 3 | 1.15E-03 | 5.70E-05 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | 10100401 | 9 | 6.09E-04 | 2.44E-04 | 1.00 | 10200401 | 18 | 1.05E-03 | 1.69E-03 | 0.98 | No |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | 10100401 | 9 | 6.09E-04 | 2.44E-04 | 1.00 | 10200402 | 3 | 1.99E-03 | 4.18E-04 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | 10100401 | 9 | 6.09E-04 | 2.44E-04 | 1.00 | 10200403 | 3 | 4.83E-03 | 1.24E-03 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | 10200401 | 18 | 1.05E-03 | 1.69E-03 | 0.98 | 10200402 | 3 | 1.99E-03 | 4.18E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | 10200401 | 18 | 1.05E-03 | 1.69E-03 | 0.98 | 10200403 | 3 | 4.83E-03 | 1.24E-03 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | 10200402 | 3 | 1.99E-03 | 4.18E-04 | 0.00 | 10200403 | 3 | 4.83E-03 | 1.24E-03 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | 10100401 | 9 | 1.40E-03 | 5.60E-04 | 1.00 | 10200401 | 18 | 4.61E-03 | 5.18E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | 10100401 | 9 | 1.40E-03 | 5.60E-04 | 1.00 | 10200402 | 3 | 3.41E-03 | 2.35E-03 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | 10100401 | 9 | 1.40E-03 | 5.60E-04 | 1.00 | 10200403 | 3 | 3.86E-03 | 4.20E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | 10200401 | 18 | 4.61E-03 | 5.18E-03 | 1.00 | 10200402 | 3 | 3.41E-03 | 2.35E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | 10200401 | 18 | 4.61E-03 | 5.18E-03 | 1.00 | 10200403 | 3 | 3.86E-03 | 4.20E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | 10200402 | 3 | 3.41E-03 | 2.35E-03 | 1.00 | 10200403 | 3 | 3.86E-03 | 4.20E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | 10100401 | 9 | 1.61E-03 | 1.12E-03 | 1.00 | 10200401 | 18 | 5.32E-03 | 1.15E-02 | 0.95 | No |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | 10100401 | 9 | 1.61E-03 | 1.12E-03 | 1.00 | 10200402 | 3 | 2.44E-03 | 4.06E-04 | 0.39 | No |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | 10100401 | 9 | 1.61E-03 | 1.12E-03 | 1.00 | 10200403 | 3 | 1.56E-03 | 1.54E-03 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | 10200401 | 18 | 5.32E-03 | 1.15E-02 | 0.95 | 10200402 | 3 | 2.44E-03 | 4.06E-04 | 0.39 | No |

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | 10200401 | 18 | 5.32E-03 | 1.15E-02 | 0.95 | 10200403 | 3 | 1.56E-03 | 1.54E-03 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | 10200402 | 3 | 2.44E-03 | 4.06E-04 | 0.39 | 10200403 | 3 | 1.56E-03 | 1.54E-03 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | 10100401 | 9 | 1.58E-03 | 1.37E-03 | 1.00 | 10200401 | 18 | 5.72E-02 | 1.59E-01 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | 10100401 | 9 | 1.58E-03 | 1.37E-03 | 1.00 | 10200402 | 3 | 1.66E-03 | 2.32E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | 10100401 | 9 | 1.58E-03 | 1.37E-03 | 1.00 | 10200403 | 3 | 5.81E-03 | 5.54E-03 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | 10200401 | 18 | 5.72E-02 | 1.59E-01 | 1.00 | 10200402 | 3 | 1.66E-03 | 2.32E-04 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | 10200401 | 18 | 5.72E-02 | 1.59E-01 | 1.00 | 10200403 | 3 | 5.81E-03 | 5.54E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | 10200402 | 3 | 1.66E-03 | 2.32E-04 | 0.00 | 10200403 | 3 | 5.81E-03 | 5.54E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | 10100401 | 9 | 3.06E-03 | 1.91E-03 | 0.00 | 10200401 | 18 | 2.46E-04 | 3.45E-04 | 0.70 | Yes |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | 10100401 | 9 | 3.06E-03 | 1.91E-03 | 0.00 | 10200402 | 3 | 5.43E-05 | 9.58E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | 10100401 | 9 | 3.06E-03 | 1.91E-03 | 0.00 | 10200403 | 3 | 1.03E-05 | 3.93E-06 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | 10200401 | 18 | 2.46E-04 | 3.45E-04 | 0.70 | 10200402 | 3 | 5.43E-05 | 9.58E-07 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | 10200401 | 18 | 2.46E-04 | 3.45E-04 | 0.70 | 10200403 | 3 | 1.03E-05 | 3.93E-06 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | 10200402 | 3 | 5.43E-05 | 9.58E-07 | 0.00 | 10200403 | 3 | 1.03E-05 | 3.93E-06 | 0.00 | Yes |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | 10100401 | 9 | 9.75E-02 | 5.45E-02 | 1.00 | 10200401 | 18 | 1.15E-01 | 1.57E-01 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | 10100401 | 9 | 9.75E-02 | 5.45E-02 | 1.00 | 10200402 | 3 | 1.59E-02 | 1.97E-03 | 0.65 | Yes |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | 10100401 | 9 | 9.75E-02 | 5.45E-02 | 1.00 | 10200403 | 3 | 3.34E-01 | 6.33E-02 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | 10200401 | 18 | 1.15E-01 | 1.57E-01 | 1.00 | 10200402 | 3 | 1.59E-02 | 1.97E-03 | 0.65 | No |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | 10200401 | 18 | 1.15E-01 | 1.57E-01 | 1.00 | 10200403 | 3 | 3.34E-01 | 6.33E-02 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | 10200402 | 3 | 1.59E-02 | 1.97E-03 | 0.65 | 10200403 | 3 | 3.34E-01 | 6.33E-02 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | 10100401 | 9 | 9.61E-04 | 6.71E-04 | 0.87 | 10200401 | 18 | 3.77E-03 | 1.06E-02 | 0.71 | No |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | 10100401 | 9 | 9.61E-04 | 6.71E-04 | 0.87 | 10200402 | 3 | 3.67E-04 | 6.47E-05 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | 10100401 | 9 | 9.61E-04 | 6.71E-04 | 0.87 | 10200403 | 3 | 2.88E-03 | 1.24E-03 | 0.17 | Yes |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | 10200401 | 18 | 3.77E-03 | 1.06E-02 | 0.71 | 10200402 | 3 | 3.67E-04 | 6.47E-05 | 0.00 | No |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | 10200401 | 18 | 3.77E-03 | 1.06E-02 | 0.71 | 10200403 | 3 | 2.88E-03 | 1.24E-03 | 0.17 | No |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | 10200402 | 3 | 3.67E-04 | 6.47E-05 | 0.00 | 10200403 | 3 | 2.88E-03 | 1.24E-03 | 0.17 | Yes |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | 10100401 | 9 | 1.41E-02 | 8.27E-03 | 1.00 | 10200401 | 18 | 1.07E-01 | 2.61E-01 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | 10100401 | 9 | 1.41E-02 | 8.27E-03 | 1.00 | 10200402 | 3 | 3.55E-02 | 1.74E-02 | 1.00 | Yes |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | 10100401 | 9 | 1.41E-02 | 8.27E-03 | 1.00 | 10200403 | 3 | 1.60E-02 | 1.29E-02 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | 10200401 | 18 | 1.07E-01 | 2.61E-01 | 1.00 | 10200402 | 3 | 3.55E-02 | 1.74E-02 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | 10200401 | 18 | 1.07E-01 | 2.61E-01 | 1.00 | 10200403 | 3 | 1.60E-02 | 1.29E-02 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | 10200402 | 3 | 3.55E-02 | 1.74E-02 | 1.00 | 10200403 | 3 | 1.60E-02 | 1.29E-02 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | 10100401 | 12 | 3.11E-05 | 3.67E-05 | 0.99 | 10200401 | 18 | 3.38E-05 | 3.40E-05 | 0.02 | No |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | 10100401 | 12 | 3.11E-05 | 3.67E-05 | 0.99 | 10200402 | 3 | 2.79E-06 | 1.87E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | 10100401 | 12 | 3.11E-05 | 3.67E-05 | 0.99 | 10200403 | 6 | 8.93E-07 | 6.01E-07 | 0.87 | No |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | 10200401 | 18 | 3.38E-05 | 3.40E-05 | 0.02 | 10200402 | 3 | 2.79E-06 | 1.87E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | 10200401 | 18 | 3.38E-05 | 3.40E-05 | 0.02 | 10200403 | 6 | 8.93E-07 | 6.01E-07 | 0.87 | Yes |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | 10200402 | 3 | 2.79E-06 | 1.87E-06 | 1.00 | 10200403 | 6 | 8.93E-07 | 6.01E-07 | 0.87 | Yes |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | 10100401 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 10200401 | 18 | 3.44E-05 | 3.36E-05 | 0.03 | Yes |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | 10100401 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 10200402 | 3 | 2.48E-06 | 9.67E-06 | 0.81 | Yes |

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | 10100401 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 10200403 | 6 | 3.17E-07 | 4.53E-08 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | 10200401 | 18 | 3.44E-05 | 3.36E-05 | 0.03 | 10200402 | 3 | 7.48E-05 | 9.57E-05 | 0.81 | No |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | 10200401 | 18 | 3.44E-05 | 3.36E-05 | 0.03 | 10200403 | 6 | 3.17E-07 | 4.53E-08 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | 10200402 | 3 | 7.48E-05 | 9.57E-05 | 0.81 | 10200403 | 6 | 3.17E-07 | 4.53E-08 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | 10100401 | 12 | 2.27E-06 | 1.56E-06 | 0.90 | 10200401 | 18 | 3.45E-05 | 3.35E-05 | 0.04 | Yes |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | 10100401 | 12 | 2.27E-06 | 1.56E-06 | 0.90 | 10200402 | 3 | 9.08E-07 | 8.86E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | 10100401 | 12 | 2.27E-06 | 1.56E-06 | 0.90 | 10200403 | 6 | 3.22E-07 | 3.19E-07 | 0.94 | Yes |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | 10200401 | 18 | 3.45E-05 | 3.35E-05 | 0.04 | 10200402 | 3 | 9.08E-07 | 8.86E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | 10200401 | 18 | 3.45E-05 | 3.35E-05 | 0.04 | 10200403 | 6 | 3.22E-07 | 3.19E-07 | 0.94 | Yes |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | 10200402 | 3 | 9.08E-07 | 8.86E-07 | 0.00 | 10200403 | 6 | 3.22E-07 | 3.19E-07 | 0.94 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | 10100401 | 12 | 2.08E-06 | 3.45E-06 | 0.52 | 10200401 | 18 | 3.35E-05 | 3.43E-05 | 0.01 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | 10100401 | 12 | 2.08E-06 | 3.45E-06 | 0.52 | 10200402 | 3 | 1.76E-08 | 1.92E-08 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | 10100401 | 12 | 2.08E-06 | 3.45E-06 | 0.52 | 10200403 | 6 | 2.04E-07 | 1.60E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | 10200401 | 18 | 3.35E-05 | 3.43E-05 | 0.01 | 10200402 | 3 | 1.76E-08 | 1.92E-08 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | 10200401 | 18 | 3.35E-05 | 3.43E-05 | 0.01 | 10200403 | 6 | 2.04E-07 | 1.60E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | 10200402 | 3 | 1.76E-08 | 1.92E-08 | 0.00 | 10200403 | 6 | 2.04E-07 | 1.60E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | 10100401 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 10200401 | 18 | 3.73E-05 | 3.15E-05 | 0.12 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | 10100401 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 10200402 | 3 | 9.09E-07 | 1.53E-06 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | 10100401 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 10200403 | 6 | 2.09E-07 | 1.54E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | 10200401 | 18 | 3.73E-05 | 3.15E-05 | 0.12 | 10200402 | 3 | 9.09E-07 | 1.53E-06 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | 10200401 | 18 | 3.73E-05 | 3.15E-05 | 0.12 | 10200403 | 6 | 2.09E-07 | 1.54E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | 10200402 | 3 | 9.09E-07 | 1.53E-06 | 0.00 | 10200403 | 6 | 2.09E-07 | 1.54E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(b)fluoranthene | lbs/Mgal | 10200401 | 12 | 5.01E-05 | 3.03E-05 | 0.02 | 10200402 | 3 | 2.36E-06 | 1.25E-06 | 0.63 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(b)fluoranthene | lbs/Mgal | 10200401 | 12 | 5.01E-05 | 3.03E-05 | 0.02 | 10200403 | 6 | 1.21E-06 | 8.93E-07 | 0.40 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(b)fluoranthene | lbs/Mgal | 10200402 | 3 | 2.36E-06 | 1.25E-06 | 0.63 | 10200403 | 6 | 1.21E-06 | 8.93E-07 | 0.40 | No |
| Boiler, Fuel Oil | PAH | Benzo(b+k)fluoranthene | lbs/Mgal | 10100401 | 12 | 1.52E-06 | 1.52E-06 | 0.34 | 10200401 | 6 | 1.60E-06 | 1.28E-06 | 0.43 | No |
| Boiler, Fuel Oil | PAH | Benzo(e)pyrene | lbs/Mgal | 10200402 | 3 | 1.03E-06 | 1.42E-06 | 0.00 | 10200403 | 3 | 8.53E-07 | 3.85E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 10100401 | 12 | 1.29E-06 | 7.46E-07 | 0.23 | 10200401 | 18 | 3.38E-05 | 3.41E-05 | 0.02 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 10100401 | 12 | 1.29E-06 | 7.46E-07 | 0.23 | 10200402 | 3 | 1.02E-06 | 1.50E-06 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 10100401 | 12 | 1.29E-06 | 7.46E-07 | 0.23 | 10200403 | 6 | 9.99E-07 | 7.75E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 10200401 | 18 | 3.38E-05 | 3.41E-05 | 0.02 | 10200402 | 3 | 1.02E-06 | 1.50E-06 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 10200401 | 18 | 3.38E-05 | 3.41E-05 | 0.02 | 10200403 | 6 | 9.99E-07 | 7.75E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 10200402 | 3 | 1.02E-06 | 1.50E-06 | 0.00 | 10200403 | 6 | 9.99E-07 | 7.75E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Benzo(k)fluoranthene | lbs/Mgal | 10200401 | 12 | 4.95E-06 | 3.14E-06 | 0.00 | 10200402 | 3 | 1.28E-08 | 9.24E-09 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(k)fluoranthene | lbs/Mgal | 10200401 | 12 | 4.95E-06 | 3.14E-06 | 0.00 | 10200403 | 6 | 2.08E-07 | 1.59E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(k)fluoranthene | lbs/Mgal | 10200402 | 3 | 1.28E-08 | 9.24E-09 | 0.00 | 10200403 | 6 | 2.08E-07 | 1.59E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | 10100401 | 12 | 1.14E-06 | 2.70E-07 | 0.12 | 10200401 | 18 | 3.35E-05 | 3.44E-05 | 0.01 | Yes |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | 10100401 | 12 | 1.14E-06 | 2.70E-07 | 0.12 | 10200402 | 3 | 2.16E-05 | 3.99E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | 10100401 | 12 | 1.14E-06 | 2.70E-07 | 0.12 | 10200403 | 6 | 3.88E-06 | 3.09E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | 10200401 | 18 | 3.35E-05 | 3.44E-05 | 0.01 | 10200402 | 3 | 2.16E-05 | 3.99E-06 | 1.00 | No |

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | 10200401 | 18 | 3.35E-05 | 3.44E-05 | 0.01 | 10200403 | 6 | 3.88E-06 | 3.06E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | 10200402 | 3 | 2.16E-05 | 3.99E-06 | 1.00 | 10200403 | 6 | 3.88E-06 | 3.06E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 10100401 | 12 | 1.10E-06 | 2.11E-07 | 0.09 | 10200401 | 18 | 3.38E-05 | 3.41E-05 | 0.02 | Yes |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 10100401 | 12 | 1.10E-06 | 2.11E-07 | 0.09 | 10200402 | 3 | 1.16E-06 | 1.44E-06 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 10100401 | 12 | 1.10E-06 | 2.11E-07 | 0.09 | 10200403 | 6 | 7.06E-07 | 9.66E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 10200401 | 18 | 3.38E-05 | 3.41E-05 | 0.02 | 10200402 | 3 | 1.16E-06 | 1.44E-06 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 10200401 | 18 | 3.38E-05 | 3.41E-05 | 0.02 | 10200403 | 6 | 7.06E-07 | 9.66E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 10200402 | 3 | 1.16E-06 | 1.44E-06 | 0.00 | 10200403 | 6 | 7.06E-07 | 9.66E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | 10100401 | 12 | 3.24E-06 | 4.80E-06 | 0.87 | 10200401 | 18 | 3.43E-05 | 3.52E-05 | 0.17 | Yes |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | 10100401 | 12 | 3.24E-06 | 4.80E-06 | 0.87 | 10200402 | 3 | 2.86E-05 | 9.51E-06 | 0.58 | Yes |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | 10100401 | 12 | 3.24E-06 | 4.80E-06 | 0.87 | 10200403 | 6 | 7.78E-06 | 6.84E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | 10200401 | 18 | 3.43E-05 | 3.52E-05 | 0.17 | 10200402 | 3 | 2.86E-05 | 9.51E-06 | 0.58 | No |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | 10200401 | 18 | 3.43E-05 | 3.52E-05 | 0.17 | 10200403 | 6 | 7.78E-06 | 6.84E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | 10200402 | 3 | 2.86E-05 | 9.51E-06 | 0.58 | 10200403 | 6 | 7.78E-06 | 6.84E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | 10100401 | 12 | 3.75E-06 | 3.60E-06 | 0.90 | 10200401 | 18 | 3.45E-05 | 3.34E-05 | 0.05 | Yes |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | 10100401 | 12 | 3.75E-06 | 3.60E-06 | 0.90 | 10200402 | 3 | 7.01E-05 | 1.63E-05 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | 10100401 | 12 | 3.75E-06 | 3.60E-06 | 0.90 | 10200403 | 6 | 4.65E-06 | 3.87E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | 10200401 | 18 | 3.45E-05 | 3.34E-05 | 0.05 | 10200402 | 3 | 7.01E-05 | 1.63E-05 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | 10200401 | 18 | 3.45E-05 | 3.34E-05 | 0.05 | 10200403 | 6 | 4.65E-06 | 3.87E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | 10200402 | 3 | 7.01E-05 | 1.63E-05 | 1.00 | 10200403 | 6 | 4.65E-06 | 3.87E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 10100401 | 12 | 1.26E-06 | 6.42E-07 | 0.21 | 10200401 | 18 | 3.36E-05 | 3.43E-05 | 0.01 | Yes |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 10100401 | 12 | 1.26E-06 | 6.42E-07 | 0.21 | 10200402 | 3 | 5.01E-07 | 5.86E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 10100401 | 12 | 1.26E-06 | 6.42E-07 | 0.21 | 10200403 | 6 | 4.59E-07 | 2.01E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 10200401 | 18 | 3.36E-05 | 3.43E-05 | 0.01 | 10200402 | 3 | 5.01E-07 | 5.86E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 10200401 | 18 | 3.36E-05 | 3.43E-05 | 0.01 | 10200403 | 6 | 4.59E-07 | 2.01E-07 | 0.00 | Yes |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 10200402 | 3 | 5.01E-07 | 5.86E-07 | 0.00 | 10200403 | 6 | 4.59E-07 | 2.01E-07 | 0.00 | No |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | 10100401 | 12 | 3.21E-03 | 2.85E-03 | 1.00 | 10200401 | 18 | 7.39E-03 | 1.60E-02 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | 10100401 | 12 | 3.21E-03 | 2.85E-03 | 1.00 | 10200402 | 3 | 9.77E-05 | 6.35E-05 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | 10100401 | 12 | 3.21E-03 | 2.85E-03 | 1.00 | 10200403 | 6 | 6.07E-05 | 1.55E-05 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | 10200401 | 18 | 7.39E-03 | 1.60E-02 | 1.00 | 10200402 | 3 | 9.77E-05 | 6.35E-05 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | 10200401 | 18 | 7.39E-03 | 1.60E-02 | 1.00 | 10200403 | 6 | 6.07E-05 | 1.55E-05 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | 10200402 | 3 | 9.77E-05 | 6.35E-05 | 1.00 | 10200403 | 6 | 6.07E-05 | 1.55E-05 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | 10100401 | 12 | 7.47E-06 | 7.63E-06 | 0.97 | 10200401 | 18 | 5.21E-05 | 7.86E-05 | 0.46 | No |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | 10100401 | 12 | 7.47E-06 | 7.63E-06 | 0.97 | 10200402 | 3 | 6.00E-05 | 3.15E-05 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | 10100401 | 12 | 7.47E-06 | 7.63E-06 | 0.97 | 10200403 | 6 | 1.10E-05 | 6.39E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | 10200401 | 18 | 5.21E-05 | 7.86E-05 | 0.46 | 10200402 | 3 | 6.00E-05 | 3.15E-05 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | 10200401 | 18 | 5.21E-05 | 7.86E-05 | 0.46 | 10200403 | 6 | 1.10E-05 | 6.39E-06 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | 10200402 | 3 | 6.00E-05 | 3.15E-05 | 1.00 | 10200403 | 6 | 1.10E-05 | 6.39E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | 10100401 | 12 | 2.50E-06 | 3.53E-06 | 0.78 | 10200401 | 18 | 3.36E-05 | 3.43E-05 | 0.01 | Yes |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | 10100401 | 12 | 2.50E-06 | 3.53E-06 | 0.78 | 10200402 | 3 | 1.87E-06 | 1.90E-06 | 0.70 | No |

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | 10100401 | 12 | 2.50E-06 | 3.53E-06 | 0.78 | 10200403 | 6 | 4.01E-06 | 4.42E-06 | 0.97 | No |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | 10200401 | 18 | 3.35E-05 | 3.43E-05 | 0.01 | 10200402 | 3 | 1.87E-06 | 1.90E-06 | 0.70 | No |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | 10200401 | 18 | 3.35E-05 | 3.43E-05 | 0.01 | 10200403 | 6 | 4.01E-06 | 4.42E-06 | 0.97 | No |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | 10200402 | 3 | 1.87E-06 | 1.90E-06 | 0.70 | 10200403 | 6 | 4.01E-06 | 4.42E-06 | 0.97 | No |
| Boiler, Fuel Oil | SVOC | 2-Chloronaphthalene | lbs/Mgal | 10200402 | 3 | 2.84E-07 | 9.93E-08 | 0.00 | 10200403 | 3 | 2.27E-08 | 6.16E-09 | 0.00 | Yes |
| Boiler, Fuel Oil | SVOC | 2-Methylnaphthalene | lbs/Mgal | 10200402 | 3 | 1.49E-04 | 4.87E-05 | 1.00 | 10200403 | 3 | 1.09E-05 | 1.25E-06 | 1.00 | Yes |
| Boiler, Fuel Oil | SVOC | Perylene | lbs/Mgal | 10200402 | 3 | 9.17E-07 | 1.52E-06 | 0.00 | 10200403 | 3 | 1.09E-07 | 9.58E-08 | 0.00 | No |
| Boiler, Fuel Oil | VOC | Acetaldehyde | lbs/Mgal | 10100401 | 3 | 5.33E-03 | 4.23E-03 | 0.82 | 10200401 | 3 | 4.86E-03 | 4.86E-04 | 0.00 | No |
| Boiler, Fuel Oil | VOC | Acetaldehyde | lbs/Mgal | 10100401 | 3 | 5.33E-03 | 4.23E-03 | 0.82 | 10200403 | 6 | 1.04E-03 | 1.20E-03 | 0.75 | Yes |
| Boiler, Fuel Oil | VOC | Acetaldehyde | lbs/Mgal | 10200401 | 3 | 4.86E-03 | 4.86E-04 | 0.00 | 10200403 | 6 | 1.04E-03 | 1.20E-03 | 0.75 | Yes |
| Boiler, Fuel Oil | VOC | Acrolein | lbs/Mgal | 10200401 | 3 | 4.86E-03 | 4.86E-04 | 0.00 | 10200403 | 3 | 2.17E-03 | 1.03E-03 | 0.00 | Yes |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | 10100401 | 9 | 3.49E-04 | 2.54E-05 | 0.00 | 10200401 | 21 | 4.00E-02 | 1.12E-01 | 0.97 | No |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | 10100401 | 9 | 3.49E-04 | 2.54E-05 | 0.00 | 10200402 | 2 | 3.82E-03 | 6.70E-04 | 0.56 | Yes |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | 10100401 | 9 | 3.49E-04 | 2.54E-05 | 0.00 | 10200403 | 3 | 4.63E-03 | 1.51E-04 | 0.00 | Yes |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | 10200401 | 21 | 4.00E-02 | 1.12E-01 | 0.97 | 10200402 | 2 | 3.82E-03 | 6.70E-04 | 0.56 | No |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | 10200401 | 21 | 4.00E-02 | 1.12E-01 | 0.97 | 10200403 | 3 | 4.63E-03 | 1.51E-04 | 0.00 | No |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | 10200402 | 2 | 3.82E-03 | 6.70E-04 | 0.56 | 10200403 | 3 | 4.63E-03 | 1.51E-04 | 0.00 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | 10100401 | 9 | 4.90E-02 | 5.13E-02 | 1.00 | 10200401 | 12 | 8.82E-02 | 1.52E-01 | 0.99 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | 10100401 | 9 | 4.90E-02 | 5.13E-02 | 1.00 | 10200402 | 3 | 1.02E-03 | 7.55E-04 | 0.48 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | 10100401 | 9 | 4.90E-02 | 5.13E-02 | 1.00 | 10200403 | 6 | 6.72E-03 | 6.12E-03 | 0.18 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | 10200401 | 12 | 8.82E-02 | 1.52E-01 | 0.99 | 10200402 | 3 | 1.02E-03 | 7.55E-04 | 0.48 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | 10200401 | 12 | 8.82E-02 | 1.52E-01 | 0.99 | 10200403 | 6 | 6.72E-03 | 6.12E-03 | 0.18 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | 10200402 | 3 | 1.02E-03 | 7.55E-04 | 0.48 | 10200403 | 6 | 6.72E-03 | 6.12E-03 | 0.18 | No |
| Boiler, Fuel Oil | VOC | Toluene | lbs/Mgal | 10200401 | 3 | 8.85E-03 | 3.86E-03 | 1.00 | 10200403 | 3 | 5.75E-03 | 1.88E-04 | 0.00 | No |
| Boiler, Fuel Oil | VOC | Xylene (Total) | lbs/Mgal | 10200401 | 3 | 7.52E-03 | 4.61E-03 | 1.00 | 10200403 | 3 | 1.10E-02 | 3.61E-04 | 0.00 | No |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 30904010 | 3 | 6.67E-02 | 4.53E-02 | 1.00 | 30904020 | 5 | 1.04E+01 | 1.45E+01 | 1.00 | No |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 30904010 | 3 | 7.64E+00 | 3.38E+00 | 1.00 | 30904020 | 6 | 1.73E+02 | 3.04E+02 | 1.00 | No |
| Coating, Powder | Metals | Nickel | lbs/ton powder | 30904010 | 3 | 3.08E+00 | 7.58E-01 | 1.00 | 30904020 | 1 | 3.21E+00 | | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 20100102 | 6 | 3.35E-03 | 3.67E-03 | 0.00 | 20200102 | 15 | 2.08E-03 | 5.18E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 20100102 | 6 | 3.35E-03 | 3.67E-03 | 0.00 | 20300101 | 6 | 8.71E-04 | 1.33E-03 | 0.84 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 20200102 | 15 | 2.08E-03 | 5.18E-03 | 1.00 | 20300101 | 6 | 8.71E-04 | 1.33E-03 | 0.84 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 20100102 | 6 | 3.35E-03 | 3.67E-03 | 0.00 | 20200102 | 15 | 2.87E-03 | 4.43E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 20100102 | 6 | 3.35E-03 | 3.67E-03 | 0.00 | 20300101 | 6 | 9.45E-04 | 7.35E-04 | 0.90 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 20200102 | 15 | 2.87E-03 | 4.43E-03 | 1.00 | 20300101 | 6 | 9.45E-04 | 7.35E-04 | 0.90 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 20100102 | 6 | 4.02E-03 | 2.94E-03 | 0.17 | 20200102 | 15 | 5.80E-04 | 8.01E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 20100102 | 6 | 4.02E-03 | 2.94E-03 | 0.17 | 20300101 | 6 | 2.67E-04 | 2.33E-05 | 0.47 | Yes |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 20200102 | 15 | 5.80E-04 | 8.01E-04 | 1.00 | 20300101 | 6 | 2.67E-04 | 2.33E-05 | 0.47 | No |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 20100102 | 6 | 3.90E-03 | 3.06E-03 | 0.14 | 20200102 | 15 | 1.61E-04 | 1.76E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 20100102 | 6 | 3.90E-03 | 3.06E-03 | 0.14 | 20300101 | 6 | 1.42E-04 | 1.52E-04 | 0.01 | Yes |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 20200102 | 15 | 1.61E-04 | 1.76E-04 | 1.00 | 20300101 | 6 | 1.42E-04 | 1.52E-04 | 0.01 | No |

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Difference at 95%Confidence |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 20100102 | 6 | 3.35E-03 | 3.67E-03 | 0.00 | 20200102 | 15 | 1.81E-05 | 2.28E-05 | 0.19 | Yes |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 20100102 | 6 | 3.35E-03 | 3.67E-03 | 0.00 | 20300101 | 6 | 1.40E-04 | 1.53E-04 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 20200102 | 15 | 1.81E-05 | 2.28E-05 | 0.19 | 20300101 | 6 | 1.40E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 20100102 | 3 | 6.70E-03 | 1.84E-05 | 0.00 | 20200102 | 12 | 8.31E-05 | 7.26E-05 | 0.63 | Yes |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 20100102 | 3 | 6.70E-03 | 1.84E-05 | 0.00 | 20300101 | 6 | 1.44E-04 | 1.49E-04 | 0.03 | Yes |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 20200102 | 12 | 8.31E-05 | 7.26E-05 | 0.63 | 20300101 | 6 | 1.44E-04 | 1.49E-04 | 0.03 | No |
| ICE, Diesel | PAH | Benzo(b+k)fluoranthene | lbs/Mgal | 20100102 | 3 | 2.85E-06 | 1.15E-07 | 0.00 | 20200102 | 3 | 1.44E-08 | 2.72E-08 | 0.00 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 20100102 | 6 | 3.62E-03 | 3.48E-03 | 0.05 | 20200102 | 15 | 4.52E-05 | 4.40E-05 | 0.65 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 20100102 | 6 | 3.62E-03 | 3.48E-03 | 0.05 | 20300101 | 6 | 1.42E-04 | 1.51E-04 | 0.02 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 20200102 | 15 | 4.52E-05 | 4.40E-05 | 0.65 | 20300101 | 6 | 1.42E-04 | 1.51E-04 | 0.02 | Yes |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 20100102 | 3 | 6.70E-03 | 1.84E-05 | 0.00 | 20200102 | 12 | 2.42E-05 | 2.33E-05 | 0.70 | Yes |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 20100102 | 3 | 6.70E-03 | 1.84E-05 | 0.00 | 20300101 | 6 | 1.41E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 20200102 | 12 | 2.42E-05 | 2.33E-05 | 0.70 | 20300101 | 6 | 1.41E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 20100102 | 6 | 3.55E-03 | 3.42E-03 | 0.05 | 20200102 | 15 | 7.43E-05 | 7.53E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 20100102 | 6 | 3.55E-03 | 3.42E-03 | 0.05 | 20300101 | 6 | 1.53E-04 | 1.39E-04 | 0.09 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 20200102 | 15 | 7.43E-05 | 7.53E-05 | 1.00 | 20300101 | 6 | 1.53E-04 | 1.39E-04 | 0.09 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 20100102 | 6 | 3.49E-03 | 3.51E-03 | 0.04 | 20200102 | 15 | 4.27E-05 | 4.44E-05 | 0.28 | Yes |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 20100102 | 6 | 3.49E-03 | 3.51E-03 | 0.04 | 20300101 | 6 | 1.40E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 20200102 | 15 | 4.27E-05 | 4.44E-05 | 0.28 | 20300101 | 6 | 1.40E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 20100102 | 6 | 4.00E-03 | 2.96E-03 | 0.16 | 20200102 | 15 | 9.45E-04 | 8.20E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 20100102 | 6 | 4.00E-03 | 2.96E-03 | 0.16 | 20300101 | 6 | 2.84E-04 | 2.40E-05 | 0.51 | Yes |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 20200102 | 15 | 9.45E-04 | 8.20E-04 | 1.00 | 20300101 | 6 | 2.84E-04 | 2.40E-05 | 0.51 | No |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 20100102 | 6 | 2.11E-02 | 1.61E-02 | 0.96 | 20200102 | 15 | 3.82E-03 | 3.61E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 20100102 | 6 | 2.11E-02 | 1.61E-02 | 0.96 | 20300101 | 6 | 6.49E-04 | 4.23E-04 | 0.78 | Yes |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 20200102 | 15 | 3.82E-03 | 3.61E-03 | 1.00 | 20300101 | 6 | 6.49E-04 | 4.23E-04 | 0.78 | Yes |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 20100102 | 6 | 3.46E-03 | 3.55E-03 | 0.03 | 20200102 | 15 | 3.94E-05 | 4.34E-05 | 0.34 | Yes |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 20100102 | 6 | 3.46E-03 | 3.55E-03 | 0.03 | 20300101 | 6 | 1.40E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 20200102 | 15 | 3.94E-05 | 4.34E-05 | 0.34 | 20300101 | 6 | 1.40E-04 | 1.53E-04 | 0.00 | Yes |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 20100102 | 6 | 5.64E-02 | 4.16E-02 | 1.00 | 20200102 | 15 | 3.92E-02 | 5.28E-02 | 1.00 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 20100102 | 6 | 5.64E-02 | 4.16E-02 | 1.00 | 20300101 | 6 | 1.56E-02 | 1.41E-02 | 1.00 | Yes |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 20200102 | 15 | 3.92E-02 | 5.28E-02 | 1.00 | 20300101 | 6 | 1.56E-02 | 1.41E-02 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 20100102 | 6 | 3.90E-02 | 2.99E-02 | 1.00 | 20200102 | 15 | 7.27E-03 | 7.13E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 20100102 | 6 | 3.90E-02 | 2.99E-02 | 1.00 | 20300101 | 6 | 3.11E-03 | 3.07E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 20200102 | 15 | 7.27E-03 | 7.13E-03 | 1.00 | 20300101 | 6 | 3.11E-03 | 3.07E-03 | 1.00 | No |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 20100102 | 6 | 8.42E-03 | 3.11E-03 | 0.73 | 20200102 | 15 | 6.57E-04 | 4.83E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 20100102 | 6 | 8.42E-03 | 3.11E-03 | 0.73 | 20300101 | 6 | 2.37E-04 | 5.42E-05 | 0.41 | Yes |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 20200102 | 15 | 6.57E-04 | 4.83E-04 | 1.00 | 20300101 | 6 | 2.37E-04 | 5.42E-05 | 0.41 | No |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 20100102 | 3 | 3.25E-02 | 4.18E-03 | 1.00 | 20200102 | 9 | 1.15E-01 | 4.80E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 20100102 | 3 | 3.25E-02 | 4.18E-03 | 1.00 | 20300101 | 3 | 2.85E-01 | 4.33E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 20200102 | 9 | 1.15E-01 | 4.80E-02 | 1.00 | 20300101 | 3 | 2.85E-01 | 4.33E-02 | 1.00 | Yes |

TABLE A6-1. SCC COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description SCC | Size | Average | Standard Deviation | Detect Ratio | Description SCC | Size | Average | Standard Deviation | Detect Ratio | |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 20100102 | 6 | 1.11E+00 | 1.14E+00 | 1.00 | 20200102 | 15 | 7.47E-02 | 9.47E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 20100102 | 6 | 1.11E+00 | 1.14E+00 | 1.00 | 20300101 | 6 | 8.79E-02 | 6.83E-02 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 20200102 | 15 | 7.47E-02 | 9.47E-02 | 1.00 | 20300101 | 6 | 8.79E-02 | 6.83E-02 | 1.00 | No |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 20200102 | 9 | 3.67E-01 | 1.62E-01 | 1.00 | 20300101 | 3 | 2.97E-01 | 4.54E-02 | 1.00 | No |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 20200102 | 9 | 4.92E-02 | 1.88E-02 | 1.00 | 20300101 | 3 | 8.50E-02 | 2.38E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Xylene (Total) | lbs/Mgal | 20200102 | 9 | 3.13E-02 | 1.08E-02 | 1.00 | 20300101 | 3 | 1.51E-02 | 6.93E-03 | 1.00 | Yes |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | 20100201 | 16 | 9.09E-02 | 7.71E-03 | 1.00 | 20200203 | 24 | 1.33E-02 | 9.19E-03 | 0.38 | Yes |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 20100201 | 12 | 3.88E+00 | 1.35E+00 | 1.00 | 20200201 | 3 | 4.68E+00 | 8.15E-01 | 1.00 | No |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 20100201 | 12 | 3.88E+00 | 1.35E+00 | 1.00 | 20200203 | 25 | 9.17E-01 | 2.02E+00 | 1.00 | Yes |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 20200201 | 3 | 4.68E+00 | 8.15E-01 | 1.00 | 20200203 | 25 | 9.17E-01 | 2.02E+00 | 1.00 | Yes |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | |
| Asphalt Prod., Oil | Metals | Arsenic | lbs/ton production | C/BH | 5 | 4.11E-06 | 7.38E-07 | 0.21 | C/WS | 3 | 2.37E-06 | 1.60E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Beryllium | lbs/ton production | C/BH | 5 | 3.83E-07 | 6.96E-08 | 0.00 | C/WS | 3 | 4.16E-07 | 2.60E-08 | 0.00 | No |
| Asphalt Prod., Oil | Metals | Cadmium | lbs/ton production | C/BH | 5 | 7.72E-07 | 1.61E-07 | 0.00 | C/WS | 3 | 7.67E-07 | 9.69E-07 | 0.82 | No |
| Asphalt Prod., Oil | Metals | Chromium (Hex) | lbs/ton production | C/BH | 5 | 6.26E-07 | 1.33E-07 | 0.00 | C/WS | 3 | 1.04E-07 | 3.14E-08 | 1.00 | Yes |
| Asphalt Prod., Oil | Metals | Chromium (Total) | lbs/ton production | C/BH | 5 | 1.13E-05 | 9.61E-06 | 1.00 | C/WS | 3 | 9.04E-06 | 7.40E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Copper | lbs/ton production | C/BH | 5 | 7.89E-06 | 2.84E-06 | 1.00 | C/WS | 3 | 6.01E-06 | 2.96E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Lead | lbs/ton production | C/BH | 5 | 3.74E-06 | 2.24E-06 | 1.00 | C/WS | 3 | 1.41E-06 | 5.60E-07 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Manganese | lbs/ton production | C/BH | 5 | 2.09E-05 | 2.24E-05 | 1.00 | C/WS | 3 | 1.50E-04 | 7.78E-05 | 1.00 | Yes |
| Asphalt Prod., Oil | Metals | Mercury | lbs/ton production | C/BH | 5 | 3.67E-06 | 3.32E-06 | 1.00 | C/WS | 3 | 7.02E-06 | 5.71E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Nickel | lbs/ton production | C/BH | 5 | 1.98E-04 | 2.55E-04 | 1.00 | C/WS | 3 | 6.42E-06 | 2.63E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Selenium | lbs/ton production | C/BH | 5 | 4.64E-06 | 1.38E-06 | 0.20 | C/WS | 3 | 2.08E-07 | 1.40E-08 | 0.00 | Yes |
| Asphalt Prod., Oil | Metals | Zinc | lbs/ton production | C/BH | 5 | 1.62E-04 | 1.43E-04 | 1.00 | C/WS | 3 | 2.62E-05 | 8.55E-06 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Acenaphthene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 3.06E-07 | 8.20E-08 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Acenaphthylene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 5.26E-07 | 2.35E-07 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Anthracene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 5.74E-08 | 1.78E-08 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(a)anthracene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 1.11E-08 | 2.14E-09 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(a)pyrene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 1.84E-09 | 1.84E-09 | 0.72 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(b)fluoranthene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 2.10E-09 | 2.45E-10 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(g,h,i)perylene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 1.20E-09 | 2.59E-10 | 0.75 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(k)fluoranthene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Chrysene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Dibenz(a,h)anthracene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Fluoranthene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 3.57E-08 | 9.68E-09 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Fluorene | lbs/ton production | C/BH | 5 | 3.17E-06 | 3.24E-06 | 1.00 | C/WS | 3 | 6.58E-07 | 2.07E-07 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Naphthalene | lbs/ton production | C/BH | 5 | 2.38E-04 | 2.60E-04 | 1.00 | C/WS | 3 | 3.08E-05 | 2.70E-06 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Phenanthrene | lbs/ton production | C/BH | 5 | 2.73E-06 | 2.52E-06 | 1.00 | C/WS | 3 | 6.64E-07 | 2.18E-07 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Pyrene | lbs/ton production | C/BH | 5 | 3.52E-07 | 1.88E-07 | 0.00 | C/WS | 3 | 5.62E-06 | 2.23E-06 | 1.00 | Yes |
| Asphalt Prod., Oil | VOC | Benzene | lbs/ton production | C/BH | 5 | 5.00E-04 | 1.28E-05 | 1.00 | C/WS | 3 | 5.90E-05 | 1.11E-05 | 1.00 | Yes |
| Asphalt Prod., Oil | VOC | Formaldehyde | lbs/ton production | C/BH | 5 | 5.44E-04 | 4.15E-04 | 1.00 | C/WS | 3 | 1.38E-04 | 2.29E-05 | 1.00 | No |
| Boiler, Ref. Gas | SVOC | Phenol | lbs/MMcf | NONE | 12 | 2.65E-03 | 1.91E-03 | 0.95 | SCR | 3 | 7.60E-04 | 4.53E-05 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | NONE | 16 | 1.19E-01 | 2.38E-01 | 1.00 | SCR | 3 | 2.13E-03 | 6.87E-04 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Benzene | lbs/MMcf | NONE | 16 | 1.28E-01 | 1.96E-01 | 0.62 | SCR | 3 | 5.04E-01 | 7.73E-01 | 0.92 | No |
| Boiler, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | NONE | 16 | 3.97E-01 | 8.05E-01 | 1.00 | SCR | 3 | 1.93E-02 | 1.92E-02 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | NONE | 19 | 5.42E-01 | 4.03E-01 | 0.00 | SCR | 3 | 6.38E-02 | 2.02E-03 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Toluene | lbs/MMcf | NONE | 9 | 3.02E-01 | 3.34E-01 | 0.85 | SCR | 3 | 1.71E+00 | 2.85E+00 | 0.97 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:4D 2378 | lbs/1000 Barrels | AC | 3 | 1.93E-11 | 1.33E-11 | 0.00 | NONE | 3 | 1.46E-11 | 5.15E-12 | 0.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:4D Total | lbs/1000 Barrels | AC | 3 | 1.93E-11 | 1.33E-11 | 0.00 | NONE | 3 | 1.46E-11 | 5.15E-12 | 0.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:5D 12378 | lbs/1000 Barrels | AC | 3 | 8.57E-12 | 1.81E-12 | 0.00 | NONE | 3 | 4.19E-11 | 1.88E-11 | 0.42 | Yes |
| Catalytic Reformer | Dioxin/Furan | Dioxin:5D Total | lbs/1000 Barrels | AC | 3 | 3.95E-11 | 4.86E-11 | 0.00 | NONE | 3 | 1.11E-10 | 7.82E-11 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:6D 123478 | lbs/1000 Barrels | AC | 3 | 2.39E-11 | 9.02E-12 | 0.00 | NONE | 3 | 3.73E-11 | 5.00E-12 | 0.36 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:6D 123678 | lbs/1000 Barrels | AC | 3 | 2.61E-11 | 6.53E-12 | 0.00 | NONE | 3 | 3.44E-11 | 1.52E-11 | 0.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:6D 123789 | lbs/1000 Barrels | AC | 3 | 2.29E-11 | 9.46E-12 | 0.00 | NONE | 3 | 3.18E-11 | 9.28E-12 | 0.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:6D Total | lbs/1000 Barrels | AC | 3 | 8.66E-11 | 8.20E-11 | 0.70 | NONE | 3 | 3.99E-10 | 2.69E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:7D 1234678 | lbs/1000 Barrels | AC | 3 | 1.19E-10 | 2.74E-11 | 0.72 | NONE | 3 | 2.19E-10 | 1.26E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Dioxin:7D Total | lbs/1000 Barrels | AC | 3 | 1.92E-10 | 8.60E-11 | 0.82 | NONE | 3 | 4.33E-10 | 3.01E-10 | 1.00 | No |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | |
| Catalytic Reformer | Dioxin/Furan | Dioxin:8D | lbs/1000 Barrels | AC | 3 | 8.37E-10 | 4.97E-10 | 1.00 | NONE | 3 | 7.95E-10 | 1.07E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:4F 2378 | lbs/1000 Barrels | AC | 3 | 1.79E-11 | 1.16E-11 | 0.00 | NONE | 3 | 7.22E-11 | 5.40E-11 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:4F Total | lbs/1000 Barrels | AC | 3 | 2.82E-10 | 2.46E-10 | 1.00 | NONE | 3 | 8.42E-10 | 3.95E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:5F 12378 | lbs/1000 Barrels | AC | 3 | 3.37E-11 | 1.46E-11 | 0.61 | NONE | 3 | 1.46E-10 | 8.94E-11 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:5F 23478 | lbs/1000 Barrels | AC | 3 | 6.64E-11 | 3.01E-11 | 0.73 | NONE | 3 | 3.41E-10 | 2.87E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:5F Total | lbs/1000 Barrels | AC | 3 | 4.47E-10 | 2.25E-10 | 1.00 | NONE | 3 | 1.59E-09 | 1.23E-09 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:6F 123478 | lbs/1000 Barrels | AC | 3 | 7.44E-11 | 2.14E-11 | 0.77 | NONE | 3 | 3.39E-10 | 1.81E-10 | 1.00 | Yes |
| Catalytic Reformer | Dioxin/Furan | Furan:6F 123678 | lbs/1000 Barrels | AC | 3 | 9.99E-11 | 4.77E-11 | 0.81 | NONE | 3 | 3.36E-10 | 1.44E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:6F 123789 | lbs/1000 Barrels | AC | 3 | 3.31E-11 | 1.47E-11 | 0.00 | NONE | 3 | 4.26E-11 | 7.73E-12 | 0.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:6F 234678 | lbs/1000 Barrels | AC | 3 | 1.96E-10 | 1.32E-10 | 0.86 | NONE | 3 | 3.81E-10 | 1.85E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:6F Total | lbs/1000 Barrels | AC | 3 | 7.39E-10 | 4.51E-10 | 1.00 | NONE | 3 | 2.48E-09 | 9.39E-10 | 1.00 | Yes |
| Catalytic Reformer | Dioxin/Furan | Furan:7F 1234678 | lbs/1000 Barrels | AC | 3 | 2.90E-10 | 3.81E-10 | 0.99 | NONE | 3 | 9.16E-10 | 1.06E-09 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:7F 1234789 | lbs/1000 Barrels | AC | 3 | 1.73E-10 | 2.60E-10 | 0.91 | NONE | 3 | 2.59E-10 | 2.02E-10 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:7F Total | lbs/1000 Barrels | AC | 3 | 5.40E-10 | 7.58E-10 | 0.99 | NONE | 3 | 1.52E-09 | 1.74E-09 | 1.00 | No |
| Catalytic Reformer | Dioxin/Furan | Furan:8F | lbs/1000 Barrels | AC | 3 | 1.48E-10 | 9.99E-11 | 0.43 | NONE | 3 | 3.14E-10 | 3.81E-10 | 1.00 | No |
| Coating, Base/Catalyst/Water Mix | Metals | Chromium (Hex) | lbs/gal paint | AF | 9 | 7.76E-05 | 8.77E-06 | 0.95 | S | 3 | 9.43E-04 | 5.91E-05 | 1.00 | Yes |
| Coating, Base/Catalyst/Water Mix | Metals | Chromium (Total) | lbs/gal paint | AF | 9 | 9.58E-05 | 9.45E-05 | 0.95 | S | 3 | 9.48E-04 | 1.09E-04 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | AF | 2 | 4.81E-01 | 1.69E-01 | 1.00 | NONE | 6 | 8.51E+00 | 1.37E+01 | 1.00 | No |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | AF | 2 | 5.88E-01 | 3.06E-01 | 1.00 | NONE | 7 | 1.52E+02 | 2.84E+02 | 1.00 | No |
| Coating, Powder | Metals | Nickel | lbs/ton powder | AE | 1 | 3.21E+00 | | 1.00 | NONE | 3 | 3.08E+00 | 7.56E-01 | 1.00 | No |
| Dryer, Pot ash | Metals | Arsenic | lbs/ton ore | BH | 3 | 2.40E-03 | 5.74E-04 | 1.00 | S | 3 | 4.86E-03 | 6.08E-03 | 1.00 | No |
| Dryer, Pot ash | Metals | Beryllium | lbs/ton ore | BH | 3 | 2.87E-04 | 1.22E-04 | 0.00 | S | 3 | 1.04E-05 | 5.10E-06 | 0.42 | Yes |
| Dryer, Pot ash | Metals | Lead | lbs/ton ore | BH | 3 | 1.43E-03 | 6.12E-04 | 0.00 | S | 3 | 5.20E-05 | 2.59E-05 | 0.42 | Yes |
| Dryer, Pot ash | SVOC | 1,2-Dichlorobenzene | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | SVOC | Ethylbenzene | lbs/ton ore | BH | 3 | 3.58E-04 | 5.66E-04 | 0.93 | S | 3 | 8.79E-06 | 5.25E-07 | 0.00 | No |
| Dryer, Pot ash | VOC | 1,1,1-Trichloroethane | lbs/ton ore | BH | 3 | 6.76E-03 | 6.26E-03 | 1.00 | S | 3 | 6.18E-05 | 1.04E-04 | 0.98 | No |
| Dryer, Pot ash | VOC | 1,1,2,2-Tetrachloroethane | lbs/ton ore | BH | 3 | 6.30E-04 | 5.13E-04 | 0.96 | S | 3 | 3.64E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | 1,1,2-Trichloroethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | 1,1-Dichloroethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | 1,1-Dichloroethene | lbs/ton ore | BH | 3 | 6.43E-05 | 4.76E-05 | 0.61 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | 1,2-Dichloroethane | lbs/ton ore | BH | 3 | 7.24E-05 | 6.15E-05 | 0.66 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | 1,2-Dichloroethene | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | 1,2-Dichloropropane | lbs/ton ore | BH | 3 | 1.19E-04 | 9.51E-05 | 0.56 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | Acetone | lbs/ton ore | BH | 1 | 4.43E-03 | | 0.00 | S | 3 | 3.38E+00 | 5.73E+00 | 1.00 | No |
| Dryer, Pot ash | VOC | Benzene | lbs/ton ore | BH | 3 | 1.33E-02 | 6.93E-03 | 1.00 | S | 3 | 1.63E-04 | 1.18E-04 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Bromodichloromethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 2 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Bromoform | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Bromomethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Carbon disulfide | lbs/ton ore | BH | 1 | 6.00E-04 | | 1.00 | S | 3 | 2.24E-05 | 3.57E-05 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Carbon Tetrachloride | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Chlorobenzene | lbs/ton ore | BH | 3 | 7.43E-04 | 2.25E-04 | 1.00 | S | 2 | 2.73E-06 | 1.29E-06 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Chloroethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Chloroform | lbs/ton ore | BH | 3 | 1.10E-04 | 1.39E-04 | 0.62 | S | 3 | 8.79E-06 | 5.25E-07 | 0.00 | No |
| Dryer, Pot ash | VOC | Chloromethane | lbs/ton ore | BH | 3 | 3.34E-04 | 2.51E-04 | 0.96 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | Dibromochloromethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Dichloromethane | lbs/ton ore | BH | 3 | 1.38E-01 | 1.46E-01 | 1.00 | S | 3 | 1.19E-02 | 1.33E-02 | 1.00 | No |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | |
| Dryer, Pot ash | VOC | Formaldehyde | lbs/ton ore | BH | 3 | 2.29E-01 | 3.79E-02 | 1.00 | S | 3 | 6.42E-03 | 2.65E-03 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Methyl Ethyl Ketone | lbs/ton ore | BH | 3 | 1.49E-02 | 2.19E-02 | 0.10 | S | 3 | 1.81E-04 | 2.08E-04 | 1.00 | No |
| Dryer, Pot ash | VOC | Styrene | lbs/ton ore | BH | 2 | 7.36E-04 | 9.79E-04 | 0.97 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | Tetrachloroethene | lbs/ton ore | BH | 3 | 3.62E-05 | 1.57E-05 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Toluene | lbs/ton ore | BH | 2 | 1.13E-02 | 1.21E-03 | 1.00 | S | 3 | 8.48E-05 | 6.95E-05 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Trichloroethene | lbs/ton ore | BH | 3 | 1.83E-04 | 1.93E-04 | 0.73 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | No |
| Dryer, Pot ash | VOC | Trichlorofluoromethane | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Vinyl Chloride | lbs/ton ore | BH | 3 | 3.95E-05 | 8.25E-06 | 0.00 | S | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Xytene (Total) | lbs/ton ore | BH | 3 | 3.00E-03 | 6.23E-04 | 1.00 | S | 3 | 8.73E-05 | 1.45E-04 | 0.97 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | ESP | 3 | 2.89E-11 | 1.03E-11 | 0.00 | FF | 9 | 1.81E-10 | 2.00E-10 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | ESP | 3 | 3.28E-11 | 1.14E-11 | 0.00 | FE | 9 | 4.24E-10 | 5.18E-10 | 0.26 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | ESP | 3 | 4.36E-11 | 4.86E-12 | 0.29 | FF | 9 | 4.67E-10 | 6.12E-10 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | ESP | 3 | 6.38E-11 | 2.75E-11 | 0.60 | FF | 9 | 4.80E-10 | 6.33E-10 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | ESP | 3 | 4.77E-11 | 8.26E-12 | 0.40 | FF | 9 | 4.35E-10 | 6.00E-10 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | ESP | 3 | 6.90E-10 | 2.02E-10 | 1.00 | FE | 9 | 2.91E-09 | 4.25E-09 | 0.99 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | ESP | 3 | 8.69E-09 | 2.53E-09 | 1.00 | FE | 9 | 1.96E-08 | 2.97E-08 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | ESP | 3 | 1.29E-10 | 5.26E-11 | 1.00 | FE | 9 | 1.19E-09 | 2.02E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | ESP | 3 | 6.27E-11 | 2.28E-11 | 1.00 | FE | 9 | 1.11E-09 | 1.62E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | ESP | 3 | 1.03E-10 | 2.69E-11 | 1.00 | FE | 9 | 1.60E-09 | 2.47E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | ESP | 3 | 7.59E-11 | 3.96E-11 | 1.00 | FE | 9 | 5.60E-10 | 7.92E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | ESP | 3 | 1.12E-10 | 5.11E-11 | 1.00 | FE | 9 | 5.63E-10 | 7.72E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | ESP | 3 | 2.77E-11 | 2.63E-11 | 0.70 | FF | 9 | 2.47E-10 | 4.07E-10 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | ESP | 3 | 3.02E-10 | 2.69E-10 | 1.00 | FE | 9 | 8.16E-10 | 8.56E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | ESP | 3 | 1.37E-09 | 1.44E-09 | 1.00 | FE | 9 | 2.59E-09 | 3.59E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | ESP | 3 | 8.97E-11 | 9.71E-11 | 0.92 | FE | 9 | 2.80E-10 | 4.56E-10 | 0.56 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | ESP | 3 | 1.61E-09 | 1.85E-09 | 1.00 | FE | 9 | 1.87E-09 | 3.06E-09 | 0.82 | No |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | ESP | 3 | 7.04E-07 | 3.53E-07 | 1.00 | FE | 9 | 6.51E-06 | 7.92E-06 | 0.39 | No |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | ESP | 3 | 2.67E-05 | 1.31E-05 | 1.00 | FE | 9 | 3.18E-05 | 6.79E-05 | 0.95 | No |
| FBC, Biomass | PAH | Anthracene | lbs/ton | ESP | 3 | 5.68E-07 | 1.92E-07 | 1.00 | FE | 9 | 4.32E-06 | 5.98E-06 | 0.07 | No |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | ESP | 3 | 2.05E-08 | 4.18E-09 | 0.74 | FE | 9 | 4.05E-06 | 6.15E-06 | 0.01 | No |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | ESP | 3 | 1.64E-08 | 6.23E-10 | 0.00 | FE | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | ESP | 3 | 1.25E-07 | 1.66E-08 | 1.00 | FE | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | ESP | 3 | 5.94E-08 | 3.59E-08 | 1.00 | FF | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | ESP | 3 | 3.00E-08 | 9.68E-09 | 1.00 | FF | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Chrysene | lbs/ton | ESP | 3 | 2.35E-07 | 3.52E-08 | 1.00 | FF | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | ESP | 3 | 1.64E-08 | 6.23E-10 | 0.00 | FF | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | ESP | 3 | 6.73E-06 | 2.44E-06 | 1.00 | FE | 9 | 1.71E-05 | 2.39E-05 | 1.00 | No |
| FBC, Biomass | PAH | Fluorene | lbs/ton | ESP | 3 | 1.32E-06 | 6.67E-07 | 1.00 | FE | 9 | 4.59E-06 | 5.81E-06 | 0.13 | No |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | ESP | 3 | 2.47E-08 | 1.15E-08 | 0.78 | FF | 9 | 4.03E-06 | 6.17E-06 | 0.00 | No |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | ESP | 3 | 2.99E-04 | 9.94E-05 | 1.00 | FE | 9 | 2.40E-03 | 3.63E-03 | 1.00 | No |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | ESP | 3 | 1.92E-05 | 5.38E-06 | 1.00 | FE | 9 | 4.34E-05 | 6.02E-05 | 1.00 | No |
| FBC, Biomass | PAH | Pyrene | lbs/ton | ESP | 3 | 4.78E-06 | 1.66E-06 | 1.00 | FE | 9 | 1.69E-05 | 2.56E-05 | 1.00 | No |
| FBC, Biomass | PCB | PCB:Decachlorinated biphenyls | lbs/ton | ESP | 3 | 6.47E-10 | 2.09E-10 | 0.00 | FE | 6 | 3.68E-09 | 1.88E-09 | 0.69 | Yes |
| FBC, Biomass | PCB | PCB:Dichlorinated biphenyls | lbs/ton | ESP | 3 | 1.53E-08 | 4.82E-09 | 0.00 | FE | 6 | 8.88E-07 | 7.98E-07 | 0.94 | No |
| FBC, Biomass | PCB | PCB:Heptachlorinated biphenyls | lbs/ton | ESP | 3 | 7.62E-10 | 6.68E-11 | 0.00 | FE | 6 | 1.69E-08 | 1.46E-08 | 0.87 | No |
| FBC, Biomass | PCB | PCB:Hexachlorinated biphenyls | lbs/ton | ESP | 3 | 1.32E-09 | 6.27E-10 | 0.00 | FE | 6 | 3.32E-08 | 3.26E-08 | 1.00 | No |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | |
| FBC, Biomass | PCB | PCB:Monochlorinated biphenyls | lbs/ton | ESP | 3 | 2.43E-08 | 3.07E-09 | 1.00 | FF | 6 | 1.81E-07 | 1.55E-07 | 1.00 | No |
| FBC, Biomass | PCB | PCB:Nonachlorinated biphenyls | lbs/ton | ESP | 3 | 8.25E-10 | 2.77E-10 | 0.00 | FF | 6 | 3.04E-09 | 1.60E-09 | 0.67 | No |
| FBC, Biomass | PCB | PCB:Octachlorinated biphenyls | lbs/ton | ESP | 3 | 1.16E-09 | 2.65E-10 | 0.00 | FF | 6 | 5.04E-08 | 1.58E-08 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Pentachlorinated biphenyls | lbs/ton | ESP | 3 | 4.61E-09 | 1.92E-09 | 1.00 | FF | 6 | 6.06E-08 | 6.48E-08 | 0.98 | No |
| FBC, Biomass | PCB | PCB:Tetrachlorinated biphenyls | lbs/ton | ESP | 3 | 1.69E-08 | 4.54E-09 | 1.00 | FF | 6 | 1.85E-07 | 1.74E-07 | 1.00 | No |
| FBC, Biomass | PCB | PCB:Trichlorinated biphenyls | lbs/ton | ESP | 3 | 1.53E-08 | 4.09E-09 | 1.00 | FF | 6 | 2.16E-06 | 2.53E-06 | 1.00 | No |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | ESP | 3 | 3.66E-04 | 1.35E-04 | 1.00 | FF | 9 | 8.90E-03 | 1.11E-02 | 1.00 | No |
| Heater, Ref. Gas | Metals | Antimony | lbs/MMcf | DeNOx | 3 | 5.81E-04 | 3.14E-04 | 1.00 | NONE | 3 | 3.30E-04 | 4.26E-04 | 0.83 | No |
| Heater, Ref. Gas | Metals | Arsenic | lbs/MMcf | DeNOx | 3 | 9.54E-04 | 5.74E-04 | 1.00 | NONE | 9 | 6.92E-04 | 4.28E-04 | 0.36 | No |
| Heater, Ref. Gas | Metals | Barium | lbs/MMcf | DeNOx | 3 | 6.49E-03 | 1.59E-04 | 0.00 | NONE | 3 | 1.33E-03 | 2.20E-04 | 1.00 | Yes |
| Heater, Ref. Gas | Metals | Beryllium | lbs/MMcf | DeNOx | 3 | 2.88E-04 | 7.08E-06 | 0.00 | NONE | 9 | 1.26E-04 | 7.36E-05 | 0.00 | Yes |
| Heater, Ref. Gas | Metals | Cadmium | lbs/MMcf | DeNOx | 3 | 1.11E-03 | 2.08E-04 | 1.00 | NONE | 9 | 3.97E-04 | 9.13E-05 | 0.27 | Yes |
| Heater, Ref. Gas | Metals | Chromium (Hex) | lbs/MMcf | DeNOx | 3 | 2.43E-03 | 1.12E-04 | 0.00 | NONE | 9 | 2.20E-04 | 3.16E-04 | 0.06 | Yes |
| Heater, Ref. Gas | Metals | Chromium (Hex) | lbs/MMcf | DeNOx | 3 | 2.43E-03 | 1.12E-04 | 0.00 | SCR | 3 | 2.52E-03 | 1.34E-04 | 1.00 | No |
| Heater, Ref. Gas | Metals | Chromium (Hex) | lbs/MMcf | NONE | 9 | 2.20E-04 | 3.16E-04 | 0.06 | SCR | 3 | 2.52E-03 | 1.34E-04 | 1.00 | Yes |
| Heater, Ref. Gas | Metals | Chromium (Total) | lbs/MMcf | DeNOx | 3 | 1.20E-03 | 8.34E-04 | 0.60 | NONE | 9 | 1.58E-03 | 4.28E-04 | 0.33 | No |
| Heater, Ref. Gas | Metals | Chromium (Total) | lbs/MMcf | DeNOx | 3 | 1.20E-03 | 8.34E-04 | 0.60 | SCR | 3 | 6.08E-04 | 1.94E-04 | 1.00 | No |
| Heater, Ref. Gas | Metals | Chromium (Total) | lbs/MMcf | NONE | 9 | 1.58E-03 | 4.28E-04 | 0.33 | SCR | 3 | 6.08E-04 | 1.94E-04 | 1.00 | Yes |
| Heater, Ref. Gas | Metals | Copper | lbs/MMcf | DeNOx | 3 | 4.73E-03 | 5.05E-03 | 1.00 | NONE | 9 | 4.81E-03 | 4.69E-03 | 0.76 | No |
| Heater, Ref. Gas | Metals | Lead | lbs/MMcf | DeNOx | 3 | 6.49E-03 | 2.88E-03 | 1.00 | NONE | 9 | 9.39E-04 | 5.29E-04 | 0.67 | Yes |
| Heater, Ref. Gas | Metals | Manganese | lbs/MMcf | DeNOx | 3 | 7.65E-03 | 5.77E-03 | 1.00 | NONE | 6 | 1.80E-03 | 5.63E-04 | 1.00 | Yes |
| Heater, Ref. Gas | Metals | Mercury | lbs/MMcf | DeNOx | 3 | 2.02E-04 | 1.31E-05 | 0.36 | NONE | 9 | 4.74E-04 | 3.75E-04 | 0.00 | No |
| Heater, Ref. Gas | Metals | Nickel | lbs/MMcf | DeNOx | 3 | 1.06E-02 | 1.58E-02 | 0.95 | NONE | 9 | 3.39E-03 | 2.08E-03 | 0.72 | No |
| Heater, Ref. Gas | Metals | Phosphorus | lbs/MMcf | DeNOx | 3 | 7.21E-04 | 1.77E-05 | 0.00 | NONE | 3 | 1.74E-02 | 2.46E-03 | 0.00 | Yes |
| Heater, Ref. Gas | Metals | Selenium | lbs/MMcf | DeNOx | 3 | 2.20E-05 | 6.66E-06 | 0.78 | NONE | 9 | 5.61E-03 | 1.38E-02 | 0.96 | No |
| Heater, Ref. Gas | Metals | Silver | lbs/MMcf | DeNOx | 3 | 1.81E-03 | 1.65E-03 | 0.94 | NONE | 3 | 1.25E-04 | 3.93E-05 | 1.00 | No |
| Heater, Ref. Gas | Metals | Thallium | lbs/MMcf | DeNOx | 3 | 6.49E-03 | 1.59E-04 | 0.00 | NONE | 3 | 4.36E-05 | 6.15E-06 | 0.00 | Yes |
| Heater, Ref. Gas | Metals | Zinc | lbs/MMcf | DeNOx | 3 | 2.34E-02 | 1.21E-02 | 1.00 | NONE | 9 | 9.69E-03 | 6.85E-03 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | DeNOx | 3 | 2.30E-06 | 7.92E-07 | 0.80 | NONE | 32 | 2.19E-05 | 8.13E-05 | 0.89 | No |
| Heater, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | DeNOx | 3 | 2.30E-06 | 7.92E-07 | 0.80 | SCR | 3 | 6.61E-06 | 3.22E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | NONE | 32 | 2.19E-05 | 8.13E-05 | 0.89 | SCR | 3 | 6.61E-06 | 3.22E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-08 | 0.00 | NONE | 32 | 1.15E-05 | 2.44E-05 | 0.77 | No |
| Heater, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-08 | 0.00 | SCR | 2 | 4.20E-06 | 2.46E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | NONE | 32 | 1.15E-05 | 2.44E-05 | 0.77 | SCR | 2 | 4.20E-06 | 2.46E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Anthracene | lbs/MMcf | DeNOx | 3 | 2.20E-06 | 7.35E-07 | 0.79 | NONE | 32 | 3.60E-05 | 1.01E-04 | 0.89 | No |
| Heater, Ref. Gas | PAH | Anthracene | lbs/MMcf | DeNOx | 3 | 2.20E-06 | 7.35E-07 | 0.79 | SCR | 3 | 3.78E-06 | 2.44E-06 | 0.89 | No |
| Heater, Ref. Gas | PAH | Anthracene | lbs/MMcf | NONE | 32 | 3.60E-05 | 1.01E-04 | 0.89 | SCR | 3 | 3.78E-06 | 2.44E-06 | 0.89 | No |
| Heater, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | DeNOx | 3 | 2.34E-06 | 3.61E-07 | 1.00 | NONE | 47 | 2.92E-05 | 7.89E-05 | 0.98 | No |
| Heater, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | DeNOx | 3 | 2.34E-06 | 3.61E-07 | 1.00 | SCR | 3 | 8.35E-06 | 6.86E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | NONE | 47 | 2.92E-05 | 7.89E-05 | 0.98 | SCR | 3 | 8.35E-06 | 6.86E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-08 | 0.00 | NONE | 47 | 5.81E-05 | 2.56E-04 | 0.98 | No |
| Heater, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-08 | 0.00 | SCR | 3 | 1.29E-06 | 5.67E-09 | 0.33 | Yes |
| Heater, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | NONE | 47 | 5.81E-05 | 2.56E-04 | 0.98 | SCR | 3 | 1.29E-06 | 5.67E-09 | 0.33 | No |
| Heater, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | DeNOx | 3 | 3.20E-06 | 1.42E-08 | 1.00 | NONE | 47 | 4.67E-05 | 1.41E-04 | 0.99 | No |
| Heater, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | DeNOx | 3 | 3.20E-06 | 1.42E-08 | 1.00 | SCR | 3 | 4.24E-06 | 2.16E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | NONE | 47 | 4.67E-05 | 1.41E-04 | 0.99 | SCR | 3 | 4.24E-06 | 2.16E-06 | 1.00 | No |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | |
| Heater, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | NONE | 32 | 3.42E-06 | 7.84E-06 | 0.72 | No |
| Heater, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | SCR | 3 | 1.67E-06 | 4.76E-07 | 0.45 | No |
| Heater, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | NONE | 32 | 3.42E-06 | 7.84E-06 | 0.72 | SCR | 3 | 1.67E-06 | 4.76E-07 | 0.45 | No |
| Heater, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | NONE | 47 | 2.20E-05 | 6.88E-05 | 0.96 | No |
| Heater, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | SCR | 3 | 1.30E-06 | 9.16E-09 | 0.34 | Yes |
| Heater, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | NONE | 47 | 2.20E-05 | 6.88E-05 | 0.96 | SCR | 3 | 1.30E-06 | 9.16E-09 | 0.34 | No |
| Heater, Ref. Gas | PAH | Chrysene | lbs/MMcf | DeNOx | 3 | 2.94E-06 | 2.14E-06 | 0.84 | NONE | 32 | 4.61E-05 | 1.43E-04 | 0.99 | No |
| Heater, Ref. Gas | PAH | Chrysene | lbs/MMcf | DeNOx | 3 | 2.94E-06 | 2.14E-06 | 0.84 | SCR | 3 | 3.01E-06 | 1.89E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Chrysene | lbs/MMcf | NONE | 32 | 4.61E-05 | 1.43E-04 | 0.99 | SCR | 3 | 3.01E-06 | 1.89E-06 | 1.00 | No |
| Heater, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | NONE | 47 | 7.26E-06 | 2.13E-05 | 0.14 | No |
| Heater, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | SCR | 3 | 1.26E-06 | 5.99E-08 | 0.00 | Yes |
| Heater, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | NONE | 47 | 7.26E-06 | 2.13E-05 | 0.14 | SCR | 3 | 1.26E-06 | 5.99E-08 | 0.00 | No |
| Heater, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | DeNOx | 3 | 3.88E-06 | 1.67E-06 | 1.00 | NONE | 32 | 7.89E-05 | 2.33E-04 | 0.96 | No |
| Heater, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | DeNOx | 3 | 3.88E-06 | 1.67E-06 | 1.00 | SCR | 3 | 2.90E-05 | 2.60E-05 | 1.00 | No |
| Heater, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | NONE | 32 | 7.89E-05 | 2.33E-04 | 0.96 | SCR | 3 | 2.90E-05 | 2.60E-05 | 1.00 | No |
| Heater, Ref. Gas | PAH | Fluorene | lbs/MMcf | DeNOx | 3 | 8.45E-06 | 4.58E-06 | 1.00 | NONE | 32 | 2.02E-04 | 9.20E-04 | 0.94 | No |
| Heater, Ref. Gas | PAH | Fluorene | lbs/MMcf | DeNOx | 3 | 8.45E-06 | 4.58E-06 | 1.00 | SCR | 3 | 2.36E-05 | 1.47E-05 | 1.00 | No |
| Heater, Ref. Gas | PAH | Fluorene | lbs/MMcf | NONE | 32 | 2.02E-04 | 9.20E-04 | 0.94 | SCR | 3 | 2.36E-05 | 1.47E-05 | 1.00 | No |
| Heater, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | NONE | 47 | 6.60E-05 | 2.97E-04 | 0.98 | No |
| Heater, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | DeNOx | 3 | 1.40E-06 | 1.45E-06 | 0.00 | SCR | 3 | 1.39E-06 | 1.73E-07 | 0.38 | No |
| Heater, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | NONE | 47 | 6.60E-05 | 2.97E-04 | 0.98 | SCR | 3 | 1.39E-06 | 1.73E-07 | 0.38 | No |
| Heater, Ref. Gas | PAH | Naphthalene | lbs/MMcf | DeNOx | 3 | 1.57E-04 | 2.24E-05 | 1.00 | NONE | 32 | 1.50E-03 | 3.95E-03 | 0.84 | No |
| Heater, Ref. Gas | PAH | Naphthalene | lbs/MMcf | DeNOx | 3 | 1.57E-04 | 2.24E-05 | 1.00 | SCR | 3 | 1.85E-03 | 2.87E-03 | 1.00 | No |
| Heater, Ref. Gas | PAH | Naphthalene | lbs/MMcf | NONE | 32 | 1.50E-03 | 3.95E-03 | 0.84 | SCR | 3 | 1.85E-03 | 2.87E-03 | 1.00 | No |
| Heater, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | DeNOx | 3 | 1.48E-05 | 6.28E-06 | 1.00 | NONE | 32 | 1.86E-04 | 4.63E-04 | 0.80 | No |
| Heater, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | DeNOx | 3 | 1.48E-05 | 6.28E-06 | 1.00 | SCR | 3 | 1.25E-04 | 1.12E-04 | 1.00 | No |
| Heater, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | NONE | 32 | 1.86E-04 | 4.63E-04 | 0.80 | SCR | 3 | 1.25E-04 | 1.12E-04 | 1.00 | No |
| Heater, Ref. Gas | PAH | Pyrene | lbs/MMcf | DeNOx | 3 | 3.63E-06 | 1.48E-06 | 1.00 | NONE | 32 | 9.34E-05 | 3.25E-04 | 0.96 | No |
| Heater, Ref. Gas | PAH | Pyrene | lbs/MMcf | DeNOx | 3 | 3.63E-06 | 1.48E-06 | 1.00 | SCR | 3 | 1.10E-05 | 1.13E-05 | 1.00 | No |
| Heater, Ref. Gas | PAH | Pyrene | lbs/MMcf | NONE | 32 | 9.34E-05 | 3.25E-04 | 0.96 | SCR | 3 | 1.10E-05 | 1.13E-05 | 1.00 | No |
| Heater, Ref. Gas | SVOC | Ethylbenzene | lbs/MMcf | DeNOx | 3 | 5.06E-02 | 0.00E+00 | 0.00 | NONE | 33 | 2.17E-02 | 3.34E-02 | 0.29 | No |
| Heater, Ref. Gas | SVOC | Phenol | lbs/MMcf | NONE | 21 | 8.36E-03 | 1.50E-02 | 0.89 | SCR | 6 | 9.21E-03 | 1.03E-02 | 0.98 | No |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | DeNOx | 3 | 2.89E-02 | 4.12E-03 | 0.38 | NONE | 39 | 6.18E-02 | 5.25E-02 | 0.44 | No |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | DeNOx | 3 | 2.89E-02 | 4.12E-03 | 0.38 | SCR | 9 | 1.52E-02 | 1.85E-02 | 1.00 | No |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | NONE | 39 | 6.18E-02 | 5.25E-02 | 0.44 | SCR | 9 | 1.52E-02 | 1.85E-02 | 1.00 | Yes |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | DeNOx | 3 | 3.73E-02 | 0.00E+00 | 0.00 | NONE | 48 | 6.16E-02 | 9.40E-02 | 0.30 | No |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | DeNOx | 3 | 3.73E-02 | 0.00E+00 | 0.00 | SCR | 9 | 8.69E-02 | 5.93E-02 | 0.12 | No |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | NONE | 48 | 6.16E-02 | 9.40E-02 | 0.30 | SCR | 9 | 8.69E-02 | 5.93E-02 | 0.12 | No |
| Heater, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | DeNOx | 3 | 6.91E-02 | 2.27E-02 | 1.00 | NONE | 38 | 2.57E-01 | 7.03E-01 | 0.94 | No |
| Heater, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | DeNOx | 3 | 6.91E-02 | 2.27E-02 | 1.00 | SCR | 6 | 7.99E-03 | 6.03E-03 | 1.00 | Yes |
| Heater, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | NONE | 38 | 2.57E-01 | 7.03E-01 | 0.94 | SCR | 6 | 7.99E-03 | 6.03E-03 | 1.00 | No |
| Heater, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | NONE | 21 | 6.99E-01 | 5.51E-01 | 0.00 | SCR | 9 | 1.77E-01 | 1.26E-01 | 0.00 | Yes |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | DeNOx | 3 | 4.39E-02 | 0.00E+00 | 0.00 | NONE | 48 | 8.14E-02 | 1.82E-01 | 0.56 | No |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | DeNOx | 3 | 4.39E-02 | 0.00E+00 | 0.00 | SCR | 6 | 1.72E-01 | 6.88E-02 | 0.47 | Yes |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | NONE | 48 | 8.14E-02 | 1.82E-01 | 0.56 | SCR | 6 | 1.72E-01 | 6.88E-02 | 0.47 | No |
| Heater, Ref. Gas | VOC | Xylene (Total) | lbs/MMcf | DeNOx | 3 | 5.06E-02 | 0.00E+00 | 0.00 | NONE | 15 | 5.98E-02 | 6.17E-02 | 0.30 | No |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | Difference at 95%Confidence |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | NONE | 34 | 1.18E+00 | 2.29E+00 | 1.00 | NSCR | 6 | 7.39E-02 | 5.71E-02 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | NONE | 64 | 1.34E+01 | 1.48E+01 | 0.98 | NSCR | 6 | 4.99E-02 | 6.30E-02 | 1.00 | Yes |
| Incinerator, Medical Waste | Halogens | HCl | lbs/ton | NONE | 3 | 4.29E+01 | 1.29E+01 | 1.00 | S | 3 | 6.43E-02 | 2.26E-02 | 1.00 | Yes |
| Turbine, Natural Gas | PAH | Acenaphthene | lbs/MMcf | COC/SCR | 3 | 1.30E-06 | 3.46E-08 | 0.00 | NONE | 12 | 2.80E-05 | 4.00E-05 | 0.16 | No |
| Turbine, Natural Gas | PAH | Acenaphthene | lbs/MMcf | COC/SCR | 3 | 1.30E-06 | 3.46E-08 | 0.00 | SCR | 3 | 5.76E-07 | 2.92E-07 | 0.26 | Yes |
| Turbine, Natural Gas | PAH | Acenaphthene | lbs/MMcf | NONE | 12 | 2.80E-05 | 4.00E-05 | 0.16 | SCR | 3 | 5.76E-07 | 2.92E-07 | 0.26 | No |
| Turbine, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | COC/SCR | 3 | 2.79E-06 | 2.59E-06 | 0.69 | NONE | 12 | 2.13E-05 | 3.22E-05 | 0.39 | No |
| Turbine, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | COC/SCR | 3 | 2.79E-06 | 2.59E-06 | 0.69 | SCR | 3 | 3.21E-07 | 2.04E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | NONE | 12 | 2.13E-05 | 3.22E-05 | 0.39 | SCR | 3 | 3.21E-07 | 2.04E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Anthracene | lbs/MMcf | COC/SCR | 3 | 5.43E-05 | 8.57E-05 | 1.00 | NONE | 12 | 3.70E-05 | 4.16E-05 | 0.31 | No |
| Turbine, Natural Gas | PAH | Anthracene | lbs/MMcf | COC/SCR | 3 | 5.43E-05 | 8.57E-05 | 1.00 | SCR | 3 | 5.06E-07 | 2.74E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Anthracene | lbs/MMcf | NONE | 12 | 3.70E-05 | 4.16E-05 | 0.31 | SCR | 3 | 5.06E-07 | 2.74E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | COC/SCR | 3 | 1.89E-06 | 5.05E-08 | 0.00 | NONE | 12 | 3.33E-05 | 5.31E-05 | 0.04 | No |
| Turbine, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | COC/SCR | 3 | 1.89E-06 | 5.05E-08 | 0.00 | SCR | 3 | 3.88E-07 | 7.64E-08 | 0.00 | Yes |
| Turbine, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | NONE | 12 | 3.33E-05 | 5.31E-05 | 0.04 | SCR | 3 | 3.88E-07 | 7.64E-08 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | COC/SCR | 3 | 1.30E-06 | 3.46E-08 | 0.00 | NONE | 12 | 2.03E-05 | 3.16E-05 | 0.38 | No |
| Turbine, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | COC/SCR | 3 | 1.30E-06 | 3.46E-08 | 0.00 | SCR | 3 | 7.00E-07 | 2.32E-07 | 0.00 | Yes |
| Turbine, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | NONE | 12 | 2.03E-05 | 3.16E-05 | 0.38 | SCR | 3 | 7.00E-07 | 2.32E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | COC/SCR | 3 | 3.84E-06 | 4.41E-06 | 0.78 | NONE | 12 | 1.57E-05 | 2.30E-05 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | COC/SCR | 3 | 3.84E-06 | 4.41E-06 | 0.78 | SCR | 3 | 7.77E-07 | 1.66E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | NONE | 12 | 1.57E-05 | 2.30E-05 | 0.00 | SCR | 3 | 7.77E-07 | 1.66E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | COC/SCR | 3 | 1.96E-06 | 1.17E-06 | 0.56 | NONE | 12 | 1.96E-05 | 2.97E-05 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | COC/SCR | 3 | 1.96E-06 | 1.17E-06 | 0.56 | SCR | 3 | 2.02E-06 | 1.37E-06 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | NONE | 12 | 1.96E-05 | 2.97E-05 | 0.00 | SCR | 3 | 2.02E-06 | 1.37E-06 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | COC/SCR | 3 | 2.37E-06 | 1.88E-06 | 0.64 | NONE | 12 | 1.57E-05 | 2.30E-05 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | COC/SCR | 3 | 2.37E-06 | 1.88E-06 | 0.64 | SCR | 3 | 4.27E-07 | 1.13E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | NONE | 12 | 1.57E-05 | 2.30E-05 | 0.00 | SCR | 3 | 4.27E-07 | 1.13E-07 | 0.00 | No |
| Turbine, Natural Gas | PAH | Chrysene | lbs/MMcf | COC/SCR | 3 | 6.05E-06 | 1.61E-07 | 0.00 | NONE | 12 | 3.62E-05 | 5.76E-05 | 0.06 | No |
| Turbine, Natural Gas | PAH | Chrysene | lbs/MMcf | COC/SCR | 3 | 6.05E-06 | 1.61E-07 | 0.00 | SCR | 3 | 2.06E-07 | 7.87E-08 | 0.57 | Yes |
| Turbine, Natural Gas | PAH | Chrysene | lbs/MMcf | NONE | 12 | 3.62E-05 | 5.76E-05 | 0.06 | SCR | 3 | 2.06E-07 | 7.87E-08 | 0.57 | No |
| Turbine, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | COC/SCR | 3 | 1.30E-06 | 3.46E-08 | 0.00 | NONE | 12 | 3.40E-05 | 5.55E-05 | 0.00 | No |
| Turbine, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | COC/SCR | 3 | 1.30E-06 | 3.46E-08 | 0.00 | SCR | 3 | 3.82E-06 | 1.37E-06 | 0.00 | Yes |
| Turbine, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | NONE | 12 | 3.40E-05 | 5.55E-05 | 0.00 | SCR | 3 | 3.82E-06 | 1.37E-06 | 0.00 | No |
| Turbine, Natural Gas | PAH | Fluoranthene | lbs/MMcf | COC/SCR | 3 | 1.39E-05 | 4.00E-06 | 1.00 | NONE | 12 | 6.12E-05 | 9.86E-05 | 1.00 | No |
| Turbine, Natural Gas | PAH | Fluoranthene | lbs/MMcf | COC/SCR | 3 | 1.39E-05 | 4.00E-06 | 1.00 | SCR | 3 | 2.01E-07 | 3.32E-08 | 1.00 | Yes |
| Turbine, Natural Gas | PAH | Fluoranthene | lbs/MMcf | NONE | 12 | 6.12E-05 | 9.86E-05 | 1.00 | SCR | 3 | 2.01E-07 | 3.32E-08 | 1.00 | No |
| Turbine, Natural Gas | PAH | Fluorene | lbs/MMcf | COC/SCR | 3 | 1.22E-05 | 3.60E-06 | 1.00 | NONE | 12 | 8.37E-05 | 1.31E-04 | 1.00 | No |
| Turbine, Natural Gas | PAH | Fluorene | lbs/MMcf | COC/SCR | 3 | 1.22E-05 | 3.60E-06 | 1.00 | SCR | 3 | 7.05E-07 | 2.32E-07 | 1.00 | Yes |
| Turbine, Natural Gas | PAH | Fluorene | lbs/MMcf | NONE | 12 | 8.37E-05 | 1.31E-04 | 1.00 | SCR | 3 | 7.05E-07 | 2.32E-07 | 1.00 | No |
| Turbine, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | COC/SCR | 3 | 1.79E-06 | 8.64E-07 | 0.52 | NONE | 12 | 3.40E-05 | 5.55E-05 | 0.00 | No |
| Turbine, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | COC/SCR | 3 | 1.79E-06 | 8.64E-07 | 0.52 | SCR | 3 | 3.33E-06 | 1.02E-06 | 0.00 | No |
| Turbine, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | NONE | 12 | 3.40E-05 | 5.55E-05 | 0.00 | SCR | 3 | 3.33E-06 | 1.02E-06 | 0.00 | No |
| Turbine, Natural Gas | PAH | Naphthalene | lbs/MMcf | COC/SCR | 3 | 9.34E-04 | 2.49E-05 | 1.00 | NONE | 12 | 2.25E-03 | 2.58E-03 | 0.84 | No |
| Turbine, Natural Gas | PAH | Naphthalene | lbs/MMcf | COC/SCR | 3 | 9.34E-04 | 2.49E-05 | 1.00 | SCR | 3 | 2.41E-05 | 3.99E-06 | 1.00 | Yes |
| Turbine, Natural Gas | PAH | Naphthalene | lbs/MMcf | NONE | 12 | 2.25E-03 | 2.58E-03 | 0.84 | SCR | 3 | 2.41E-05 | 3.99E-06 | 1.00 | No |
| Turbine, Natural Gas | PAH | Phenanthrene | lbs/MMcf | COC/SCR | 3 | 4.17E-05 | 1.35E-05 | 1.00 | NONE | 12 | 4.59E-04 | 6.97E-04 | 0.99 | No |

TABLE A6-2. AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description APCS | Size | Average | Standard Deviation | Detect Ratio | Descriptio APCS | Size | Average | Standard Deviation | Detect Ratio | |
| Turbine, Natural Gas | PAH | Phenanthrene | lbs/MMcf | COC/SCR | 3 | 4.17E-06 | 1.35E-06 | 1.00 | SCR | 3 | 9.60E-07 | 1.78E-07 | 1.00 | Yes |
| Turbine, Natural Gas | PAH | Phenanthrene | lbs/MMcf | NONE | 12 | 4.59E-04 | 6.97E-04 | 0.99 | SCR | 3 | 9.60E-07 | 1.78E-07 | 1.00 | No |
| Turbine, Natural Gas | PAH | Pyrene | lbs/MMcf | COC/SCR | 3 | 3.48E-06 | 9.45E-06 | 1.00 | NONE | 12 | 3.28E-05 | 4.38E-05 | 1.00 | No |
| Turbine, Natural Gas | PAH | Pyrene | lbs/MMcf | COC/SCR | 12 | 1.49E-05 | 9.44E-06 | 1.00 | SCR | 3 | 2.66E-07 | 3.85E-08 | 1.00 | Yes |
| Turbine, Natural Gas | PAH | Pyrene | lbs/MMcf | NONE | 12 | 3.28E-05 | 4.38E-05 | 1.00 | SCR | 3 | 2.66E-07 | 3.85E-08 | 1.00 | No |
| Turbine, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | COC/SCR | 3 | 2.11E-02 | 6.59E-04 | 0.00 | NONE | 12 | 1.71E-02 | 1.68E-02 | 0.64 | No |
| Turbine, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | COC | 3 | 6.45E-01 | 1.69E-01 | 1.00 | NONE | 10 | 6.66E-02 | 6.47E-02 | 0.97 | Yes |
| Turbine, Natural Gas | VOC | Acrolein | lbs/MMcf | AI/SCR | 3 | 1.10E-02 | 0.00E+00 | 0.00 | COC | 3 | 7.44E-03 | 1.34E-03 | 0.00 | Yes |
| Turbine, Natural Gas | VOC | Acrolein | lbs/MMcf | AI/SCR | 3 | 1.10E-02 | 0.00E+00 | 0.00 | NONE | 12 | 2.37E-02 | 2.25E-02 | 0.70 | No |
| Turbine, Natural Gas | VOC | Acrolein | lbs/MMcf | COC | 3 | 7.44E-03 | 1.34E-03 | 0.00 | NONE | 12 | 2.37E-02 | 2.25E-02 | 0.70 | No |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | COC | 3 | 1.13E-02 | 2.94E-04 | 0.00 | COC/SCR | 3 | 1.77E-02 | 7.20E-04 | 0.00 | Yes |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | COC | 3 | 1.13E-02 | 2.94E-04 | 0.00 | NONE | 21 | 3.64E-02 | 3.75E-02 | 0.90 | No |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | COC | 3 | 1.13E-02 | 2.94E-04 | 0.00 | SCR | 3 | 1.16E-02 | 1.25E-04 | 0.00 | No |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | COC/SCR | 3 | 1.77E-02 | 7.20E-04 | 0.00 | NONE | 21 | 3.64E-02 | 3.75E-02 | 0.90 | No |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | COC/SCR | 3 | 1.77E-02 | 7.20E-04 | 0.00 | SCR | 3 | 1.16E-02 | 1.25E-04 | 0.00 | Yes |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | NONE | 21 | 3.64E-02 | 3.75E-02 | 0.90 | SCR | 3 | 1.16E-02 | 1.25E-04 | 0.00 | No |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | COC | 3 | 7.22E-01 | 4.65E-01 | 1.00 | NONE | 31 | 2.02E+00 | 2.18E+00 | 1.00 | No |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | COC | 3 | 7.22E-01 | 4.65E-01 | 1.00 | SCR | 6 | 3.14E+00 | 3.39E+00 | 1.00 | No |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | NONE | 31 | 2.02E+00 | 2.18E+00 | 1.00 | SCR | 6 | 3.14E+00 | 3.39E+00 | 1.00 | No |
| Turbine, Natural Gas | VOC | Toluene | lbs/MMcf | COC/SCR | 3 | 1.26E-01 | 6.90E-02 | 1.00 | NONE | 12 | 6.75E-02 | 4.94E-02 | 0.99 | Yes |
| Turbine, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | COC/SCR | 3 | 4.21E-02 | 1.72E-03 | 0.00 | NONE | 6 | 1.81E-02 | 2.24E-02 | 0.75 | No |

TABLE A6-3. RICE STROKES PER CYCLE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Strokes | Size | Average | Standard Deviation | Detect Ratio | Description Strokes | Size | Average | Standard Deviation | Detect Ratio | |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | 9 | 5.13E-02 | 4.11E-02 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | 37 | 1.07E+00 | 2.22E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | 51 | 1.33E+01 | 1.52E+01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | 25 | 5.02E-01 | 6.27E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | 9 | 4.51E-01 | 3.76E-01 | 1.00 | No |

TABLE A6-4. RICE OXYGEN COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Oxygen | Size | Average | Standard Deviation | Detect Ratio | Description Oxygen | Size | Average | Standard Deviation | Detect Ratio | |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | O2<13% | 12 | 6.71E-04 | 9.39E-04 | 0.90 | O2>13% | 15 | 3.23E-03 | 5.46E-03 | 0.58 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | O2<13% | 12 | 1.02E-03 | 5.28E-04 | 0.95 | O2>13% | 15 | 3.78E-03 | 4.72E-03 | 0.65 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | O2<13% | 12 | 2.23E-04 | 7.13E-05 | 0.69 | O2>13% | 15 | 2.11E-03 | 3.14E-03 | 0.37 | Yes |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | O2<13% | 12 | 9.60E-05 | 1.16E-04 | 0.27 | O2>13% | 15 | 1.70E-03 | 2.61E-03 | 0.20 | Yes |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | O2<13% | 12 | 7.92E-05 | 1.22E-04 | 0.05 | O2>13% | 15 | 1.35E-03 | 2.77E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | O2<13% | 12 | 1.12E-04 | 1.20E-04 | 0.12 | O2>13% | 9 | 2.71E-03 | 3.31E-03 | 0.00 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | O2<13% | 12 | 9.05E-05 | 1.19E-04 | 0.22 | O2>13% | 15 | 1.44E-03 | 2.73E-03 | 0.06 | No |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | O2<13% | 12 | 7.81E-05 | 1.23E-04 | 0.08 | O2>13% | 9 | 2.28E-03 | 3.13E-03 | 0.00 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | O2<13% | 12 | 1.30E-04 | 1.24E-04 | 0.46 | O2>13% | 15 | 1.46E-03 | 2.71E-03 | 0.08 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | O2<13% | 12 | 8.23E-05 | 1.21E-04 | 0.00 | O2>13% | 15 | 1.43E-03 | 2.73E-03 | 0.05 | No |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | O2<13% | 12 | 3.29E-04 | 1.45E-04 | 0.79 | O2>13% | 15 | 2.19E-03 | 2.82E-03 | 0.44 | Yes |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | O2<13% | 12 | 9.62E-04 | 5.67E-04 | 0.93 | O2>13% | 15 | 3.11E-03 | 4.12E-03 | 0.60 | Yes |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | O2<13% | 12 | 8.47E-05 | 1.20E-04 | 0.06 | O2>13% | 15 | 1.41E-03 | 2.74E-03 | 0.04 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | O2<13% | 12 | 1.60E-02 | 9.64E-03 | 1.00 | O2>13% | 15 | 5.64E-02 | 5.60E-02 | 1.00 | Yes |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | O2<13% | 12 | 3.53E-03 | 2.46E-03 | 1.00 | O2>13% | 15 | 2.01E-02 | 2.31E-02 | 1.00 | Yes |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | O2<13% | 12 | 2.63E-04 | 1.72E-04 | 0.73 | O2>13% | 15 | 3.01E-03 | 4.72E-03 | 0.07 | Yes |
| ICE, Diesel | VOC | Acetaldehyde | lbs/Mgal | O2<13% | 3 | 3.47E-03 | 2.61E-03 | 1.00 | O2>13% | 6 | 1.07E-01 | 4.60E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Acrolein | lbs/Mgal | O2<13% | 3 | 1.07E-03 | 6.19E-04 | 0.56 | O2>13% | 6 | 1.30E-02 | 9.64E-03 | 0.82 | No |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | O2<13% | 6 | 1.83E-01 | 1.04E-01 | 1.00 | O2>13% | 9 | 9.23E-02 | 6.48E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | O2<13% | 12 | 5.05E-02 | 6.07E-02 | 1.00 | O2>13% | 15 | 5.14E-01 | 8.53E-01 | 1.00 | No |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | O2<13% | 6 | 3.41E-01 | 5.93E-02 | 1.00 | O2>13% | 6 | 3.58E-01 | 2.03E-01 | 1.00 | No |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | O2<13% | 6 | 6.12E-02 | 3.01E-02 | 1.00 | O2>13% | 6 | 5.60E-02 | 2.10E-02 | 1.00 | No |
| ICE, Diesel | VOC | Xylene (Total) | lbs/Mgal | O2<13% | 6 | 2.10E-02 | 7.79E-03 | 1.00 | O2>13% | 3 | 3.59E-02 | 1.48E-02 | 1.00 | No |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | Lean | 9 | 3.40E-04 | 3.05E-04 | 1.00 | Rich | 3 | 1.94E-03 | 1.20E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | Lean | 9 | 2.88E-03 | 3.87E-03 | 1.00 | Rich | 3 | 1.46E-02 | 1.74E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | Lean | 9 | 1.65E-04 | 9.21E-05 | 1.00 | Rich | 3 | 1.84E-03 | 3.92E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | Lean | 9 | 6.51E-05 | 2.94E-05 | 1.00 | Rich | 3 | 2.94E-04 | 4.08E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | Lean | 9 | 1.36E-05 | 1.79E-05 | 0.66 | Rich | 3 | 1.16E-04 | 3.18E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | Lean | 9 | 1.36E-04 | 2.98E-04 | 0.96 | Rich | 3 | 2.37E-04 | 5.53E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | Lean | 9 | 3.93E-05 | 8.27E-05 | 0.99 | Rich | 3 | 1.99E-04 | 4.48E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | Lean | 9 | 1.82E-04 | 3.69E-04 | 0.98 | Rich | 3 | 1.03E-04 | 2.07E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | Lean | 9 | 4.17E-05 | 4.35E-05 | 0.99 | Rich | 3 | 3.10E-04 | 7.71E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | Lean | 9 | 5.44E-06 | 4.60E-06 | 0.67 | Rich | 3 | 1.48E-05 | 1.72E-06 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | Lean | 9 | 2.77E-04 | 1.26E-04 | 1.00 | Rich | 3 | 9.96E-04 | 1.84E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | Lean | 9 | 4.44E-04 | 2.14E-04 | 0.65 | Rich | 3 | 6.97E-03 | 7.18E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | Lean | 9 | 4.47E-05 | 9.47E-05 | 1.00 | Rich | 3 | 1.69E-04 | 3.43E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | Lean | 9 | 5.74E-02 | 6.59E-02 | 1.00 | Rich | 3 | 7.65E-02 | 1.58E-02 | 1.00 | No |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | Lean | 9 | 1.53E-03 | 7.46E-04 | 1.00 | Rich | 3 | 1.70E-02 | 2.19E-03 | 1.00 | Yes |

TABLE A6-4. RICE OXYGEN COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Oxygen | Size | Average | Standard Deviation | Detect Ratio | Description Oxygen | Size | Average | Standard Deviation | Detect Ratio | |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | Lean | 9 | 1.66E-04 | 8.39E-05 | 1.00 | Rich | 6 | 1.79E-03 | 7.83E-04 | 1.00 | Yes |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | Lean | 9 | 6.90E-02 | 2.85E-02 | 0.89 | Rich | 3 | 1.16E-02 | 3.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | VOC | 1,3-Butadiene | lbs/MMcf | Lean | 6 | 3.67E-01 | 8.37E-02 | 1.00 | Rich | 3 | 1.04E-01 | 3.92E-04 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | Lean | 21 | 3.00E+00 | 2.75E+00 | 1.00 | Rich | 6 | 8.83E-01 | 9.05E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | Lean | 20 | 1.16E+00 | 1.45E+00 | 0.99 | Rich | 9 | 5.47E-01 | 4.57E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | Lean | 23 | 8.29E-01 | 6.51E-01 | 1.00 | Rich | 17 | 1.26E+00 | 3.24E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | Lean | 39 | 1.77E+01 | 1.62E+01 | 0.99 | Rich | 21 | 1.69E+00 | 3.57E+00 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | Lean | 20 | 1.47E+01 | 1.81E+01 | 0.97 | Rich | 5 | 1.60E+01 | 2.15E+01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | Lean | 23 | 3.38E-01 | 1.58E-01 | 1.00 | Rich | 6 | 1.02E+00 | 1.32E+00 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (m,p) | lbs/MMcf | Lean | 14 | 8.63E-02 | 3.99E-02 | 1.00 | Rich | 2 | 1.41E-01 | 1.78E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (o) | lbs/MMcf | Lean | 14 | 4.94E-02 | 1.95E-02 | 0.95 | Rich | 2 | 2.07E-01 | 7.51E-03 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | Lean | 9 | 4.74E-01 | 3.49E-01 | 0.91 | Rich | 3 | 6.02E-02 | 1.86E-02 | 1.00 | No |

TABLE A6-5. EXTERNAL COMBUSTION BURNER TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Burner Type | Size | Average | Standard Deviation | Detect Ratio | Description Burner Type | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Ref. Gas | SVOC | Phenol | lbs/MMcf | CB | 6 | 1.56E-03 | 1.87E-03 | 0.76 | LNB | 6 | 2.80E-03 | 2.28E-03 | 0.90 | No |
| Boiler, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | CB | 9 | 3.03E-03 | 3.63E-03 | 1.00 | LNB | 6 | 5.38E-03 | 4.45E-03 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Benzene | lbs/MMcf | CB | 10 | 2.96E-01 | 4.56E-01 | 0.90 | LNB | 6 | 5.68E-02 | 1.28E-02 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | CB | 9 | 1.88E-02 | 1.10E-02 | 1.00 | LNB | 6 | 1.18E-02 | 7.05E-03 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | CB | 10 | 2.55E-01 | 3.09E-01 | 0.00 | LNB | 6 | 3.05E-01 | 8.56E-02 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Toluene | lbs/MMcf | CB | 6 | 1.23E+00 | 1.88E+00 | 0.98 | LNB | 3 | 6.17E-02 | 2.11E-02 | 0.45 | No |
| Heater, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | CB | 8 | 2.34E-06 | 1.78E-06 | 1.00 | LNB | 15 | 5.59E-06 | 6.63E-06 | 0.38 | No |
| Heater, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | CB | 8 | 1.57E-06 | 6.96E-07 | 0.68 | LNB | 14 | 7.12E-06 | 1.13E-05 | 0.15 | No |
| Heater, Ref. Gas | PAH | Anthracene | lbs/MMcf | CB | 8 | 3.03E-06 | 1.83E-06 | 0.96 | LNB | 15 | 1.09E-05 | 1.74E-05 | 0.20 | No |
| Heater, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | CB | 17 | 5.23E-05 | 1.18E-04 | 1.00 | LNB | 21 | 5.23E-06 | 5.46E-06 | 0.94 | No |
| Heater, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | CB | 17 | 1.50E-04 | 4.16E-04 | 0.99 | LNB | 21 | 1.88E-06 | 2.08E-06 | 0.30 | No |
| Heater, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | CB | 17 | 6.78E-05 | 1.78E-04 | 0.99 | LNB | 21 | 4.26E-06 | 4.53E-06 | 0.93 | No |
| Heater, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | CB | 8 | 1.08E-06 | 1.38E-07 | 0.00 | LNB | 15 | 1.25E-06 | 5.86E-07 | 0.11 | No |
| Heater, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | CB | 17 | 3.99E-05 | 1.03E-04 | 0.97 | LNB | 21 | 2.28E-06 | 2.34E-06 | 0.63 | No |
| Heater, Ref. Gas | PAH | Chrysene | lbs/MMcf | CB | 8 | 1.18E-06 | 2.51E-07 | 0.44 | LNB | 15 | 2.90E-06 | 3.64E-06 | 0.83 | No |
| Heater, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | CB | 17 | 7.56E-06 | 1.57E-05 | 0.00 | LNB | 21 | 7.62E-06 | 2.83E-05 | 0.00 | No |
| Heater, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | CB | 8 | 2.75E-06 | 8.50E-07 | 1.00 | LNB | 15 | 1.51E-05 | 1.38E-05 | 0.99 | Yes |
| Heater, Ref. Gas | PAH | Fluorene | lbs/MMcf | CB | 8 | 1.14E-05 | 8.03E-06 | 1.00 | LNB | 15 | 2.43E-05 | 3.11E-05 | 0.29 | No |
| Heater, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | CB | 17 | 1.75E-04 | 4.83E-04 | 0.99 | LNB | 21 | 2.20E-06 | 3.19E-06 | 0.54 | No |
| Heater, Ref. Gas | PAH | Naphthalene | lbs/MMcf | CB | 8 | 3.56E-04 | 1.97E-04 | 1.00 | LNB | 15 | 7.79E-04 | 1.34E-03 | 0.52 | No |
| Heater, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | CB | 8 | 1.43E-05 | 4.46E-06 | 1.00 | LNB | 15 | 9.38E-05 | 1.21E-04 | 0.37 | No |
| Heater, Ref. Gas | PAH | Pyrene | lbs/MMcf | CB | 8 | 2.54E-06 | 5.79E-07 | 1.00 | LNB | 15 | 1.05E-05 | 1.01E-05 | 0.46 | Yes |
| Heater, Ref. Gas | SVOC | Ethylbenzene | lbs/MMcf | CB | 9 | 2.37E-02 | 3.30E-02 | 0.88 | LNB | 12 | 2.83E-02 | 2.77E-02 | 0.00 | No |
| Heater, Ref. Gas | SVOC | Phenol | lbs/MMcf | CB | 6 | 3.53E-03 | 2.71E-03 | 0.95 | LNB | 18 | 7.10E-03 | 7.84E-03 | 0.95 | No |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | CB | 6 | 2.21E-02 | 2.00E-02 | 1.00 | LNB | 30 | 4.44E-02 | 5.07E-02 | 0.21 | No |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | CB | 15 | 5.87E-02 | 8.25E-02 | 0.06 | LNB | 30 | 7.08E-02 | 7.13E-02 | 0.04 | No |
| Heater, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | CB | 6 | 9.99E-02 | 1.39E-01 | 1.00 | LNB | 27 | 1.13E-01 | 3.39E-01 | 0.90 | No |
| Heater, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | CB | 6 | 5.91E-01 | 3.70E-01 | 0.00 | LNB | 21 | 3.64E-01 | 3.49E-01 | 0.00 | No |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | CB | 15 | 9.76E-02 | 1.05E-01 | 0.52 | LNB | 27 | 1.20E-01 | 2.30E-01 | 0.55 | No |
| Heater, Ref. Gas | VOC | Xylene (Total) | lbs/MMcf | CB | 9 | 3.29E-02 | 4.09E-02 | 0.91 | LNB | 6 | 5.46E-02 | 4.37E-03 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Acenaphthene | lbs/MMcf | CB | 3 | 1.38E-06 | 9.82E-07 | 0.90 | LNB | 3 | 7.01E-07 | 5.56E-08 | 0.36 | No |
| SG, Natural/CVR Gas | PAH | Acenaphthylene | lbs/MMcf | CB | 3 | 4.74E-06 | 5.06E-06 | 0.97 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Anthracene | lbs/MMcf | CB | 3 | 2.04E-06 | 1.41E-06 | 0.93 | LNB | 3 | 2.14E-06 | 1.51E-06 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(a)anthracene | lbs/MMcf | CB | 3 | 1.13E-06 | 2.46E-08 | 0.00 | LNB | 3 | 1.32E-06 | 7.61E-07 | 0.83 | No |
| SG, Natural/CVR Gas | PAH | Benzo(a)pyrene | lbs/MMcf | CB | 3 | 7.14E-07 | 5.34E-07 | 0.62 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | CB | 3 | 3.35E-06 | 1.93E-06 | 1.00 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | CB | 3 | 1.30E-06 | 7.71E-07 | 0.89 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | CB | 3 | 9.84E-07 | 5.11E-07 | 0.86 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Chrysene | lbs/MMcf | CB | 3 | 1.85E-06 | 4.05E-08 | 0.00 | LNB | 3 | 1.25E-06 | 7.95E-07 | 0.82 | No |

TABLE A6-5. EXTERNAL COMBUSTION BURNER TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Burner Type | Size | Average | Standard Deviation | Detect Ratio | Description Burner Type | Size | Average | Standard Deviation | Detect Ratio | |
| SG, Natural/CVR Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | CB | 3 | 4.02E-07 | 8.80E-09 | 0.00 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | Yes |
| SG, Natural/CVR Gas | PAH | Fluoranthene | lbs/MMcf | CB | 3 | 6.03E-06 | 3.93E-06 | 1.00 | LNB | 3 | 1.29E-06 | 4.76E-07 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Fluorene | lbs/MMcf | CB | 3 | 9.08E-06 | 6.02E-06 | 1.00 | LNB | 3 | 2.18E-06 | 5.44E-07 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | CB | 3 | 1.67E-06 | 1.09E-06 | 0.92 | LNB | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Naphthalene | lbs/MMcf | CB | 3 | 4.12E-04 | 1.12E-04 | 1.00 | LNB | 3 | 1.66E-04 | 1.45E-05 | 1.00 | Yes |
| SG, Natural/CVR Gas | PAH | Phenanthrene | lbs/MMcf | CB | 3 | 2.18E-05 | 1.34E-05 | 1.00 | LNB | 3 | 1.11E-05 | 3.63E-06 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Pyrene | lbs/MMcf | CB | 3 | 1.02E-05 | 7.40E-06 | 1.00 | LNB | 3 | 1.82E-06 | 1.06E-06 | 1.00 | No |
| SG, Natural/CVR Gas | SVOC | Ethylbenzene | lbs/MMcf | CB | 3 | 7.32E-03 | 6.84E-05 | 0.00 | LNB | 3 | 1.11E-02 | 7.47E-03 | 0.89 | No |
| SG, Natural/CVR Gas | VOC | Benzene | lbs/MMcf | CB | 3 | 6.14E-03 | 5.74E-05 | 0.00 | LNB | 3 | 2.64E-03 | 8.58E-05 | 0.00 | Yes |
| SG, Natural/CVR Gas | VOC | Toluene | lbs/MMcf | CB | 3 | 2.68E-02 | 4.63E-03 | 1.00 | LNB | 3 | 1.75E-02 | 4.71E-03 | 1.00 | No |
| SG, Natural/CVR Gas | VOC | Xylene (Total) | lbs/MMcf | CB | 3 | 1.46E-02 | 1.37E-04 | 0.00 | LNB | 3 | 2.16E-02 | 1.62E-02 | 1.00 | No |

TABLE A6-6. EXTERNAL COMBUSTION EXCESS AIR COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Excess Air | Size | Average | Standard Deviation | Detect Ratio | Description Excess Air | Size | Average | Standard Deviation | Detect Ratio | |
| Boiler, Ref. Gas | Metals | Arsenic | lbs/MMcf | EA<100% | 3 | 7.04E-04 | 4.65E-04 | 1.00 | EA>100% | 3 | 3.57E-03 | 3.05E-03 | 0.71 | No |
| Boiler, Ref. Gas | Metals | Beryllium | lbs/MMcf | EA<100% | 2 | 1.55E-04 | 2.08E-06 | 1.00 | EA>100% | 3 | 2.60E-04 | 5.35E-05 | 0.00 | No |
| Boiler, Ref. Gas | Metals | Cadmium | lbs/MMcf | EA<100% | 3 | 2.38E-03 | 6.44E-04 | 1.00 | EA>100% | 3 | 6.60E-04 | 1.36E-04 | 0.00 | Yes |
| Boiler, Ref. Gas | Metals | Chromium (Hex) | lbs/MMcf | EA<100% | 3 | 7.70E-03 | 3.09E-03 | 0.00 | EA>100% | 3 | 2.38E-04 | 7.18E-05 | 0.00 | Yes |
| Boiler, Ref. Gas | Metals | Chromium (Total) | lbs/MMcf | EA<100% | 3 | 1.28E-02 | 1.57E-02 | 1.00 | EA>100% | 3 | 2.46E-03 | 8.57E-05 | 0.34 | No |
| Boiler, Ref. Gas | Metals | Copper | lbs/MMcf | EA<100% | 2 | 6.30E-03 | 1.99E-03 | 1.00 | EA>100% | 3 | 5.30E-03 | 5.18E-03 | 0.71 | No |
| Boiler, Ref. Gas | Metals | Lead | lbs/MMcf | EA<100% | 2 | 2.42E-03 | 9.38E-05 | 1.00 | EA>100% | 3 | 3.01E-03 | 4.09E-03 | 0.94 | No |
| Boiler, Ref. Gas | Metals | Manganese | lbs/MMcf | EA<100% | 2 | 2.39E-03 | 1.06E-03 | 1.00 | EA>100% | 3 | 1.43E-01 | 2.19E-01 | 1.00 | No |
| Boiler, Ref. Gas | Metals | Mercury | lbs/MMcf | EA<100% | 3 | 3.23E-04 | 5.60E-05 | 0.00 | EA>100% | 3 | 1.10E-03 | 2.89E-04 | 0.00 | Yes |
| Boiler, Ref. Gas | Metals | Nickel | lbs/MMcf | EA<100% | 2 | 5.59E-03 | 2.03E-03 | 1.00 | EA>100% | 3 | 1.97E-02 | 2.60E-02 | 0.84 | No |
| Boiler, Ref. Gas | Metals | Selenium | lbs/MMcf | EA<100% | 3 | 2.06E-03 | 9.62E-04 | 0.16 | EA>100% | 3 | 3.30E-01 | 3.08E-01 | 1.00 | No |
| Boiler, Ref. Gas | Metals | Zinc | lbs/MMcf | EA<100% | 3 | 3.42E+00 | 5.51E+00 | 1.00 | EA>100% | 3 | 9.89E-02 | 1.55E-01 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | EA<100% | 3 | 5.88E-06 | 5.28E-07 | 0.37 | EA>100% | 3 | 1.23E-05 | 6.63E-06 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | EA<100% | 3 | 2.56E-06 | 5.23E-08 | 0.00 | EA>100% | 3 | 1.42E-04 | 1.19E-04 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Anthracene | lbs/MMcf | EA<100% | 3 | 2.28E-05 | 1.74E-05 | 1.00 | EA>100% | 3 | 3.49E-05 | 1.55E-05 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | EA<100% | 3 | 1.83E-05 | 6.06E-06 | 1.00 | EA>100% | 3 | 1.07E-05 | 1.25E-05 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | EA<100% | 3 | 3.42E-06 | 9.48E-07 | 0.76 | EA>100% | 3 | 2.09E-06 | 1.57E-07 | 0.00 | No |
| Boiler, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | EA<100% | 3 | 6.76E-06 | 1.82E-06 | 1.00 | EA>100% | 3 | 1.54E-04 | 1.61E-04 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | EA<100% | 3 | 3.85E-06 | 1.33E-06 | 0.78 | EA>100% | 3 | 2.09E-06 | 1.57E-07 | 0.00 | No |
| Boiler, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | EA<100% | 3 | 2.56E-06 | 5.23E-08 | 0.00 | EA>100% | 3 | 3.05E-05 | 2.87E-05 | 0.98 | No |
| Boiler, Ref. Gas | PAH | Chrysene | lbs/MMcf | EA<100% | 3 | 3.42E-06 | 1.52E-06 | 0.50 | EA>100% | 3 | 9.72E-05 | 1.03E-04 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | EA<100% | 3 | 2.56E-06 | 5.23E-08 | 0.00 | EA>100% | 3 | 3.02E-06 | 1.52E-06 | 0.53 | No |
| Boiler, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | EA<100% | 3 | 4.25E-05 | 2.62E-05 | 1.00 | EA>100% | 3 | 1.62E-04 | 2.74E-05 | 1.00 | Yes |
| Boiler, Ref. Gas | PAH | Fluorene | lbs/MMcf | EA<100% | 3 | 9.78E-06 | 7.26E-06 | 1.00 | EA>100% | 3 | 8.29E-05 | 5.40E-05 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | EA<100% | 3 | 2.56E-06 | 5.23E-08 | 0.00 | EA>100% | 3 | 4.86E-06 | 3.75E-06 | 0.84 | No |
| Boiler, Ref. Gas | PAH | Naphthalene | lbs/MMcf | EA<100% | 3 | 2.06E-04 | 2.99E-05 | 1.00 | EA>100% | 3 | 1.56E-03 | 3.10E-04 | 0.74 | Yes |
| Boiler, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | EA<100% | 3 | 5.64E-05 | 2.78E-05 | 1.00 | EA>100% | 3 | 3.08E-04 | 1.49E-04 | 1.00 | Yes |
| Boiler, Ref. Gas | PAH | Pyrene | lbs/MMcf | EA<100% | 3 | 5.98E-05 | 2.02E-05 | 1.00 | EA>100% | 3 | 6.66E-05 | 5.06E-06 | 1.00 | No |
| Boiler, Ref. Gas | SVOC | Phenol | lbs/MMcf | EA<100% | 12 | 2.18E-03 | 2.09E-03 | 0.85 | EA>100% | 3 | 2.63E-03 | 3.27E-04 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | EA<100% | 15 | 3.97E-03 | 4.00E-03 | 1.00 | EA>100% | 3 | 9.70E-01 | 6.90E-02 | 1.00 | Yes |
| Boiler, Ref. Gas | VOC | Benzene | lbs/MMcf | EA<100% | 16 | 2.06E-01 | 3.73E-01 | 0.80 | EA>100% | 3 | 8.38E-02 | 4.32E-03 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | EA<100% | 15 | 1.60E-02 | 9.95E-03 | 1.00 | EA>100% | 6 | 1.93E+00 | 3.92E-01 | 1.00 | Yes |
| Boiler, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | EA<100% | 16 | 2.74E-01 | 2.46E-01 | 0.00 | EA>100% | 6 | 1.02E+00 | 1.94E-01 | 0.00 | Yes |
| Boiler, Ref. Gas | VOC | Toluene | lbs/MMcf | EA<100% | 9 | 8.40E-01 | 1.59E+00 | 0.97 | EA>100% | 3 | 9.88E-02 | 5.02E-03 | 0.00 | No |
| Heater, Ref. Gas | Halogens | HCl | lbs/MMcf | EA<100% | 3 | 2.36E-01 | 3.35E-02 | 0.00 | EA>100% | 3 | 8.13E-01 | 3.64E-01 | 0.83 | No |
| Heater, Ref. Gas | Metals | Arsenic | lbs/MMcf | EA<100% | 9 | 8.39E-04 | 5.05E-04 | 0.68 | EA>100% | 3 | 5.12E-04 | 3.67E-05 | 0.00 | No |
| Heater, Ref. Gas | Metals | Beryllium | lbs/MMcf | EA<100% | 9 | 1.55E-04 | 1.10E-04 | 0.00 | EA>100% | 3 | 2.01E-04 | 1.46E-05 | 0.00 | No |
| Heater, Ref. Gas | Metals | Cadmium | lbs/MMcf | EA<100% | 9 | 5.96E-04 | 3.99E-04 | 0.80 | EA>100% | 3 | 5.12E-04 | 3.67E-05 | 0.00 | No |

TABLE A6-6. EXTERNAL COMBUSTION EXCESS AIR COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Excess Air | Size | Average | Standard Deviation | Detect Ratio | Description Excess Air | Size | Average | Standard Deviation | Detect Ratio | |
| Heater, Ref. Gas | Metals | Chromium (Hex) | lbs/MMcf | EA<100% | 12 | 1.28E-03 | 1.25E-03 | 0.50 | EA>100% | 3 | 4.71E-04 | 4.91E-04 | 0.00 | No |
| Heater, Ref. Gas | Metals | Chromium (Total) | lbs/MMcf | EA<100% | 12 | 1.16E-03 | 5.73E-04 | 0.62 | EA>100% | 3 | 1.92E-03 | 2.28E-04 | 0.00 | Yes |
| Heater, Ref. Gas | Metals | Copper | lbs/MMcf | EA<100% | 9 | 5.71E-03 | 4.95E-03 | 0.92 | EA>100% | 3 | 2.01E-03 | 1.46E-04 | 0.00 | No |
| Heater, Ref. Gas | Metals | Lead | lbs/MMcf | EA<100% | 9 | 2.47E-03 | 2.66E-03 | 0.95 | EA>100% | 3 | 9.02E-04 | 3.67E-05 | 1.00 | No |
| Heater, Ref. Gas | Metals | Manganese | lbs/MMcf | EA<100% | 6 | 4.63E-03 | 4.93E-03 | 1.00 | EA>100% | 3 | 1.98E-03 | 7.39E-04 | 1.00 | No |
| Heater, Ref. Gas | Metals | Mercury | lbs/MMcf | EA<100% | 9 | 2.41E-04 | 1.91E-04 | 0.10 | EA>100% | 3 | 9.01E-04 | 1.02E-04 | 0.00 | Yes |
| Heater, Ref. Gas | Metals | Nickel | lbs/MMcf | EA<100% | 9 | 4.95E-03 | 8.98E-03 | 0.77 | EA>100% | 3 | 5.87E-03 | 1.32E-03 | 1.00 | No |
| Heater, Ref. Gas | Metals | Selenium | lbs/MMcf | EA<100% | 9 | 4.95E-03 | 1.41E-02 | 0.95 | EA>100% | 3 | 1.99E-03 | 2.45E-04 | 1.00 | No |
| Heater, Ref. Gas | Metals | Zinc | lbs/MMcf | EA<100% | 9 | 1.46E-02 | 1.12E-02 | 1.00 | EA>100% | 3 | 8.61E-03 | 9.93E-04 | 1.00 | No |
| Heater, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | EA<100% | 35 | 4.08E-06 | 4.82E-06 | 0.43 | EA>100% | 3 | 1.98E-04 | 2.12E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | EA<100% | 34 | 4.00E-06 | 7.67E-06 | 0.34 | EA>100% | 3 | 6.13E-05 | 1.17E-05 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Anthracene | lbs/MMcf | EA<100% | 35 | 5.83E-06 | 1.21E-05 | 0.34 | EA>100% | 3 | 3.22E-04 | 1.47E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | EA<100% | 50 | 2.02E-05 | 7.14E-05 | 0.98 | EA>100% | 3 | 1.31E-04 | 1.00E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | EA<100% | 50 | 5.19E-05 | 2.48E-04 | 0.97 | EA>100% | 3 | 4.68E-05 | 3.89E-05 | 1.00 | No |
| Heater, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | EA<100% | 50 | 2.51E-05 | 1.06E-04 | 0.98 | EA>100% | 3 | 3.28E-04 | 2.51E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Benzo(e)pyrene | lbs/MMcf | EA<100% | 21 | 1.25E-06 | 1.22E-06 | 0.23 | EA>100% | 3 | 1.80E-04 | 1.40E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | EA<100% | 35 | 1.11E-06 | 4.57E-07 | 0.05 | EA>100% | 3 | 2.04E-05 | 9.68E-06 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | EA<100% | 50 | 1.47E-05 | 6.16E-05 | 0.93 | EA>100% | 3 | 1.01E-04 | 7.92E-05 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Chrysene | lbs/MMcf | EA<100% | 35 | 1.88E-06 | 2.52E-06 | 0.70 | EA>100% | 3 | 1.76E-04 | 1.10E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | EA<100% | 50 | 6.00E-06 | 2.04E-05 | 0.00 | EA>100% | 3 | 1.63E-05 | 1.39E-05 | 0.97 | No |
| Heater, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | EA<100% | 35 | 8.71E-06 | 1.17E-05 | 0.63 | EA>100% | 3 | 7.78E-04 | 2.05E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Fluorene | lbs/MMcf | EA<100% | 35 | 1.66E-05 | 2.18E-05 | 0.34 | EA>100% | 3 | 1.69E-03 | 2.80E-03 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | EA<100% | 50 | 6.06E-05 | 2.88E-04 | 0.98 | EA>100% | 3 | 2.69E-05 | 2.55E-05 | 0.98 | No |
| Heater, Ref. Gas | PAH | Naphthalene | lbs/MMcf | EA<100% | 35 | 4.74E-04 | 9.07E-04 | 0.54 | EA>100% | 3 | 1.26E-02 | 6.18E-03 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | EA<100% | 35 | 5.20E-05 | 8.65E-05 | 0.36 | EA>100% | 3 | 1.62E-03 | 5.32E-04 | 1.00 | Yes |
| Heater, Ref. Gas | PAH | Pyrene | lbs/MMcf | EA<100% | 35 | 6.29E-06 | 7.62E-06 | 0.47 | EA>100% | 3 | 9.37E-04 | 6.75E-04 | 1.00 | Yes |
| Heater, Ref. Gas | SVOC | 2-Methylnaphthalene | lbs/MMcf | EA<100% | 21 | 7.80E-05 | 1.26E-04 | 0.16 | EA>100% | 3 | 2.29E-03 | 1.31E-03 | 1.00 | Yes |
| Heater, Ref. Gas | SVOC | Ethylbenzene | lbs/MMcf | EA<100% | 33 | 1.77E-02 | 2.60E-02 | 0.35 | EA>100% | 3 | 9.46E-02 | 0.00E+00 | 0.00 | Yes |
| Heater, Ref. Gas | SVOC | Perylene | lbs/MMcf | EA<100% | 21 | 1.02E-06 | 5.20E-07 | 0.00 | EA>100% | 3 | 1.62E-05 | 1.09E-05 | 0.73 | Yes |
| Heater, Ref. Gas | SVOC | Phenol | lbs/MMcf | EA<100% | 21 | 4.63E-03 | 5.39E-03 | 0.92 | EA>100% | 6 | 2.23E-02 | 2.45E-02 | 0.91 | Yes |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | EA<100% | 45 | 5.18E-02 | 5.08E-02 | 0.48 | EA>100% | 6 | 5.05E-02 | 4.82E-02 | 0.39 | No |
| Heater, Ref. Gas | VOC | Ammonia | lbs/MMcf | EA<100% | 3 | 1.42E-01 | 7.93E-02 | 1.00 | EA>100% | 3 | 2.76E+00 | 7.14E-01 | 1.00 | Yes |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | EA<100% | 54 | 4.76E-02 | 6.86E-02 | 0.07 | EA>100% | 6 | 2.14E-01 | 1.02E-01 | 0.63 | Yes |
| Heater, Ref. Gas | VOC | Carbonyl Sulfide | lbs/MMcf | EA<100% | 3 | 9.47E-01 | 3.21E-02 | 0.00 | EA>100% | 3 | 2.16E+00 | 3.19E-01 | 0.00 | Yes |
| Heater, Ref. Gas | VOC | Cyanide | lbs/MMcf | EA<100% | 3 | 6.16E-03 | 8.89E-04 | 0.00 | EA>100% | 3 | 1.24E-02 | 2.69E-03 | 0.00 | Yes |
| Heater, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | EA<100% | 44 | 9.93E-02 | 2.70E-01 | 0.91 | EA>100% | 3 | 1.88E+00 | 1.82E+00 | 0.97 | Yes |
| Heater, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | EA<100% | 24 | 4.45E-01 | 3.71E-01 | 0.00 | EA>100% | 6 | 9.33E-01 | 8.51E-01 | 0.00 | Yes |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | EA<100% | 51 | 8.39E-02 | 1.79E-01 | 0.62 | EA>100% | 6 | 1.33E-01 | 5.65E-02 | 0.00 | No |

TABLE A6-6. EXTERNAL COMBUSTION EXCESS AIR COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Excess Air | Size | Average | Standard Deviation | Detect Ratio | Description Excess Air | Size | Average | Standard Deviation | Detect Ratio | |
| Heater, Ref. Gas | VOC | Xylene (Total) | lbs/MMcf | EA<100% | 15 | 4.16E-02 | 3.29E-02 | 0.43 | EA>100% | 3 | 1.42E-01 | 8.14E-02 | 0.00 | Yes |

TABLE A6-7. TURBINE DUCT BURNER COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description DB | Size | Average | Standard Deviation | Detect Ratio | Description DB | Size | Average | Standard Deviation | Detect Ratio | |
| Turbine, Natural Gas | VOC | Benzene | lbs/MMcf | N | 6 | 1.24E-02 | 5.82E-03 | 0.00 | Y | 3 | 8.71E-03 | 0.00E+00 | 0.00 | No |
| Turbine, Natural Gas | VOC | Formaldehyde | lbs/MMcf | N | 3 | 2.09E-02 | 6.23E-03 | 0.45 | Y | 5 | 3.86E+00 | 3.26E+00 | 1.00 | No |

TABLE A6-8. CHROME PLATING AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Substance | Value Type | First Sample Statistics | | | | | | | | Second Sample Statistics | | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Description | | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | |
| Plating, Anodizing | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 7 | 2.64E-01 | 3.09E-01 | 1.00 | Y | N | Y | Y | 2 | 4.16E-02 | 9.41E-04 | 0.00 | No |
| Plating, Anodizing | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 3 | 6.21E-02 | 7.04E-02 | 1.00 | Y | N | N | N | 7 | 3.70E-01 | 3.09E-01 | 1.00 | No |
| Plating, Anodizing | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 3 | 6.21E-02 | 7.04E-02 | 1.00 | Y | N | Y | Y | 4 | 4.14E-03 | 2.08E-04 | 0.00 | No |
| Plating, Anodizing | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 3 | 6.21E-02 | 7.04E-02 | 1.00 | Y | Y | Y | N | 2 | 3.69E-02 | 6.49E-04 | 1.00 | No |
| Plating, Anodizing | Chromium (Total) | mg/amp-hr | Y | N | N | N | 7 | 3.70E-01 | 3.09E-01 | 1.00 | Y | N | Y | Y | 4 | 4.14E-03 | 2.08E-04 | 0.00 | No |
| Plating, Anodizing | Chromium (Total) | mg/amp-hr | Y | N | N | N | 7 | 3.70E-01 | 3.09E-01 | 1.00 | Y | Y | Y | N | 2 | 3.69E-02 | 6.49E-04 | 1.00 | No |
| Plating, Anodizing | Chromium (Total) | mg/amp-hr | Y | N | Y | Y | 4 | 4.14E-03 | 2.08E-04 | 0.00 | Y | Y | Y | N | 2 | 3.69E-02 | 6.49E-04 | 1.00 | Yes |
| Plating, Decorative | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 8.50E-05 | 1.26E-04 | 1.00 | Y | N | N | N | 3 | 2.36E+00 | 4.09E-02 | 0.00 | Yes |
| Plating, Decorative | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 2.49E-03 | 2.47E-04 | 1.00 | Y | N | N | N | 3 | 3.61E+00 | 2.89E+00 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | NA |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | N | 1 | 2.49E-02 | | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | N | Y | Y | 9 | 2.70E-03 | 1.94E-03 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | N | N | 15 | 1.06E-02 | 1.26E-02 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | N | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | N | 1 | 1.36E-02 | | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |

TABLE A6-8. CHROME PLATING AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Substance | Value Type | First Sample Statistics | | | | | | | | Second Sample Statistics | | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Description | | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | N | Y | Y | Y | 3 | 1.63E-03 | 1.24E-03 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 21 | 1.59E-02 | 8.40E-03 | 0.66 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Y | N | Y | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | N | Y | 3 | 4.74E-04 | 4.57E-05 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | N | 3 | 1.62E-02 | 7.93E-03 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | N | Y | Y | 10 | 1.13E-02 | 1.47E-02 | 0.86 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | Y | N | N | 9 | 4.79E-03 | 3.80E-03 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | No |
| Plating, Hard | Chromium (Hex) | mg/amp-hr | Y | Y | Y | N | 14 | 6.72E-02 | 7.89E-02 | 1.00 | Y | Y | Y | Y | 6 | 8.14E-03 | 8.67E-04 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | N | N | 3 | 1.66E+00 | 1.75E-01 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | NA |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | N | 1 | 5.80E-02 | | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Yes |

TABLE A6-8. CHROME PLATING AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Substance | Value Type | First Sample Statistics | | | | | | | | Second Sample Statistics | | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Description | | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | N | Y | Y | 9 | 4.56E-03 | 3.57E-03 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | N | N | 18 | 2.13E-02 | 1.73E-02 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | N | 1 | 3.50E-02 | | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | N | Y | Y | Y | 3 | 3.75E-02 | 4.54E-02 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | N | 21 | 2.89E-02 | 1.97E-02 | 0.65 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | N | Y | 3 | 6.13E-03 | 4.80E-05 | 0.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | N | 6 | 4.58E-02 | 3.13E-02 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | N | Y | Y | 12 | 8.47E-03 | 1.52E-02 | 0.98 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Yes |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | Y | N | N | 9 | 1.17E-02 | 8.54E-03 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | No |
| Plating, Hard | Chromium (Total) | mg/amp-hr | Y | Y | Y | N | 23 | 7.14E-02 | 7.45E-02 | 1.00 | Y | Y | Y | Y | 6 | 1.05E-02 | 1.82E-03 | 1.00 | No |

TABLE A6-8. CHROME PLATING AIR POLLUTION CONTROL SYSTEM COMPARISON.

| Major Group | Substance | Value Type | First Sample Statistics | | | | | | | | Second Sample Statistics | | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Description | | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | WS (Y/N) | CFS (Y/N) | ME (Y/N) | Filter (Y/N) | | | | | |
| Plating, Hard/Anodizing | Chromium (Hex) | mg/amp-hr | Y | N | N | N | 6 | 3.09E-02 | 1.90E-02 | 1.00 | Y | N | Y | N | 3 | 1.20E-02 | 5.31E-04 | 1.00 | No |
| Plating, Hard/Anodizing | Chromium (Total) | mg/amp-hr | Y | N | N | N | 6 | 3.09E-02 | 1.90E-02 | 1.00 | Y | N | Y | N | 3 | 5.98E-03 | 2.87E-04 | 1.00 | Yes |

TABLE A6-9. RICE SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Capacity | Size | Average | Standard Deviation | Detect Ratio | Description Capacity | Size | Average | Standard Deviation | Detect Ratio | |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | ≤650Hp | 12 | 2.49E-03 | 5.76E-03 | 0.97 | >650Hp | 12 | 2.14E-03 | 2.92E-03 | 0.22 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | ≤650Hp | 12 | 3.10E-03 | 5.00E-03 | 0.98 | >650Hp | 12 | 2.42E-03 | 2.68E-03 | 0.31 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | <650Hp | 12 | 6.98E-04 | 8.60E-04 | 0.90 | ≥650Hp | 12 | 2.12E-03 | 2.80E-03 | 0.21 | No |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | <650Hp | 12 | 2.44E-04 | 1.59E-04 | 0.71 | ≥650Hp | 12 | 1.09E-03 | 2.81E-03 | 0.16 | Yes |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | <650Hp | 12 | 7.98E-05 | 1.22E-04 | 0.05 | >650Hp | 12 | 1.69E-03 | 3.02E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | <650Hp | 9 | 1.93E-04 | 6.76E-05 | 0.33 | ≥650Hp | 9 | 2.24E-03 | 3.34E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b+k)fluoranthene | lbs/Mgal | <650Hp | 3 | 1.44E-06 | 2.72E-08 | 0.00 | >650Hp | 3 | 2.86E-06 | 1.15E-07 | 0.00 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | <650Hp | 12 | 1.07E-04 | 1.08E-04 | 0.34 | ≥650Hp | 12 | 1.78E-03 | 2.97E-03 | 0.05 | No |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | <650Hp | 9 | 1.11E-04 | 1.28E-04 | 0.14 | ≥650Hp | 9 | 2.25E-03 | 3.34E-03 | 0.00 | No |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | <650Hp | 12 | 1.53E-04 | 1.00E-04 | 0.54 | ≥650Hp | 12 | 1.81E-03 | 2.96E-03 | 0.07 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | <650Hp | 12 | 9.69E-05 | 1.13E-04 | 0.15 | ≥650Hp | 12 | 1.77E-03 | 2.97E-03 | 0.04 | No |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | <650Hp | 12 | 1.12E-03 | 8.24E-04 | 0.94 | ≥650Hp | 12 | 2.16E-03 | 2.77E-03 | 0.22 | No |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | <650Hp | 12 | 4.44E-03 | 3.82E-03 | 0.98 | ≥650Hp | 12 | 1.10E-02 | 1.52E-02 | 0.95 | No |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | <650Hp | 12 | 9.63E-05 | 1.12E-04 | 0.18 | ≥650Hp | 12 | 1.75E-03 | 2.98E-03 | 0.03 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | ≤650Hp | 12 | 4.20E-02 | 5.97E-02 | 1.00 | >650Hp | 12 | 3.93E-02 | 3.39E-02 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | <650Hp | 12 | 8.13E-03 | 7.87E-03 | 1.00 | ≥650Hp | 12 | 2.14E-02 | 2.73E-02 | 1.00 | No |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | <650Hp | 12 | 7.27E-04 | 4.44E-04 | 0.90 | ≥650Hp | 12 | 1.41E-03 | 4.70E-03 | 0.75 | Yes |
| ICE, Diesel | VOC | Acetaldehyde | lbs/Mgal | ≤650Hp | 6 | 7.59E-02 | 7.94E-02 | 1.00 | >650Hp | 3 | 6.48E-02 | 5.78E-03 | 1.00 | No |
| ICE, Diesel | VOC | Acrolein | lbs/Mgal | <650Hp | 6 | 4.21E-03 | 3.49E-03 | 0.38 | ≥650Hp | 3 | 1.07E-02 | 1.17E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | <650Hp | 6 | 8.51E-02 | 1.74E-02 | 1.00 | ≥650Hp | 9 | 1.64E-01 | 1.12E-01 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | <650Hp | 12 | 6.24E-02 | 9.60E-02 | 1.00 | ≥650Hp | 12 | 6.26E-01 | 9.22E-01 | 1.00 | Yes |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | <650Hp | 6 | 2.82E-01 | 1.17E-01 | 1.00 | ≥650Hp | 6 | 4.18E-01 | 1.42E-01 | 1.00 | No |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | <650Hp | 6 | 3.67E-02 | 1.40E-03 | 1.00 | ≥650Hp | 6 | 7.98E-02 | 1.82E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Xylene (Total) | lbs/Mgal | ≤650Hp | 3 | 2.68E-02 | 1.03E-03 | 1.00 | >650Hp | 6 | 2.55E-02 | 1.54E-02 | 1.00 | No |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | ≤650Hp | 6 | 1.33E-03 | 1.06E-03 | 1.00 | >650Hp | 6 | 1.51E-04 | 5.09E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | ≤650Hp | 6 | 1.10E-02 | 4.40E-03 | 1.00 | >650Hp | 6 | 5.25E-04 | 1.25E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | ≤650Hp | 6 | 1.08E-03 | 9.03E-04 | 1.00 | >650Hp | 6 | 1.19E-04 | 3.91E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | ≤650Hp | 6 | 1.86E-04 | 1.22E-04 | 1.00 | >650Hp | 6 | 5.88E-05 | 3.32E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | ≤650Hp | 6 | 7.61E-05 | 4.87E-05 | 0.94 | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | ≤650Hp | 6 | 2.82E-04 | 3.36E-04 | 0.97 | >650Hp | 6 | 4.09E-05 | 2.32E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | ≤650Hp | 6 | 1.49E-04 | 1.03E-04 | 1.00 | >650Hp | 6 | 7.54E-06 | 6.05E-06 | 0.92 | Yes |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | ≤650Hp | 6 | 3.16E-04 | 4.04E-04 | 0.98 | >650Hp | 6 | 7.83E-06 | 3.54E-06 | 0.93 | No |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | ≤650Hp | 6 | 2.03E-04 | 1.28E-04 | 1.00 | >650Hp | 6 | 1.43E-05 | 7.20E-06 | 0.96 | Yes |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | ≤650Hp | 6 | 1.17E-06 | 2.82E-06 | 1.00 | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | Yes |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | ≤650Hp | 6 | 6.23E-04 | 4.30E-04 | 1.00 | >650Hp | 6 | 2.91E-04 | 1.46E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | ≤650Hp | 6 | 3.69E-03 | 3.75E-03 | 0.94 | >650Hp | 6 | 4.36E-04 | 2.53E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | ≤650Hp | 6 | 1.44E-04 | 1.02E-04 | 1.00 | >650Hp | 6 | 7.17E-06 | 3.12E-06 | 0.96 | Yes |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | ≤650Hp | 6 | 9.02E-02 | 6.25E-02 | 1.00 | >650Hp | 6 | 2.51E-02 | 4.56E-03 | 1.00 | Yes |

TABLE A6-9. RICE SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Capacity | Size | Average | Standard Deviation | Detect Ratio | Description Capacity | Size | Average | Standard Deviation | Detect Ratio | |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | ≤650Hp | 6 | 3.98E-03 | 3.60E-03 | 1.00 | >650Hp | 6 | 1.85E-03 | 6.89E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | ≤650Hp | 6 | 9.57E-04 | 1.03E-03 | 1.00 | >650Hp | 6 | 1.87E-04 | 9.30E-05 | 1.00 | No |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | <650Hp | 3 | 1.16E-02 | 3.13E-03 | 1.00 | ≥650Hp | 9 | 6.90E-02 | 2.88E-02 | 0.69 | Yes |
| ICE, Natural Gas | VOC | 1,3-Butadiene | lbs/MMcf | <650Hp | 3 | 1.04E-01 | 3.92E-04 | 1.00 | ≥650Hp | 6 | 3.67E-01 | 6.37E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | ≤650Hp | 21 | 3.11E+00 | 2.64E+00 | 1.00 | >650Hp | 6 | 5.29E-01 | 1.04E+00 | 0.96 | Yes |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | ≤650Hp | 23 | 1.21E+00 | 1.31E+00 | 1.00 | >650Hp | 6 | 5.90E-02 | 5.20E-02 | 0.45 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | ≤650Hp | 31 | 1.24E+00 | 2.40E+00 | 1.00 | >650Hp | 9 | 2.43E-01 | 4.78E-02 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | ≤650Hp | 42 | 1.62E+01 | 1.59E+01 | 1.00 | >650Hp | 18 | 4.93E+00 | 7.25E+00 | 0.94 | Yes |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | ≤650Hp | 19 | 1.80E+01 | 2.01E+01 | 0.98 | >650Hp | 6 | 5.38E+00 | 3.30E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | ≤650Hp | 19 | 5.85E-01 | 7.01E-01 | 1.00 | >650Hp | 9 | 2.22E-01 | 1.12E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | <650Hp | 3 | 6.02E-02 | 1.86E-02 | 1.00 | ≥650Hp | 9 | 4.74E-01 | 3.49E-01 | 0.91 | No |

TABLE A6-10. OIL FIRED ASPHALT PRODUCTION CONTRACTOR COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Contractor | Size | Average | Standard Deviation | Detect Ratio | Description Contractor | Size | Average | Standard Deviation | Detect Ratio | |
| Asphalt Prod., Oil | Metals | Arsenic | lbs/ton production | A | 5 | 4.11E-06 | 7.38E-07 | 0.21 | B | 3 | 2.37E-06 | 1.60E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Beryllium | lbs/ton production | A | 5 | 3.83E-07 | 6.96E-08 | 0.00 | B | 3 | 4.16E-07 | 2.80E-08 | 0.00 | No |
| Asphalt Prod., Oil | Metals | Cadmium | lbs/ton production | A | 5 | 7.72E-07 | 1.61E-07 | 0.00 | B | 3 | 7.67E-07 | 9.69E-07 | 0.82 | No |
| Asphalt Prod., Oil | Metals | Chromium (Hex) | lbs/ton production | A | 5 | 6.25E-07 | 1.33E-07 | 0.00 | B | 3 | 1.04E-07 | 3.14E-08 | 1.00 | Yes |
| Asphalt Prod., Oil | Metals | Chromium (Total) | lbs/ton production | A | 5 | 1.13E-05 | 8.61E-06 | 1.00 | B | 3 | 9.04E-06 | 7.40E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Copper | lbs/ton production | A | 5 | 7.89E-06 | 2.84E-06 | 1.00 | B | 3 | 6.01E-06 | 2.98E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Lead | lbs/ton production | A | 5 | 3.74E-06 | 2.24E-06 | 1.00 | B | 3 | 1.41E-06 | 5.50E-07 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Manganese | lbs/ton production | A | 5 | 2.09E-05 | 2.24E-05 | 1.00 | B | 3 | 1.04E-04 | 7.79E-05 | 1.00 | Yes |
| Asphalt Prod., Oil | Metals | Mercury | lbs/ton production | A | 5 | 3.67E-06 | 3.32E-06 | 1.00 | B | 3 | 7.02E-06 | 5.71E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Nickel | lbs/ton production | A | 5 | 1.98E-04 | 2.55E-04 | 1.00 | B | 3 | 8.42E-06 | 2.63E-06 | 1.00 | No |
| Asphalt Prod., Oil | Metals | Selenium | lbs/ton production | A | 5 | 4.94E-06 | 1.39E-06 | 0.20 | B | 3 | 2.08E-07 | 1.40E-08 | 0.00 | Yes |
| Asphalt Prod., Oil | Metals | Zinc | lbs/ton production | A | 5 | 1.62E-04 | 1.43E-04 | 1.00 | B | 3 | 2.52E-05 | 8.55E-06 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Acenaphthene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 3.06E-07 | 8.20E-08 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Acenaphthylene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 5.26E-07 | 2.35E-07 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Anthracene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 5.74E-08 | 1.78E-08 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(a)anthracene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 1.11E-08 | 2.14E-09 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(a)pyrene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 1.84E-09 | 1.84E-09 | 0.72 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(b)fluoranthene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 2.10E-09 | 2.45E-10 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(g,h,i)perylene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 1.20E-09 | 2.59E-10 | 0.75 | Yes |
| Asphalt Prod., Oil | PAH | Benzo(k)fluoranthene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Chrysene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Dibenz(a,h)anthracene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Fluoranthene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 3.57E-08 | 9.68E-09 | 1.00 | Yes |
| Asphalt Prod., Oil | PAH | Fluorene | lbs/ton production | A | 5 | 3.17E-06 | 3.24E-06 | 1.00 | B | 3 | 6.58E-07 | 2.07E-07 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 8.17E-10 | 7.87E-11 | 0.00 | Yes |
| Asphalt Prod., Oil | PAH | Naphthalene | lbs/ton production | A | 5 | 2.38E-04 | 2.50E-04 | 1.00 | B | 3 | 3.08E-05 | 2.70E-06 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Phenanthrene | lbs/ton production | A | 5 | 2.73E-06 | 2.52E-06 | 1.00 | B | 3 | 6.64E-07 | 2.18E-07 | 1.00 | No |
| Asphalt Prod., Oil | PAH | Pyrene | lbs/ton production | A | 5 | 3.52E-07 | 1.88E-07 | 0.00 | B | 3 | 5.62E-08 | 2.23E-08 | 1.00 | Yes |
| Asphalt Prod., Oil | VOC | Benzene | lbs/ton production | A | 5 | 6.00E-04 | 9.28E-05 | 1.00 | B | 3 | 5.90E-05 | 1.11E-05 | 1.00 | Yes |
| Asphalt Prod., Oil | VOC | Formaldehyde | lbs/ton production | A | 5 | 5.44E-04 | 4.15E-04 | 1.00 | B | 3 | 1.38E-04 | 2.29E-05 | 1.00 | No |

TABLE A6-11. FLUIDIZED BED FUEL TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Difference at 95%Confidence |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | AGRICULTURAL WASTE | 3 | 4.46E-10 | 4.17E-11 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.79E-11 | 1.61E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | AGRICULTURAL WASTE | 3 | 4.46E-10 | 4.17E-11 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.89E-11 | 1.03E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | AGRICULTURAL WASTE | 3 | 4.46E-10 | 4.17E-11 | 0.00 | URBAN WOOD WASTE | 3 | 3.99E-11 | 8.81E-12 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.79E-11 | 1.61E-11 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.89E-11 | 1.03E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.79E-11 | 1.61E-11 | 0.00 | URBAN WOOD WASTE | 3 | 3.99E-11 | 8.81E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.89E-11 | 1.03E-11 | 0.00 | URBAN WOOD WASTE | 3 | 3.99E-11 | 8.81E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 2.16E-07 | 2.34E-07 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.56E-09 | 1.49E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 2.16E-07 | 2.34E-07 | 1.00 | URBAN WOOD WASTE | 3 | 1.79E-09 | 6.46E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:4D Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.56E-09 | 1.49E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.79E-09 | 6.46E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.10E-09 | 1.91E-10 | 0.29 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.69E-11 | 3.47E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.10E-09 | 1.91E-10 | 0.29 | SAW MILL WOOD WASTE | 3 | 3.28E-11 | 1.14E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.10E-09 | 1.91E-10 | 0.29 | URBAN WOOD WASTE | 3 | 6.10E-11 | 2.48E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.69E-11 | 3.47E-11 | 0.00 | SAW MILL WOOD WASTE | 3 | 3.28E-11 | 1.14E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.69E-11 | 3.47E-11 | 0.00 | URBAN WOOD WASTE | 3 | 6.10E-11 | 2.48E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | SAW MILL WOOD WASTE | 3 | 3.28E-11 | 1.14E-11 | 0.00 | URBAN WOOD WASTE | 3 | 6.10E-11 | 2.48E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 5.85E-08 | 5.84E-08 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.07E-09 | 8.65E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 5.85E-08 | 5.84E-08 | 1.00 | URBAN WOOD WASTE | 3 | 1.54E-09 | 6.31E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:5D Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.07E-09 | 8.65E-10 | 1.00 | URBAN WOOD WASTE | 3 | 1.54E-09 | 6.31E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.22E-09 | 4.69E-10 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.07E-11 | 1.38E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.22E-09 | 4.69E-10 | 0.00 | SAW MILL WOOD WASTE | 3 | 4.36E-11 | 4.86E-12 | 0.29 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.22E-09 | 4.69E-10 | 0.00 | URBAN WOOD WASTE | 3 | 8.95E-11 | 1.03E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.07E-11 | 1.38E-11 | 0.00 | SAW MILL WOOD WASTE | 3 | 4.36E-11 | 4.86E-12 | 0.29 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.07E-11 | 1.38E-11 | 0.00 | URBAN WOOD WASTE | 3 | 8.95E-11 | 1.03E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | SAW MILL WOOD WASTE | 3 | 4.36E-11 | 4.86E-12 | 0.29 | URBAN WOOD WASTE | 3 | 8.95E-11 | 1.03E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.27E-09 | 4.45E-10 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.94E-11 | 1.46E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.27E-09 | 4.45E-10 | 0.00 | SAW MILL WOOD WASTE | 3 | 6.38E-11 | 2.75E-11 | 0.50 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.27E-09 | 4.45E-10 | 0.00 | URBAN WOOD WASTE | 3 | 8.95E-11 | 1.03E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.94E-11 | 1.46E-11 | 0.00 | SAW MILL WOOD WASTE | 3 | 6.38E-11 | 2.75E-11 | 0.50 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.94E-11 | 1.46E-11 | 0.00 | URBAN WOOD WASTE | 3 | 8.95E-11 | 1.03E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.38E-11 | 2.75E-11 | 0.50 | URBAN WOOD WASTE | 3 | 8.95E-11 | 1.03E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.15E-09 | 5.30E-10 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.19E-11 | 1.50E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.15E-09 | 5.30E-10 | 0.00 | SAW MILL WOOD WASTE | 3 | 4.77E-11 | 8.28E-12 | 0.40 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.15E-09 | 5.30E-10 | 0.00 | URBAN WOOD WASTE | 3 | 8.09E-11 | 1.01E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.19E-11 | 1.50E-11 | 0.00 | SAW MILL WOOD WASTE | 3 | 4.77E-11 | 8.28E-12 | 0.40 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.19E-11 | 1.50E-11 | 0.00 | URBAN WOOD WASTE | 3 | 8.09E-11 | 1.01E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | SAW MILL WOOD WASTE | 3 | 4.77E-11 | 8.28E-12 | 0.40 | URBAN WOOD WASTE | 3 | 8.09E-11 | 1.01E-11 | 0.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 2.64E-08 | 1.35E-08 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.55E-10 | 2.81E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 2.64E-08 | 1.35E-08 | 1.00 | URBAN WOOD WASTE | 3 | 9.50E-10 | 3.82E-10 | 0.72 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:6D Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.55E-10 | 2.81E-10 | 1.00 | URBAN WOOD WASTE | 3 | 9.50E-10 | 3.82E-10 | 0.72 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 6.41E-09 | 2.06E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.19E-10 | 1.73E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 6.41E-09 | 2.06E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.90E-10 | 2.02E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 6.41E-09 | 2.06E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.08E-10 | 2.99E-11 | 0.58 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.19E-10 | 1.73E-10 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.90E-10 | 2.02E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.19E-10 | 1.73E-10 | 1.00 | URBAN WOOD WASTE | 3 | 1.08E-10 | 2.99E-11 | 0.58 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.90E-10 | 2.02E-10 | 1.00 | URBAN WOOD WASTE | 3 | 1.08E-10 | 2.99E-11 | 0.58 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 1.81E-08 | 4.65E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.87E-10 | 1.87E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D Total | lbs/ton | AGRICULTURAL WASTE | 3 | 1.81E-08 | 4.65E-09 | 1.00 | URBAN WOOD WASTE | 3 | 5.51E-09 | 9.31E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:7D Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.87E-10 | 1.87E-10 | 1.00 | URBAN WOOD WASTE | 3 | 5.51E-09 | 9.31E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | AGRICULTURAL WASTE | 3 | 5.81E-09 | 1.41E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.12E-10 | 1.63E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | AGRICULTURAL WASTE | 3 | 5.81E-09 | 1.41E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.69E-09 | 2.53E-09 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | AGRICULTURAL WASTE | 3 | 5.81E-09 | 1.41E-09 | 1.00 | URBAN WOOD WASTE | 3 | 3.32E-10 | 1.46E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.12E-10 | 1.63E-10 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.69E-09 | 2.53E-09 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.12E-10 | 1.63E-10 | 1.00 | URBAN WOOD WASTE | 3 | 3.32E-10 | 1.46E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Dioxin:8D | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.69E-09 | 2.53E-09 | 1.00 | URBAN WOOD WASTE | 3 | 3.32E-10 | 1.46E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | AGRICULTURAL WASTE | 3 | 3.20E-09 | 2.68E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.00E-10 | 7.71E-11 | 1.00 | No |

TABLE A6-11. FLUIDIZED BED FUEL TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Difference at 95%Confidence |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | AGRICULTURAL WASTE | 3 | 3.20E-09 | 2.68E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.29E-10 | 5.25E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | AGRICULTURAL WASTE | 3 | 3.20E-09 | 2.68E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.57E-10 | 5.09E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.00E-10 | 7.71E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.29E-10 | 5.25E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.00E-10 | 7.71E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.57E-10 | 5.09E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F 2378 | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.29E-10 | 5.25E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.57E-10 | 5.09E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 3.09E-07 | 3.20E-07 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.56E-09 | 2.00E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 3.09E-07 | 3.20E-07 | 1.00 | URBAN WOOD WASTE | 3 | 4.46E-09 | 1.72E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:4F Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.56E-09 | 2.00E-09 | 1.00 | URBAN WOOD WASTE | 3 | 4.46E-09 | 1.72E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | AGRICULTURAL WASTE | 3 | 2.09E-09 | 1.30E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.28E-10 | 5.49E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | AGRICULTURAL WASTE | 3 | 2.09E-09 | 1.30E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.27E-11 | 2.28E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | AGRICULTURAL WASTE | 3 | 2.09E-09 | 1.30E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.19E-10 | 5.88E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.28E-10 | 5.49E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.27E-11 | 2.28E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.28E-10 | 5.49E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.19E-10 | 5.88E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 12378 | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.27E-11 | 2.28E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.19E-10 | 5.88E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | AGRICULTURAL WASTE | 3 | 4.48E-09 | 2.42E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.63E-10 | 5.55E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | AGRICULTURAL WASTE | 3 | 4.48E-09 | 2.42E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.03E-10 | 2.69E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | AGRICULTURAL WASTE | 3 | 4.48E-09 | 2.42E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.60E-10 | 6.86E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.63E-10 | 5.55E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.03E-10 | 2.69E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.63E-10 | 5.55E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.60E-10 | 6.86E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F 23478 | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.03E-10 | 2.69E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.60E-10 | 6.86E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 8.58E-08 | 8.09E-08 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.76E-09 | 7.74E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 8.58E-08 | 8.09E-08 | 1.00 | URBAN WOOD WASTE | 3 | 1.40E-09 | 6.82E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:5F Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.76E-09 | 7.74E-10 | 1.00 | URBAN WOOD WASTE | 3 | 1.40E-09 | 6.82E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.63E-09 | 6.21E-10 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.86E-11 | 1.21E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.63E-09 | 6.21E-10 | 1.00 | SAW MILL WOOD WASTE | 3 | 7.59E-11 | 3.95E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.63E-09 | 6.21E-10 | 1.00 | URBAN WOOD WASTE | 3 | 9.08E-11 | 6.96E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.86E-11 | 1.21E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 7.59E-11 | 3.95E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.86E-11 | 1.21E-11 | 1.00 | URBAN WOOD WASTE | 3 | 9.08E-11 | 6.96E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123478 | lbs/ton | SAW MILL WOOD WASTE | 3 | 7.59E-11 | 3.95E-11 | 1.00 | URBAN WOOD WASTE | 3 | 9.08E-11 | 6.96E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.66E-09 | 3.91E-10 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.98E-11 | 1.82E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.66E-09 | 3.91E-10 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.12E-10 | 5.11E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.66E-09 | 3.91E-10 | 1.00 | URBAN WOOD WASTE | 3 | 8.18E-11 | 4.93E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.98E-11 | 1.82E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.12E-10 | 5.11E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.98E-11 | 1.82E-11 | 1.00 | URBAN WOOD WASTE | 3 | 8.18E-11 | 4.93E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123678 | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.12E-10 | 5.11E-11 | 1.00 | URBAN WOOD WASTE | 3 | 8.18E-11 | 4.93E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | AGRICULTURAL WASTE | 3 | 6.51E-10 | 5.42E-10 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.35E-11 | 6.50E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | AGRICULTURAL WASTE | 3 | 6.51E-10 | 5.42E-10 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.77E-11 | 2.63E-11 | 0.70 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | AGRICULTURAL WASTE | 3 | 6.51E-10 | 5.42E-10 | 0.00 | URBAN WOOD WASTE | 3 | 4.60E-11 | 6.23E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.35E-11 | 6.50E-12 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.77E-11 | 2.63E-11 | 0.70 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.35E-11 | 6.50E-12 | 0.00 | URBAN WOOD WASTE | 3 | 4.60E-11 | 6.23E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 123789 | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.77E-11 | 2.63E-11 | 0.70 | URBAN WOOD WASTE | 3 | 4.60E-11 | 6.23E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.75E-09 | 1.40E-10 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.17E-11 | 1.14E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.75E-09 | 1.40E-10 | 1.00 | SAW MILL WOOD WASTE | 3 | 3.02E-10 | 2.69E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 1.75E-09 | 1.40E-10 | 1.00 | URBAN WOOD WASTE | 3 | 5.41E-11 | 1.78E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.17E-11 | 1.14E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 3.02E-10 | 2.69E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.17E-11 | 1.14E-11 | 1.00 | URBAN WOOD WASTE | 3 | 5.41E-11 | 1.78E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F 234678 | lbs/ton | SAW MILL WOOD WASTE | 3 | 3.02E-10 | 2.69E-10 | 1.00 | URBAN WOOD WASTE | 3 | 5.41E-11 | 1.78E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:6F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 2.85E-08 | 1.28E-08 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.76E-10 | 9.79E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 2.85E-08 | 1.28E-08 | 1.00 | URBAN WOOD WASTE | 3 | 8.03E-10 | 5.38E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:6F Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.76E-10 | 9.79E-11 | 1.00 | URBAN WOOD WASTE | 3 | 8.03E-10 | 5.38E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 7.32E-09 | 1.09E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.21E-10 | 2.11E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 7.32E-09 | 1.09E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.37E-09 | 1.44E-09 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | AGRICULTURAL WASTE | 3 | 7.32E-09 | 1.09E-09 | 1.00 | URBAN WOOD WASTE | 3 | 3.41E-10 | 3.68E-10 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.21E-10 | 2.11E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.37E-09 | 1.44E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.21E-10 | 2.11E-11 | 1.00 | URBAN WOOD WASTE | 3 | 3.41E-10 | 3.68E-10 | 1.00 | No |

TABLE A6-11. FLUIDIZED BED FUEL TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.37E-09 | 1.44E-09 | 1.00 | URBAN WOOD WASTE | 3 | 3.41E-10 | 3.58E-10 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | AGRICULTURAL WASTE | 3 | 7.43E-10 | 5.89E-10 | 0.63 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.72E-11 | 6.83E-12 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | AGRICULTURAL WASTE | 3 | 7.43E-10 | 5.89E-10 | 0.63 | SAW MILL WOOD WASTE | 3 | 8.97E-11 | 9.71E-11 | 0.92 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | AGRICULTURAL WASTE | 3 | 7.43E-10 | 5.89E-10 | 0.63 | URBAN WOOD WASTE | 3 | 4.98E-11 | 3.43E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.72E-11 | 6.83E-12 | 0.00 | SAW MILL WOOD WASTE | 3 | 8.97E-11 | 9.71E-11 | 0.92 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.72E-11 | 6.83E-12 | 0.00 | URBAN WOOD WASTE | 3 | 4.98E-11 | 3.43E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | SAW MILL WOOD WASTE | 3 | 8.97E-11 | 9.71E-11 | 0.92 | URBAN WOOD WASTE | 3 | 4.98E-11 | 3.43E-11 | 0.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:7F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 9.72E-09 | 3.22E-09 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.33E-10 | 2.96E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:7F Total | lbs/ton | AGRICULTURAL WASTE | 3 | 9.72E-09 | 3.22E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.16E-10 | 6.92E-11 | 1.00 | Yes |
| FBC, Biomass | Dioxin/Furan | Furan:7F Total | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.33E-10 | 2.96E-11 | 1.00 | URBAN WOOD WASTE | 3 | 1.16E-10 | 6.92E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | AGRICULTURAL WASTE | 3 | 5.24E-09 | 3.44E-09 | 0.81 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.66E-10 | 3.04E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | AGRICULTURAL WASTE | 3 | 5.24E-09 | 3.44E-09 | 0.81 | SAW MILL WOOD WASTE | 3 | 1.61E-09 | 1.65E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | AGRICULTURAL WASTE | 3 | 5.24E-09 | 3.44E-09 | 0.81 | URBAN WOOD WASTE | 3 | 2.05E-10 | 8.21E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.66E-10 | 3.04E-11 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.61E-09 | 1.65E-09 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.66E-10 | 3.04E-11 | 1.00 | URBAN WOOD WASTE | 3 | 2.05E-10 | 8.21E-11 | 1.00 | No |
| FBC, Biomass | Dioxin/Furan | Furan:8F | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.61E-09 | 1.65E-09 | 1.00 | URBAN WOOD WASTE | 3 | 2.05E-10 | 8.21E-11 | 1.00 | No |
| FBC, Biomass | Halogens | HCl | lbs/ton | AGRICULTURAL WASTE | 3 | 7.21E-02 | 3.55E-02 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.14E-04 | 6.43E-05 | 1.00 | Yes |
| FBC, Biomass | Halogens | HCl | lbs/ton | AGRICULTURAL WASTE | 3 | 7.21E-02 | 3.55E-02 | 1.00 | URBAN WOOD WASTE | 3 | 1.55E-04 | 1.53E-04 | 1.00 | Yes |
| FBC, Biomass | Halogens | HCl | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.14E-04 | 6.43E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.55E-04 | 1.53E-04 | 1.00 | No |
| FBC, Biomass | Metals | Arsenic | lbs/ton | AGRICULTURAL WASTE | 3 | 1.57E-05 | 2.35E-05 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.74E-05 | 1.21E-05 | 1.00 | No |
| FBC, Biomass | Metals | Arsenic | lbs/ton | AGRICULTURAL WASTE | 3 | 1.57E-05 | 2.35E-05 | 0.00 | URBAN WOOD WASTE | 3 | 6.06E-06 | 4.76E-06 | 1.00 | No |
| FBC, Biomass | Metals | Arsenic | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.74E-05 | 1.21E-05 | 1.00 | URBAN WOOD WASTE | 3 | 6.06E-06 | 4.76E-06 | 1.00 | Yes |
| FBC, Biomass | Metals | Beryllium | lbs/ton | AGRICULTURAL WASTE | 3 | 2.16E-06 | 1.02E-07 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.65E-07 | 1.10E-07 | 0.77 | Yes |
| FBC, Biomass | Metals | Beryllium | lbs/ton | AGRICULTURAL WASTE | 3 | 2.16E-06 | 1.02E-07 | 0.00 | URBAN WOOD WASTE | 3 | 2.75E-07 | 1.08E-07 | 0.00 | Yes |
| FBC, Biomass | Metals | Beryllium | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.65E-07 | 1.10E-07 | 0.77 | URBAN WOOD WASTE | 3 | 2.75E-07 | 1.08E-07 | 0.00 | No |
| FBC, Biomass | Metals | Cadmium | lbs/ton | AGRICULTURAL WASTE | 3 | 8.87E-05 | 1.17E-04 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.35E-06 | 5.25E-06 | 1.00 | No |
| FBC, Biomass | Metals | Cadmium | lbs/ton | AGRICULTURAL WASTE | 3 | 8.87E-05 | 1.17E-04 | 0.00 | URBAN WOOD WASTE | 3 | 5.29E-06 | 3.99E-06 | 1.00 | No |
| FBC, Biomass | Metals | Cadmium | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.35E-06 | 5.25E-06 | 1.00 | URBAN WOOD WASTE | 3 | 5.29E-06 | 3.99E-06 | 1.00 | No |
| FBC, Biomass | Metals | Chromium (Hex) | lbs/ton | AGRICULTURAL WASTE | 3 | 4.28E-05 | 6.16E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.58E-07 | 4.66E-08 | 0.00 | Yes |
| FBC, Biomass | Metals | Chromium (Hex) | lbs/ton | AGRICULTURAL WASTE | 3 | 4.28E-05 | 6.16E-06 | 0.00 | URBAN WOOD WASTE | 3 | 1.02E-06 | 1.54E-08 | 0.00 | Yes |
| FBC, Biomass | Metals | Chromium (Hex) | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.58E-07 | 4.66E-08 | 0.00 | URBAN WOOD WASTE | 3 | 1.02E-06 | 1.54E-08 | 0.00 | No |
| FBC, Biomass | Metals | Chromium (Total) | lbs/ton | AGRICULTURAL WASTE | 3 | 2.88E-06 | 1.35E-06 | 0.52 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.67E-05 | 2.04E-06 | 1.00 | Yes |
| FBC, Biomass | Metals | Chromium (Total) | lbs/ton | AGRICULTURAL WASTE | 3 | 2.88E-06 | 1.35E-06 | 0.52 | URBAN WOOD WASTE | 3 | 3.85E-05 | 2.89E-06 | 1.00 | Yes |
| FBC, Biomass | Metals | Chromium (Total) | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.67E-05 | 2.04E-06 | 1.00 | URBAN WOOD WASTE | 3 | 3.85E-05 | 2.89E-06 | 1.00 | Yes |
| FBC, Biomass | Metals | Copper | lbs/ton | AGRICULTURAL WASTE | 3 | 6.15E-05 | 2.11E-05 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.13E-05 | 1.54E-05 | 1.00 | No |
| FBC, Biomass | Metals | Copper | lbs/ton | AGRICULTURAL WASTE | 3 | 6.15E-05 | 2.11E-05 | 1.00 | URBAN WOOD WASTE | 3 | 3.60E-05 | 6.42E-06 | 1.00 | No |
| FBC, Biomass | Metals | Copper | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.13E-05 | 1.54E-05 | 1.00 | URBAN WOOD WASTE | 3 | 3.60E-05 | 6.42E-06 | 1.00 | No |
| FBC, Biomass | Metals | Lead | lbs/ton | AGRICULTURAL WASTE | 3 | 6.54E-05 | 3.40E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 8.76E-05 | 7.38E-05 | 1.00 | No |
| FBC, Biomass | Metals | Lead | lbs/ton | AGRICULTURAL WASTE | 3 | 6.54E-05 | 3.40E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.04E-05 | 3.32E-05 | 1.00 | No |
| FBC, Biomass | Metals | Lead | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 8.76E-05 | 7.38E-05 | 1.00 | URBAN WOOD WASTE | 3 | 4.04E-05 | 3.32E-05 | 1.00 | No |
| FBC, Biomass | Metals | Manganese | lbs/ton | AGRICULTURAL WASTE | 3 | 2.86E-04 | 3.84E-04 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.65E-04 | 6.80E-04 | 1.00 | No |
| FBC, Biomass | Metals | Manganese | lbs/ton | AGRICULTURAL WASTE | 3 | 2.86E-04 | 3.84E-04 | 1.00 | URBAN WOOD WASTE | 3 | 1.64E-04 | 2.29E-04 | 1.00 | No |
| FBC, Biomass | Metals | Manganese | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 7.65E-04 | 6.80E-04 | 1.00 | URBAN WOOD WASTE | 3 | 1.64E-04 | 2.29E-04 | 1.00 | No |
| FBC, Biomass | Metals | Mercury | lbs/ton | AGRICULTURAL WASTE | 3 | 1.92E-04 | 1.13E-04 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.41E-06 | 7.72E-06 | 0.65 | Yes |
| FBC, Biomass | Metals | Mercury | lbs/ton | AGRICULTURAL WASTE | 3 | 1.92E-04 | 1.13E-04 | 1.00 | URBAN WOOD WASTE | 3 | 3.69E-04 | 3.16E-04 | 1.00 | No |
| FBC, Biomass | Metals | Mercury | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.41E-06 | 7.72E-06 | 0.65 | URBAN WOOD WASTE | 3 | 3.69E-04 | 3.16E-04 | 1.00 | No |
| FBC, Biomass | Metals | Nickel | lbs/ton | AGRICULTURAL WASTE | 3 | 4.50E-05 | 9.69E-07 | 0.34 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.56E-05 | 3.37E-05 | 1.00 | No |
| FBC, Biomass | Metals | Nickel | lbs/ton | AGRICULTURAL WASTE | 3 | 4.50E-05 | 9.69E-07 | 0.34 | URBAN WOOD WASTE | 3 | 8.51E-06 | 5.99E-06 | 1.00 | Yes |
| FBC, Biomass | Metals | Nickel | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.56E-05 | 3.37E-05 | 1.00 | URBAN WOOD WASTE | 3 | 8.51E-06 | 5.99E-06 | 1.00 | No |
| FBC, Biomass | Metals | Selenium | lbs/ton | AGRICULTURAL WASTE | 3 | 1.90E-05 | 7.71E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.78E-06 | 7.66E-06 | 1.00 | No |
| FBC, Biomass | Metals | Selenium | lbs/ton | AGRICULTURAL WASTE | 3 | 1.90E-05 | 7.71E-06 | 0.00 | URBAN WOOD WASTE | 3 | 6.29E-06 | 3.52E-06 | 1.00 | No |
| FBC, Biomass | Metals | Selenium | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 9.78E-06 | 7.66E-06 | 1.00 | URBAN WOOD WASTE | 3 | 6.29E-06 | 3.52E-06 | 1.00 | No |
| FBC, Biomass | Metals | Zinc | lbs/ton | AGRICULTURAL WASTE | 3 | 3.36E-04 | 2.26E-04 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.47E-04 | 2.97E-04 | 1.00 | No |
| FBC, Biomass | Metals | Zinc | lbs/ton | AGRICULTURAL WASTE | 3 | 3.36E-04 | 2.26E-04 | 1.00 | URBAN WOOD WASTE | 3 | 1.74E-04 | 1.42E-04 | 1.00 | No |
| FBC, Biomass | Metals | Zinc | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.47E-04 | 2.97E-04 | 1.00 | URBAN WOOD WASTE | 3 | 1.74E-04 | 1.42E-04 | 1.00 | No |

TABLE A6-11. FLUIDIZED BED FUEL TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.62E-07 | 3.17E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 7.04E-07 | 3.53E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 6.96E-06 | 1.20E-05 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.62E-07 | 3.17E-07 | 1.00 | SAW MILL WOOD WASTE | 3 | 7.04E-07 | 3.53E-07 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.62E-07 | 3.17E-07 | 1.00 | URBAN WOOD WASTE | 3 | 6.96E-06 | 1.20E-05 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthene | lbs/ton | SAW MILL WOOD WASTE | 3 | 7.04E-07 | 3.53E-07 | 1.00 | URBAN WOOD WASTE | 3 | 6.96E-06 | 1.20E-05 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | AGRICULTURAL WASTE | 3 | 9.47E-05 | 9.77E-05 | 0.95 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.14E-07 | 3.49E-07 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | AGRICULTURAL WASTE | 3 | 9.47E-05 | 9.77E-05 | 0.95 | SAW MILL WOOD WASTE | 3 | 2.67E-05 | 1.31E-05 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | AGRICULTURAL WASTE | 3 | 9.47E-05 | 9.77E-05 | 0.95 | URBAN WOOD WASTE | 3 | 1.62E-07 | 1.97E-07 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.14E-07 | 3.49E-07 | 1.00 | SAW MILL WOOD WASTE | 3 | 2.67E-05 | 1.31E-05 | 1.00 | Yes |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 5.14E-07 | 3.49E-07 | 1.00 | URBAN WOOD WASTE | 3 | 1.62E-07 | 1.97E-07 | 1.00 | No |
| FBC, Biomass | PAH | Acenaphthylene | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.67E-05 | 1.31E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.62E-07 | 1.97E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.80E-07 | 3.13E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 5.68E-07 | 1.92E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 2.92E-07 | 4.03E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Anthracene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.80E-07 | 3.13E-07 | 1.00 | SAW MILL WOOD WASTE | 3 | 5.68E-07 | 1.92E-07 | 1.00 | No |
| FBC, Biomass | PAH | Anthracene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.80E-07 | 3.13E-07 | 1.00 | URBAN WOOD WASTE | 3 | 2.92E-07 | 4.03E-07 | 1.00 | No |
| FBC, Biomass | PAH | Anthracene | lbs/ton | SAW MILL WOOD WASTE | 3 | 5.68E-07 | 1.92E-07 | 1.00 | URBAN WOOD WASTE | 3 | 2.92E-07 | 4.03E-07 | 1.00 | No |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.21E-07 | 3.62E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.05E-08 | 4.16E-09 | 0.74 | Yes |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 3.86E-08 | 8.74E-09 | 0.25 | Yes |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.21E-07 | 3.62E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 2.05E-08 | 4.16E-09 | 0.74 | Yes |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.21E-07 | 3.62E-08 | 1.00 | URBAN WOOD WASTE | 3 | 3.86E-08 | 8.74E-09 | 0.25 | Yes |
| FBC, Biomass | PAH | Benzo(a)anthracene | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.05E-08 | 4.16E-09 | 0.74 | URBAN WOOD WASTE | 3 | 3.86E-08 | 8.74E-09 | 0.25 | Yes |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.70E-08 | 1.45E-08 | 0.19 | Yes |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 1.64E-08 | 6.23E-10 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.70E-08 | 1.45E-08 | 0.19 | SAW MILL WOOD WASTE | 3 | 1.64E-08 | 6.23E-10 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.70E-08 | 1.45E-08 | 0.19 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(a)pyrene | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.64E-08 | 6.23E-10 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.48E-08 | 8.33E-09 | 1.00 | Yes |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 1.25E-07 | 1.66E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.48E-08 | 8.33E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.25E-07 | 1.66E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.48E-08 | 8.33E-09 | 1.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(b)fluoranthene | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.25E-07 | 1.66E-08 | 1.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 5.94E-08 | 3.59E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | SAW MILL WOOD WASTE | 3 | 5.94E-08 | 3.59E-08 | 1.00 | No |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(g,h,i)perylene | lbs/ton | SAW MILL WOOD WASTE | 3 | 5.94E-08 | 3.59E-08 | 1.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 3.00E-08 | 9.68E-09 | 1.00 | Yes |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | SAW MILL WOOD WASTE | 3 | 3.00E-08 | 9.68E-09 | 1.00 | No |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Benzo(k)fluoranthene | lbs/ton | SAW MILL WOOD WASTE | 3 | 3.00E-08 | 9.68E-09 | 1.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Chrysene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Chrysene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.35E-07 | 3.52E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Chrysene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Chrysene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.35E-07 | 3.52E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Chrysene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Chrysene | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.35E-07 | 3.52E-08 | 1.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | Yes |

TABLE A6-11. FLUIDIZED BED FUEL TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Difference at 95%Confidance |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 1.64E-08 | 6.23E-10 | 0.00 | Yes |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | SAW MILL WOOD WASTE | 3 | 1.64E-08 | 6.23E-10 | 0.00 | Yes |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Dibenz(a,h)anthracene | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.64E-08 | 6.23E-10 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 4.79E-05 | 1.16E-05 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.15E-08 | 1.20E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 4.79E-05 | 1.16E-05 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.73E-08 | 2.44E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | AGRICULTURAL WASTE | 3 | 4.79E-05 | 1.16E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.86E-07 | 6.62E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.15E-08 | 1.20E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.73E-08 | 2.44E-08 | 1.00 | No |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.15E-08 | 1.20E-08 | 1.00 | URBAN WOOD WASTE | 3 | 1.86E-07 | 6.62E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluoranthene | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.73E-08 | 2.44E-08 | 1.00 | URBAN WOOD WASTE | 3 | 1.86E-07 | 6.62E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluorene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.39E-08 | 1.27E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluorene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 1.32E-08 | 6.67E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluorene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 3.75E-07 | 2.28E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Fluorene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.39E-08 | 1.27E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.32E-08 | 6.67E-07 | 1.00 | No |
| FBC, Biomass | PAH | Fluorene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.39E-08 | 1.27E-08 | 1.00 | URBAN WOOD WASTE | 3 | 3.75E-07 | 2.28E-07 | 1.00 | No |
| FBC, Biomass | PAH | Fluorene | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.32E-08 | 6.67E-07 | 1.00 | URBAN WOOD WASTE | 3 | 3.75E-07 | 2.28E-07 | 1.00 | No |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.47E-08 | 1.15E-08 | 0.78 | Yes |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.20E-05 | 3.01E-06 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | Yes |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | SAW MILL WOOD WASTE | 3 | 2.47E-08 | 1.15E-08 | 0.78 | No |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.41E-08 | 5.22E-09 | 0.00 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.47E-08 | 1.15E-08 | 0.78 | URBAN WOOD WASTE | 3 | 4.26E-08 | 1.82E-09 | 0.00 | No |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | AGRICULTURAL WASTE | 3 | 7.17E-03 | 1.25E-03 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.17E-05 | 2.56E-05 | 1.00 | Yes |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | AGRICULTURAL WASTE | 3 | 7.17E-03 | 1.25E-03 | 1.00 | SAW MILL WOOD WASTE | 3 | 2.99E-04 | 9.94E-05 | 1.00 | Yes |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | AGRICULTURAL WASTE | 3 | 7.17E-03 | 1.25E-03 | 1.00 | URBAN WOOD WASTE | 3 | 1.00E-05 | 1.01E-05 | 1.00 | Yes |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.17E-05 | 2.56E-05 | 1.00 | SAW MILL WOOD WASTE | 3 | 2.99E-04 | 9.94E-05 | 1.00 | Yes |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.17E-05 | 2.56E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.00E-05 | 1.01E-05 | 1.00 | No |
| FBC, Biomass | PAH | Naphthalene | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.99E-04 | 9.94E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.00E-05 | 1.01E-05 | 1.00 | Yes |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.13E-04 | 6.79E-06 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.62E-05 | 6.79E-06 | 1.00 | Yes |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.13E-04 | 6.79E-06 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.92E-05 | 5.38E-06 | 1.00 | Yes |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | AGRICULTURAL WASTE | 3 | 1.13E-04 | 6.79E-06 | 1.00 | URBAN WOOD WASTE | 3 | 7.06E-07 | 5.32E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.62E-05 | 6.79E-06 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.92E-05 | 5.38E-06 | 1.00 | No |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.62E-05 | 6.79E-06 | 1.00 | URBAN WOOD WASTE | 3 | 7.06E-07 | 5.32E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Phenanthrene | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.92E-05 | 5.38E-06 | 1.00 | URBAN WOOD WASTE | 3 | 7.06E-07 | 5.32E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 4.93E-05 | 1.65E-05 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.24E-06 | 4.10E-07 | 1.00 | Yes |
| FBC, Biomass | PAH | Pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 4.93E-05 | 1.65E-05 | 1.00 | SAW MILL WOOD WASTE | 3 | 4.78E-08 | 1.66E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Pyrene | lbs/ton | AGRICULTURAL WASTE | 3 | 4.93E-05 | 1.65E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.03E-07 | 2.93E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Pyrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.24E-06 | 4.10E-07 | 1.00 | SAW MILL WOOD WASTE | 3 | 4.78E-08 | 1.66E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Pyrene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.24E-06 | 4.10E-07 | 1.00 | URBAN WOOD WASTE | 3 | 1.03E-07 | 2.93E-08 | 1.00 | Yes |
| FBC, Biomass | PAH | Pyrene | lbs/ton | SAW MILL WOOD WASTE | 3 | 4.78E-08 | 1.66E-08 | 1.00 | URBAN WOOD WASTE | 3 | 1.03E-07 | 2.93E-08 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Decachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.17E-09 | 1.92E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.47E-10 | 2.09E-10 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Decachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.17E-09 | 1.92E-09 | 1.00 | URBAN WOOD WASTE | 3 | 2.95E-09 | 1.20E-09 | 0.00 | No |
| FBC, Biomass | PCB | PCB:Decachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.47E-10 | 2.09E-10 | 0.00 | URBAN WOOD WASTE | 3 | 2.95E-09 | 1.20E-09 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Dichlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.40E-06 | 6.76E-07 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.53E-08 | 4.82E-09 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Dichlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.40E-06 | 6.76E-07 | 1.00 | URBAN WOOD WASTE | 3 | 7.58E-08 | 6.17E-08 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Dichlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.53E-08 | 4.82E-09 | 0.00 | URBAN WOOD WASTE | 3 | 7.58E-08 | 6.17E-08 | 0.00 | No |
| FBC, Biomass | PCB | PCB:Heptachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.95E-08 | 7.81E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 7.62E-10 | 8.58E-11 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Heptachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.95E-08 | 7.81E-09 | 1.00 | URBAN WOOD WASTE | 3 | 4.37E-09 | 1.46E-09 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Heptachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 7.62E-10 | 8.58E-11 | 0.00 | URBAN WOOD WASTE | 3 | 4.37E-09 | 1.46E-09 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Hexachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.11E-08 | 1.69E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.32E-09 | 6.27E-10 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Hexachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.11E-08 | 1.69E-08 | 1.00 | URBAN WOOD WASTE | 3 | 5.21E-09 | 2.68E-09 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Hexachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.32E-09 | 6.27E-10 | 0.00 | URBAN WOOD WASTE | 3 | 5.21E-09 | 2.68E-09 | 1.00 | No |
| FBC, Biomass | PCB | PCB:Monochlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.40E-07 | 5.40E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 2.43E-08 | 3.07E-09 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Monochlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.40E-07 | 5.40E-08 | 1.00 | URBAN WOOD WASTE | 3 | 2.22E-07 | 2.28E-07 | 1.00 | No |

TABLE A6-11. FLUIDIZED BED FUEL TYPE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | Description Fuel Type | Size | Average | Standard Deviation | Detect Ratio | |
| FBC, Biomass | PCB | PCB:Monochlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 2.43E-08 | 3.07E-09 | 1.00 | URBAN WOOD WASTE | 3 | 2.22E-07 | 2.28E-07 | 1.00 | No |
| FBC, Biomass | PCB | PCB:Nonachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.05E-09 | 1.49E-09 | 1.00 | SAW MILL WOOD WASTE | 3 | 6.25E-10 | 2.77E-10 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Nonachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.05E-09 | 1.49E-09 | 1.00 | URBAN WOOD WASTE | 3 | 2.03E-09 | 1.09E-09 | 0.00 | No |
| FBC, Biomass | PCB | PCB:Nonachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 6.25E-10 | 2.77E-10 | 0.00 | URBAN WOOD WASTE | 3 | 2.03E-09 | 1.09E-09 | 0.00 | No |
| FBC, Biomass | PCB | PCB:Octachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.41E-08 | 3.86E-09 | 0.00 | SAW MILL WOOD WASTE | 3 | 1.16E-09 | 2.65E-10 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Octachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 6.41E-08 | 3.86E-09 | 0.00 | URBAN WOOD WASTE | 3 | 3.67E-08 | 6.71E-09 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Octachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.16E-09 | 2.65E-10 | 0.00 | URBAN WOOD WASTE | 3 | 3.67E-08 | 6.71E-09 | 0.00 | Yes |
| FBC, Biomass | PCB | PCB:Pentachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.16E-07 | 4.77E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 4.61E-09 | 1.92E-09 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Pentachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.16E-07 | 4.77E-08 | 1.00 | URBAN WOOD WASTE | 3 | 5.62E-09 | 4.18E-09 | 0.62 | Yes |
| FBC, Biomass | PCB | PCB:Pentachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 4.61E-09 | 1.92E-09 | 1.00 | URBAN WOOD WASTE | 3 | 5.62E-09 | 4.18E-09 | 0.62 | No |
| FBC, Biomass | PCB | PCB:Tetrachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.42E-07 | 1.03E-07 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.69E-08 | 4.54E-09 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Tetrachlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 3.42E-07 | 1.03E-07 | 1.00 | URBAN WOOD WASTE | 3 | 3.79E-08 | 1.88E-08 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Tetrachlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.69E-08 | 4.54E-09 | 1.00 | URBAN WOOD WASTE | 3 | 3.79E-08 | 1.88E-08 | 1.00 | No |
| FBC, Biomass | PCB | PCB:Trichlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.12E-08 | 2.10E-08 | 1.00 | SAW MILL WOOD WASTE | 3 | 1.53E-08 | 4.09E-09 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Trichlorinated biphenyls | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 4.12E-08 | 2.10E-08 | 1.00 | URBAN WOOD WASTE | 3 | 1.94E-07 | 2.01E-07 | 1.00 | Yes |
| FBC, Biomass | PCB | PCB:Trichlorinated biphenyls | lbs/ton | SAW MILL WOOD WASTE | 3 | 1.53E-08 | 4.09E-09 | 1.00 | URBAN WOOD WASTE | 3 | 1.94E-07 | 2.01E-07 | 1.00 | No |
| FBC, Biomass | VOC | Acetaldehyde | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.87E-04 | 1.87E-05 | 1.00 | URBAN WOOD WASTE | 3 | 1.03E-03 | 7.65E-04 | 1.00 | No |
| FBC, Biomass | VOC | Acrolein | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.31E-04 | 1.43E-04 | 0.75 | URBAN WOOD WASTE | 3 | 6.23E-05 | 2.21E-06 | 0.00 | No |
| FBC, Biomass | VOC | Benzene | lbs/ton | AGRICULTURAL WASTE | 3 | 7.70E-04 | 2.19E-04 | 0.79 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.34E-04 | 3.53E-06 | 0.00 | Yes |
| FBC, Biomass | VOC | Benzene | lbs/ton | AGRICULTURAL WASTE | 3 | 7.70E-04 | 2.19E-04 | 0.79 | URBAN WOOD WASTE | 3 | 1.49E-04 | 1.21E-06 | 0.00 | Yes |
| FBC, Biomass | VOC | Benzene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.34E-04 | 3.53E-06 | 0.00 | URBAN WOOD WASTE | 3 | 1.49E-04 | 1.21E-06 | 0.00 | Yes |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | AGRICULTURAL WASTE | 3 | 2.34E-02 | 4.02E-03 | 1.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.65E-03 | 3.73E-04 | 1.00 | Yes |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | AGRICULTURAL WASTE | 3 | 2.34E-02 | 4.02E-03 | 1.00 | SAW MILL WOOD WASTE | 3 | 3.66E-04 | 1.35E-04 | 1.00 | Yes |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | AGRICULTURAL WASTE | 3 | 2.34E-02 | 4.02E-03 | 1.00 | URBAN WOOD WASTE | 3 | 6.04E-04 | 1.66E-04 | 1.00 | Yes |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.65E-03 | 3.73E-04 | 1.00 | SAW MILL WOOD WASTE | 3 | 3.66E-04 | 1.35E-04 | 1.00 | Yes |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 2.65E-03 | 3.73E-04 | 1.00 | URBAN WOOD WASTE | 3 | 6.04E-04 | 1.66E-04 | 1.00 | Yes |
| FBC, Biomass | VOC | Formaldehyde | lbs/ton | SAW MILL WOOD WASTE | 3 | 3.66E-04 | 1.35E-04 | 1.00 | URBAN WOOD WASTE | 3 | 6.04E-04 | 1.66E-04 | 1.00 | No |
| FBC, Biomass | VOC | Toluene | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.28E-04 | 1.05E-05 | 0.64 | URBAN WOOD WASTE | 3 | 1.70E-04 | 3.19E-05 | 0.00 | No |
| FBC, Biomass | VOC | Vinyl Chloride | lbs/ton | AGRICULTURAL WASTE | 3 | 5.43E-04 | 1.21E-04 | 0.00 | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.42E-04 | 3.72E-06 | 0.00 | Yes |
| FBC, Biomass | VOC | Vinyl Chloride | lbs/ton | AGRICULTURAL WASTE | 3 | 5.43E-04 | 1.21E-04 | 0.00 | URBAN WOOD WASTE | 3 | 1.57E-04 | 1.62E-06 | 0.00 | Yes |
| FBC, Biomass | VOC | Vinyl Chloride | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.42E-04 | 3.72E-06 | 0.00 | URBAN WOOD WASTE | 3 | 1.57E-04 | 1.62E-06 | 0.00 | Yes |
| FBC, Biomass | VOC | Xylene (Total) | lbs/ton | AGRICULTURAL/URBAN WOOD WASTE | 3 | 1.50E-04 | 8.24E-05 | 0.68 | URBAN WOOD WASTE | 3 | 1.60E-04 | 1.30E-06 | 0.00 | No |

TABLE A6-12. COATING, DRYER, AND INCINERATOR MATERIAL COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Material | Size | Average | Standard Deviation | Detect Ratio | Description Material | Size | Average | Standard Deviation | Detect Ratio | |
| Coating, Base/Catalyst/Water Mix | Metals | Chromium (Hex) | lbs/gal paint | 26% Cr | 6 | 6.63E-04 | 4.26E-04 | 1.00 | 5.25% Cr | 6 | 2.59E-05 | 1.65E-05 | 0.78 | Yes |
| Coating, Base/Catalyst/Water Mix | Metals | Chromium (Total) | lbs/gal paint | 26% Cr | 6 | 8.32E-04 | 3.61E-04 | 1.00 | 5.25% Cr | 6 | 3.59E-05 | 3.02E-05 | 0.81 | Yes |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 20% Cr | 1 | 5.15E-01 | | 1.00 | 4% Cr | 1 | 3.62E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 20% Cr | 1 | 5.15E-01 | | 1.00 | 44% Cr | 1 | 6.01E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 20% Cr | 1 | 5.15E-01 | | 1.00 | 68% Cr | 1 | 1.78E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 20% Cr | 1 | 5.15E-01 | | 1.00 | 79% Cr | 1 | 3.25E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 20% Cr | 1 | 5.15E-01 | | 1.00 | 6.5% Cr | 3 | 6.67E-02 | 4.53E-02 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 4% Cr | 1 | 3.62E-01 | | 1.00 | 44% Cr | 1 | 6.01E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 4% Cr | 1 | 3.62E-01 | | 1.00 | 68% Cr | 1 | 1.78E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 4% Cr | 1 | 3.62E-01 | | 1.00 | 79% Cr | 1 | 3.25E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 4% Cr | 1 | 3.62E-01 | | 1.00 | 6.5% Cr | 3 | 6.67E-02 | 4.53E-02 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 44% Cr | 1 | 6.01E-01 | | 1.00 | 68% Cr | 1 | 1.78E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 44% Cr | 1 | 6.01E-01 | | 1.00 | 79% Cr | 1 | 3.25E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 44% Cr | 1 | 6.01E-01 | | 1.00 | 6.5% Cr | 3 | 6.67E-02 | 4.53E-02 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 68% Cr | 1 | 1.78E+01 | | 1.00 | 79% Cr | 1 | 3.25E+01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 68% Cr | 1 | 1.78E+01 | | 1.00 | 6.5% Cr | 3 | 6.67E-02 | 4.53E-02 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Hex) | lbs/ton powder | 79% Cr | 1 | 3.25E+01 | | 1.00 | 6.5% Cr | 3 | 6.67E-02 | 4.53E-02 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 0% Cr | 1 | 6.97E-01 | | 1.00 | 20% Cr | 1 | 3.71E+00 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 0% Cr | 1 | 6.97E-01 | | 1.00 | 4% Cr | 1 | 3.72E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 0% Cr | 1 | 6.97E-01 | | 1.00 | 44% Cr | 1 | 8.05E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 0% Cr | 1 | 6.97E-01 | | 1.00 | 68% Cr | 1 | 2.84E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 0% Cr | 1 | 6.97E-01 | | 1.00 | 79% Cr | 1 | 7.50E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 0% Cr | 1 | 6.97E-01 | | 1.00 | 6.5% Cr | 3 | 7.64E+00 | 3.38E+00 | 1.00 | No |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 20% Cr | 1 | 3.71E+00 | | 1.00 | 4% Cr | 1 | 3.72E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 20% Cr | 1 | 3.71E+00 | | 1.00 | 44% Cr | 1 | 8.05E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 20% Cr | 1 | 3.71E+00 | | 1.00 | 68% Cr | 1 | 2.84E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 20% Cr | 1 | 3.71E+00 | | 1.00 | 79% Cr | 1 | 7.50E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 20% Cr | 1 | 3.71E+00 | | 1.00 | 6.5% Cr | 3 | 7.64E+00 | 3.38E+00 | 1.00 | No |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 4% Cr | 1 | 3.72E-01 | | 1.00 | 44% Cr | 1 | 8.05E-01 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 4% Cr | 1 | 3.72E-01 | | 1.00 | 68% Cr | 1 | 2.84E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 4% Cr | 1 | 3.72E-01 | | 1.00 | 79% Cr | 1 | 7.50E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 4% Cr | 1 | 3.72E-01 | | 1.00 | 6.5% Cr | 3 | 7.64E+00 | 3.38E+00 | 1.00 | No |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 44% Cr | 1 | 8.05E-01 | | 1.00 | 68% Cr | 1 | 2.84E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 44% Cr | 1 | 8.05E-01 | | 1.00 | 79% Cr | 1 | 7.50E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 44% Cr | 1 | 8.05E-01 | | 1.00 | 6.5% Cr | 3 | 7.64E+00 | 3.38E+00 | 1.00 | No |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 68% Cr | 1 | 2.84E+02 | | 1.00 | 79% Cr | 1 | 7.50E+02 | | 1.00 | NA |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 68% Cr | 1 | 2.84E+02 | | 1.00 | 6.5% Cr | 3 | 7.64E+00 | 3.38E+00 | 1.00 | Yes |
| Coating, Powder | Metals | Chromium (Total) | lbs/ton powder | 79% Cr | 1 | 7.50E+02 | | 1.00 | 6.5% Cr | 3 | 7.64E+00 | 3.38E+00 | 1.00 | Yes |
| Coating, Powder | Metals | Nickel | lbs/ton powder | 0% Cr | 1 | 3.21E+00 | | 1.00 | 6.5% Cr | 3 | 3.08E+00 | 7.58E-01 | 1.00 | No |
| Dryer, Pot ash | Metals | Arsenic | lbs/ton ore | Pot Ash | 3 | 4.86E-03 | 6.08E-03 | 1.00 | Sulfate of Pot Ash | 3 | 2.40E-03 | 5.74E-04 | 1.00 | No |
| Dryer, Pot ash | Metals | Beryllium | lbs/ton ore | Pot Ash | 3 | 1.04E-05 | 5.10E-06 | 0.42 | Sulfate of Pot Ash | 3 | 2.87E-04 | 1.22E-04 | 0.00 | Yes |
| Dryer, Pot ash | Metals | Lead | lbs/ton ore | Pot Ash | 3 | 5.20E-05 | 2.59E-05 | 0.42 | Sulfate of Pot Ash | 3 | 1.43E-03 | 6.12E-04 | 0.00 | Yes |
| Dryer, Pot ash | SVOC | 1,2-Dichlorobenzene | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | SVOC | Ethylbenzene | lbs/ton ore | Pot Ash | 3 | 8.79E-06 | 5.25E-07 | 0.00 | Sulfate of Pot Ash | 3 | 3.58E-04 | 5.66E-04 | 0.93 | No |
| Dryer, Pot ash | VOC | 1,1,1-Trichloroethane | lbs/ton ore | Pot Ash | 3 | 6.18E-05 | 1.04E-04 | 0.98 | Sulfate of Pot Ash | 3 | 6.76E-03 | 6.26E-03 | 1.00 | No |
| Dryer, Pot ash | VOC | 1,1,2,2-Tetrachloroethane | lbs/ton ore | Pot Ash | 3 | 3.64E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 6.30E-04 | 5.13E-04 | 0.96 | No |
| Dryer, Pot ash | VOC | 1,1,2-Trichloroethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | 1,1-Dichloroethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |

TABLE A6-12. COATING, DRYER, AND INCINERATOR MATERIAL COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Material | Size | Average | Standard Deviation | Detect Ratio | Description Material | Size | Average | Standard Deviation | Detect Ratio | |
| Dryer, Pot ash | VOC | 1,1-Dichloroethene | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 8.43E-05 | 4.76E-05 | 0.61 | No |
| Dryer, Pot ash | VOC | 1,2-Dichloroethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 7.24E-05 | 6.15E-05 | 0.66 | No |
| Dryer, Pot ash | VOC | 1,2-Dichloroethene | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | 1,2-Dichloropropane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 1.19E-04 | 9.51E-05 | 0.56 | No |
| Dryer, Pot ash | VOC | Acetone | lbs/ton ore | Pot Ash | 3 | 3.38E+00 | 5.73E+00 | 1.00 | Sulfate of Pot Ash | 1 | 4.43E-03 | | 0.00 | No |
| Dryer, Pot ash | VOC | Benzene | lbs/ton ore | Pot Ash | 3 | 1.63E-04 | 1.18E-04 | 1.00 | Sulfate of Pot Ash | 3 | 1.43E-02 | 8.44E-03 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Bromodichloromethane | lbs/ton ore | Pot Ash | 2 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Bromoform | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Bromomethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Carbon disulfide | lbs/ton ore | Pot Ash | 3 | 2.24E-05 | 3.87E-05 | 0.00 | Sulfate of Pot Ash | 1 | 1.00E-04 | | 0.00 | Yes |
| Dryer, Pot ash | VOC | Carbon Tetrachloride | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Chlorobenzene | lbs/ton ore | Pot Ash | 2 | 2.73E-06 | 1.29E-06 | 1.00 | Sulfate of Pot Ash | 3 | 7.41E-04 | 2.25E-04 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Chloroethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Chloroform | lbs/ton ore | Pot Ash | 3 | 8.79E-06 | 5.25E-07 | 0.00 | Sulfate of Pot Ash | 3 | 1.10E-04 | 1.39E-04 | 0.82 | No |
| Dryer, Pot ash | VOC | Chloromethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.34E-04 | 2.51E-04 | 0.98 | No |
| Dryer, Pot ash | VOC | Dibromochloromethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Dichloromethane | lbs/ton ore | Pot Ash | 3 | 1.19E-02 | 1.33E-02 | 1.00 | Sulfate of Pot Ash | 3 | 1.38E-01 | 1.46E-01 | 1.00 | No |
| Dryer, Pot ash | VOC | Formaldehyde | lbs/ton ore | Pot Ash | 3 | 6.42E-03 | 2.66E-03 | 1.00 | Sulfate of Pot Ash | 3 | 1.29E-01 | 6.70E-02 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Methyl Ethyl Ketone | lbs/ton ore | Pot Ash | 3 | 1.81E-04 | 2.06E-04 | 1.00 | Sulfate of Pot Ash | 3 | 1.49E-02 | 2.19E-02 | 0.10 | No |
| Dryer, Pot ash | VOC | Styrene | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 2 | 7.36E-04 | 9.79E-04 | 0.97 | No |
| Dryer, Pot ash | VOC | Tetrachloroethene | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.52E-05 | 1.57E-05 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Toluene | lbs/ton ore | Pot Ash | 3 | 8.48E-05 | 5.95E-05 | 1.00 | Sulfate of Pot Ash | 2 | 1.13E-02 | 2.21E-03 | 1.00 | Yes |
| Dryer, Pot ash | VOC | Trichloroethene | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 1.83E-04 | 1.93E-04 | 0.73 | No |
| Dryer, Pot ash | VOC | Trichlorofluoromethane | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Vinyl Chloride | lbs/ton ore | Pot Ash | 3 | 1.82E-06 | 0.00E+00 | 0.00 | Sulfate of Pot Ash | 3 | 3.95E-05 | 8.25E-06 | 0.00 | Yes |
| Dryer, Pot ash | VOC | Xylene (Total) | lbs/ton ore | Pot Ash | 3 | 8.73E-05 | 1.45E-04 | 0.97 | Sulfate of Pot Ash | 3 | 3.00E-03 | 6.25E-04 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | Animal Bedding | 3 | 5.67E-10 | 7.49E-10 | 0.84 | Infectious Waste | 3 | 1.50E-06 | 6.89E-07 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | Animal Bedding | 3 | 5.67E-10 | 7.49E-10 | 0.84 | Pathological Waste | 3 | 1.16E-09 | 6.50E-10 | 0.54 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:4D 2378 | lbs/ton | Infectious Waste | 3 | 1.50E-06 | 6.89E-07 | 1.00 | Pathological Waste | 3 | 1.16E-09 | 6.50E-10 | 0.54 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:4D Total | lbs/ton | Animal Bedding | 3 | 2.13E-07 | 3.63E-07 | 1.00 | Pathological Waste | 3 | 1.40E-07 | 1.75E-07 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | Animal Bedding | 3 | 2.17E-09 | 2.90E-09 | 0.98 | Infectious Waste | 3 | 6.63E-06 | 3.83E-06 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | Animal Bedding | 3 | 2.17E-09 | 2.90E-09 | 0.98 | Pathological Waste | 3 | 4.64E-09 | 2.85E-09 | 0.83 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:5D 12378 | lbs/ton | Infectious Waste | 3 | 6.63E-06 | 3.83E-06 | 1.00 | Pathological Waste | 3 | 4.64E-09 | 2.85E-09 | 0.83 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:5D Total | lbs/ton | Animal Bedding | 3 | 5.67E-08 | 8.54E-08 | 0.99 | Pathological Waste | 3 | 1.34E-07 | 1.10E-07 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | Animal Bedding | 3 | 1.28E-09 | 1.29E-09 | 0.91 | Infectious Waste | 3 | 1.36E-05 | 8.66E-06 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | Animal Bedding | 3 | 1.28E-09 | 1.29E-09 | 0.91 | Pathological Waste | 3 | 2.48E-09 | 1.09E-09 | 0.84 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123478 | lbs/ton | Infectious Waste | 3 | 1.36E-05 | 8.66E-06 | 1.00 | Pathological Waste | 3 | 2.48E-09 | 1.09E-09 | 0.84 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | Animal Bedding | 3 | 1.98E-09 | 2.00E-09 | 0.96 | Infectious Waste | 3 | 3.19E-05 | 1.91E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | Animal Bedding | 3 | 1.98E-09 | 2.00E-09 | 0.96 | Pathological Waste | 3 | 4.17E-09 | 2.72E-09 | 0.92 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123678 | lbs/ton | Infectious Waste | 3 | 3.19E-05 | 1.91E-05 | 1.00 | Pathological Waste | 3 | 4.17E-09 | 2.72E-09 | 0.92 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | Animal Bedding | 3 | 1.27E-09 | 1.21E-09 | 0.92 | Infectious Waste | 3 | 2.20E-05 | 1.32E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | Animal Bedding | 3 | 1.27E-09 | 1.21E-09 | 0.92 | Pathological Waste | 3 | 3.47E-09 | 1.95E-09 | 0.88 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D 123789 | lbs/ton | Infectious Waste | 3 | 2.20E-05 | 1.32E-05 | 1.00 | Pathological Waste | 3 | 3.47E-09 | 1.95E-09 | 0.88 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:6D Total | lbs/ton | Animal Bedding | 3 | 4.12E-08 | 4.87E-08 | 1.00 | Pathological Waste | 3 | 9.72E-08 | 1.90E-08 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | Animal Bedding | 3 | 6.26E-09 | 6.29E-09 | 1.00 | Infectious Waste | 3 | 5.69E-05 | 3.31E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | Animal Bedding | 3 | 6.26E-09 | 6.29E-09 | 1.00 | Pathological Waste | 3 | 1.17E-08 | 7.38E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:7D 1234678 | lbs/ton | Infectious Waste | 3 | 5.69E-05 | 3.31E-05 | 1.00 | Pathological Waste | 3 | 1.17E-08 | 7.38E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:7D Total | lbs/ton | Animal Bedding | 3 | 1.60E-08 | 1.61E-08 | 1.00 | Pathological Waste | 3 | 2.28E-08 | 1.48E-08 | 1.00 | No |

TABLE A6-12. COATING, DRYER, AND INCINERATOR MATERIAL COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Material | Size | Average | Standard Deviation | Detect Ratio | Description Material | Size | Average | Standard Deviation | Detect Ratio | |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:8D | lbs/ton | Animal Bedding | 3 | 9.13E-09 | 5.68E-09 | 1.00 | Infectious Waste | 3 | 3.25E-05 | 1.69E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:8D | lbs/ton | Animal Bedding | 3 | 9.13E-09 | 5.68E-09 | 1.00 | Pathological Waste | 3 | 1.72E-08 | 1.11E-08 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Dioxin:8D | lbs/ton | Infectious Waste | 3 | 3.25E-05 | 1.69E-05 | 1.00 | Pathological Waste | 3 | 1.72E-08 | 1.11E-08 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:4F 2378 | lbs/ton | Animal Bedding | 3 | 2.39E-08 | 3.93E-08 | 1.00 | Infectious Waste | 3 | 2.21E-05 | 3.81E-05 | 0.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:4F 2378 | lbs/ton | Animal Bedding | 3 | 2.39E-08 | 3.93E-08 | 1.00 | Pathological Waste | 3 | 3.56E-09 | 3.22E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:4F 2378 | lbs/ton | Infectious Waste | 3 | 2.21E-05 | 3.81E-05 | 0.00 | Pathological Waste | 3 | 3.56E-09 | 3.22E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:4F Total | lbs/ton | Animal Bedding | 3 | 1.75E-06 | 2.93E-06 | 1.00 | Pathological Waste | 3 | 4.47E-07 | 3.81E-07 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:5F 12378 | lbs/ton | Animal Bedding | 3 | 2.77E-08 | 4.52E-08 | 1.00 | Infectious Waste | 3 | 2.73E-05 | 5.16E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:5F 12378 | lbs/ton | Animal Bedding | 3 | 2.77E-08 | 4.52E-08 | 1.00 | Pathological Waste | 3 | 8.01E-09 | 7.06E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:5F 12378 | lbs/ton | Infectious Waste | 3 | 2.73E-05 | 5.16E-05 | 1.00 | Pathological Waste | 3 | 8.01E-09 | 7.06E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:5F 23478 | lbs/ton | Animal Bedding | 3 | 5.01E-08 | 8.06E-08 | 1.00 | Infectious Waste | 3 | 4.42E-05 | 9.36E-05 | 0.61 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:5F 23478 | lbs/ton | Animal Bedding | 3 | 5.01E-08 | 8.06E-08 | 1.00 | Pathological Waste | 3 | 1.33E-08 | 1.16E-08 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:5F 23478 | lbs/ton | Infectious Waste | 3 | 4.42E-05 | 9.36E-05 | 0.61 | Pathological Waste | 3 | 1.33E-08 | 1.16E-08 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F Total | lbs/ton | Animal Bedding | 3 | 7.40E-07 | 1.22E-06 | 1.00 | Pathological Waste | 3 | 1.74E-07 | 1.40E-07 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123478 | lbs/ton | Animal Bedding | 3 | 6.11E-08 | 1.02E-07 | 1.00 | Infectious Waste | 3 | 6.21E-05 | 1.48E-05 | 0.87 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123478 | lbs/ton | Animal Bedding | 3 | 6.11E-08 | 1.02E-07 | 1.00 | Pathological Waste | 3 | 7.32E-09 | 5.54E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123478 | lbs/ton | Infectious Waste | 3 | 6.19E-05 | 1.48E-05 | 0.87 | Pathological Waste | 3 | 7.32E-09 | 5.54E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123678 | lbs/ton | Animal Bedding | 3 | 5.79E-08 | 9.45E-08 | 1.00 | Infectious Waste | 3 | 2.45E-05 | 1.15E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123678 | lbs/ton | Animal Bedding | 3 | 5.79E-08 | 9.45E-08 | 1.00 | Pathological Waste | 3 | 7.62E-09 | 4.90E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123678 | lbs/ton | Infectious Waste | 3 | 2.45E-05 | 1.15E-05 | 1.00 | Pathological Waste | 3 | 7.62E-09 | 4.90E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123789 | lbs/ton | Animal Bedding | 3 | 6.29E-09 | 1.01E-08 | 0.99 | Infectious Waste | 3 | 2.38E-07 | 4.89E-08 | 0.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123789 | lbs/ton | Animal Bedding | 3 | 6.29E-09 | 1.01E-08 | 0.99 | Pathological Waste | 3 | 3.38E-09 | 3.38E-09 | 0.92 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 123789 | lbs/ton | Infectious Waste | 3 | 2.38E-07 | 4.89E-08 | 0.00 | Pathological Waste | 3 | 3.38E-09 | 3.38E-09 | 0.92 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 234678 | lbs/ton | Animal Bedding | 3 | 3.55E-08 | 5.51E-08 | 1.00 | Infectious Waste | 3 | 2.38E-07 | 4.89E-08 | 0.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 234678 | lbs/ton | Animal Bedding | 3 | 3.55E-08 | 5.51E-08 | 1.00 | Pathological Waste | 3 | 9.81E-09 | 7.44E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F 234678 | lbs/ton | Infectious Waste | 3 | 2.38E-07 | 4.89E-08 | 0.00 | Pathological Waste | 3 | 9.81E-09 | 7.44E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:6F Total | lbs/ton | Animal Bedding | 3 | 6.18E-07 | 1.02E-06 | 1.00 | Pathological Waste | 3 | 8.09E-08 | 5.41E-08 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | Animal Bedding | 3 | 1.55E-07 | 2.59E-07 | 1.00 | Infectious Waste | 3 | 1.99E-04 | 1.22E-04 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | Animal Bedding | 3 | 1.55E-07 | 2.59E-07 | 1.00 | Pathological Waste | 3 | 1.52E-08 | 7.15E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F 1234678 | lbs/ton | Infectious Waste | 3 | 1.99E-04 | 1.22E-04 | 1.00 | Pathological Waste | 3 | 1.52E-08 | 7.15E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | Animal Bedding | 3 | 8.29E-09 | 1.35E-08 | 1.00 | Infectious Waste | 3 | 1.53E-05 | 1.08E-05 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | Animal Bedding | 3 | 8.29E-09 | 1.35E-08 | 1.00 | Pathological Waste | 3 | 4.41E-09 | 2.31E-09 | 0.87 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F 1234789 | lbs/ton | Infectious Waste | 3 | 1.53E-05 | 1.08E-05 | 1.00 | Pathological Waste | 3 | 4.41E-09 | 2.31E-09 | 0.87 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:7F Total | lbs/ton | Animal Bedding | 3 | 2.12E-07 | 3.54E-07 | 1.00 | Pathological Waste | 3 | 9.37E-08 | 2.85E-08 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:8F | lbs/ton | Animal Bedding | 3 | 1.21E-08 | 2.05E-08 | 0.99 | Infectious Waste | 3 | 3.60E-05 | 2.17E-05 | 1.00 | Yes |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:8F | lbs/ton | Animal Bedding | 3 | 1.21E-08 | 2.05E-08 | 0.99 | Pathological Waste | 3 | 7.84E-09 | 3.70E-09 | 1.00 | No |
| Incinerator, Medical Waste | Dioxin/Furan | Furan:8F | lbs/ton | Infectious Waste | 3 | 3.60E-05 | 2.17E-05 | 1.00 | Pathological Waste | 3 | 7.84E-09 | 3.70E-09 | 1.00 | Yes |
| Incinerator, Medical Waste | Halogens | HCl | lbs/ton | Infectious Waste | 3 | 4.29E+01 | 1.29E+01 | 1.00 | Pathological Waste | 3 | 6.43E-02 | 2.26E-02 | 1.00 | Yes |
| Incinerator, Medical Waste | Metals | Chromium (Hex) | lbs/ton | Human Carcasses | 3 | 1.29E-03 | 3.77E-04 | 1.00 | Infectious Waste | 3 | 1.29E-04 | 4.47E-05 | 0.67 | Yes |
| Incinerator, Medical Waste | PAH | Acenaphthene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 1.07E-02 | 8.98E-03 | 0.92 | No |
| Incinerator, Medical Waste | PAH | Acenaphthylene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 2.78E-01 | 1.96E-01 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Anthracene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 9.74E-02 | 7.07E-02 | 0.91 | No |
| Incinerator, Medical Waste | PAH | Benzo(a)anthracene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 3.56E-02 | 2.62E-02 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Benzo(a)pyrene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 6.26E-03 | 3.30E-03 | 0.87 | No |
| Incinerator, Medical Waste | PAH | Benzo(b)fluoranthene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 1.90E-02 | 1.63E-02 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Benzo(g,h,i)perylene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 6.91E-03 | 3.83E-03 | 0.88 | No |
| Incinerator, Medical Waste | PAH | Benzo(k)fluoranthene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 2.61E-02 | 2.19E-02 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Chrysene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 4.99E-02 | 3.53E-02 | 1.00 | No |

TABLE A6-12. COATING, DRYER, AND INCINERATOR MATERIAL COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description Material | Size | Average | Standard Deviation | Detect Ratio | Description Material | Size | Average | Standard Deviation | Detect Ratio | |
| Incinerator, Medical Waste | PAH | Dibenz(a,h)anthracene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 3.00E-03 | 5.90E-04 | 0.00 | No |
| Incinerator, Medical Waste | PAH | Fluoranthene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 1.77E-01 | 1.05E-01 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Fluorene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 1.37E-01 | 1.04E-01 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 5.69E-03 | 2.84E-03 | 0.85 | No |
| Incinerator, Medical Waste | PAH | Naphthalene | lbs/ton | Human Carcasses | 2 | 1.63E-02 | 9.24E-03 | 1.00 | Infectious Waste | 3 | 3.94E-01 | 1.72E-01 | 0.19 | No |
| Incinerator, Medical Waste | PAH | Phenanthrene | lbs/ton | Human Carcasses | 2 | 4.04E-03 | 2.52E-03 | 1.00 | Infectious Waste | 3 | 3.29E-01 | 1.86E-01 | 1.00 | No |
| Incinerator, Medical Waste | PAH | Pyrene | lbs/ton | Human Carcasses | 2 | 1.95E-03 | 1.10E-03 | 0.00 | Infectious Waste | 3 | 1.61E-01 | 1.05E-01 | 1.00 | No |
| Incinerator, Medical Waste | VOC | Formaldehyde | lbs/ton | Animal Carcasses | 2 | 5.56E-02 | 5.35E-02 | 1.00 | Human Carcasses | 2 | 1.89E-03 | 1.89E-03 | 1.00 | No |

TABLE A6-13. EXTERNAL COMBUSTION BURNER TYPE AND EXCESS AIR COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | Second Sample Statistics | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | Size | Average | Standard Deviation | Detect Ratio | Description | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Burner Type | Excess Air | | | | | Burner Type | Excess Air | | | | | |
| Boiler, Ref. Gas | SVOC | Phenol | lbs/MMcf | CB | EA<100% | 6 | 1.56E-03 | 1.87E-03 | 0.76 | LNB | EA<100% | 6 | 2.60E-03 | 2.28E-03 | 0.90 | No |
| Boiler, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | CB | EA<100% | 9 | 3.03E-03 | 3.63E-03 | 1.00 | LNB | EA<100% | 6 | 5.38E-03 | 4.45E-03 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Benzene | lbs/MMcf | CB | EA<100% | 10 | 2.96E-01 | 4.56E-01 | 0.90 | LNB | EA<100% | 6 | 5.68E-02 | 1.28E-02 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | CB | EA<100% | 9 | 1.88E-02 | 1.10E-02 | 1.00 | LNB | EA<100% | 6 | 1.18E-02 | 7.05E-03 | 1.00 | No |
| Boiler, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | CB | EA<100% | 10 | 2.55E-01 | 3.09E-01 | 0.00 | LNB | EA<100% | 6 | 3.05E-01 | 8.56E-02 | 0.00 | No |
| Boiler, Ref. Gas | VOC | Toluene | lbs/MMcf | CB | EA<100% | 6 | 1.23E+00 | 1.88E+00 | 0.98 | LNB | EA<100% | 3 | 6.17E-02 | 2.11E-02 | 0.45 | No |
| Heater, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | CB | EA<100% | 8 | 2.34E-06 | 1.78E-06 | 1.00 | LNB | EA<100% | 15 | 5.59E-06 | 6.63E-06 | 0.38 | No |
| Heater, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | CB | EA<100% | 8 | 1.57E-06 | 6.96E-07 | 0.68 | LNB | EA<100% | 14 | 7.12E-06 | 1.13E-05 | 0.15 | No |
| Heater, Ref. Gas | PAH | Anthracene | lbs/MMcf | CB | EA<100% | 8 | 3.03E-06 | 1.83E-06 | 0.96 | LNB | EA<100% | 15 | 1.09E-05 | 1.74E-05 | 0.20 | No |
| Heater, Ref. Gas | PAH | Benzo(a)anthracene | lbs/MMcf | CB | EA<100% | 17 | 5.23E-05 | 1.18E-04 | 1.00 | LNB | EA<100% | 21 | 5.23E-06 | 5.46E-06 | 0.94 | No |
| Heater, Ref. Gas | PAH | Benzo(a)pyrene | lbs/MMcf | CB | EA<100% | 17 | 1.50E-04 | 4.16E-04 | 0.99 | LNB | EA<100% | 21 | 1.88E-06 | 2.08E-06 | 0.30 | No |
| Heater, Ref. Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | CB | EA<100% | 17 | 6.78E-05 | 1.78E-04 | 0.99 | LNB | EA<100% | 21 | 4.26E-06 | 4.63E-06 | 0.93 | No |
| Heater, Ref. Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | CB | EA<100% | 8 | 1.08E-06 | 1.38E-07 | 0.00 | LNB | EA<100% | 15 | 1.25E-06 | 5.86E-07 | 0.11 | No |
| Heater, Ref. Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | CB | EA<100% | 17 | 3.99E-05 | 1.03E-04 | 0.97 | LNB | EA<100% | 21 | 2.28E-06 | 2.34E-06 | 0.63 | No |
| Heater, Ref. Gas | PAH | Chrysene | lbs/MMcf | CB | EA<100% | 8 | 1.18E-06 | 2.61E-07 | 0.44 | LNB | EA<100% | 15 | 2.90E-06 | 3.64E-06 | 0.63 | No |
| Heater, Ref. Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | CB | EA<100% | 17 | 7.56E-06 | 1.57E-05 | 0.00 | LNB | EA<100% | 21 | 7.62E-06 | 2.83E-05 | 0.00 | No |
| Heater, Ref. Gas | PAH | Fluoranthene | lbs/MMcf | CB | EA<100% | 8 | 2.75E-06 | 8.50E-07 | 1.00 | LNB | EA<100% | 15 | 1.81E-06 | 7.67E-06 | 0.68 | Yes |
| Heater, Ref. Gas | PAH | Fluorene | lbs/MMcf | CB | EA<100% | 8 | 1.14E-05 | 8.03E-06 | 1.00 | LNB | EA<100% | 15 | 2.43E-05 | 3.11E-05 | 0.29 | No |
| Heater, Ref. Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | CB | EA<100% | 17 | 1.75E-04 | 4.83E-04 | 0.99 | LNB | EA<100% | 21 | 2.20E-06 | 3.19E-06 | 0.54 | No |
| Heater, Ref. Gas | PAH | Naphthalene | lbs/MMcf | CB | EA<100% | 8 | 3.56E-04 | 1.97E-04 | 1.00 | LNB | EA<100% | 15 | 7.79E-04 | 1.34E-03 | 0.52 | No |
| Heater, Ref. Gas | PAH | Phenanthrene | lbs/MMcf | CB | EA<100% | 8 | 1.43E-05 | 4.46E-06 | 1.00 | LNB | EA<100% | 15 | 9.38E-05 | 1.21E-04 | 0.37 | No |
| Heater, Ref. Gas | PAH | Pyrene | lbs/MMcf | CB | EA<100% | 8 | 2.54E-06 | 5.79E-07 | 1.00 | LNB | EA<100% | 15 | 1.08E-05 | 1.01E-05 | 0.48 | Yes |
| Heater, Ref. Gas | SVOC | Ethylbenzene | lbs/MMcf | CB | EA<100% | 9 | 2.37E-02 | 3.30E-02 | 0.88 | LNB | EA<100% | 12 | 2.83E-02 | 2.77E-02 | 0.00 | No |
| Heater, Ref. Gas | SVOC | Phenol | lbs/MMcf | CB | EA<100% | 6 | 3.53E-03 | 2.71E-03 | 0.95 | LNB | EA<100% | 15 | 5.06E-03 | 6.18E-03 | 0.91 | No |
| Heater, Ref. Gas | SVOC | Phenol | lbs/MMcf | CB | EA<100% | 6 | 3.53E-03 | 2.71E-03 | 0.95 | LNB | EA>100% | 3 | 1.73E-02 | 8.26E-03 | 1.00 | Yes |
| Heater, Ref. Gas | SVOC | Phenol | lbs/MMcf | LNB | EA<100% | 15 | 5.06E-03 | 6.18E-03 | 0.91 | LNB | EA>100% | 3 | 1.73E-02 | 8.26E-03 | 1.00 | Yes |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | CB | EA<100% | 6 | 2.21E-02 | 2.00E-02 | 1.00 | LNB | EA<100% | 27 | 4.88E-02 | 5.18E-02 | 0.20 | No |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | CB | EA<100% | 6 | 2.21E-02 | 2.00E-02 | 1.00 | LNB | EA>100% | 3 | 6.52E-03 | 1.81E-03 | 1.00 | No |
| Heater, Ref. Gas | VOC | Acetaldehyde | lbs/MMcf | LNB | EA<100% | 27 | 4.88E-02 | 5.18E-02 | 0.20 | LNB | EA>100% | 3 | 6.52E-03 | 1.81E-03 | 1.00 | No |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | CB | EA<100% | 15 | 5.87E-02 | 8.25E-02 | 0.06 | LNB | EA<100% | 27 | 6.13E-02 | 6.88E-02 | 0.06 | No |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | CB | EA<100% | 15 | 5.87E-02 | 8.25E-02 | 0.06 | LNB | EA>100% | 3 | 1.56E-01 | 7.97E-03 | 0.00 | No |
| Heater, Ref. Gas | VOC | Benzene | lbs/MMcf | LNB | EA<100% | 27 | 6.13E-02 | 6.88E-02 | 0.06 | LNB | EA>100% | 3 | 1.56E-01 | 7.97E-03 | 0.00 | Yes |
| Heater, Ref. Gas | VOC | Formaldehyde | lbs/MMcf | CB | EA<100% | 6 | 9.99E-02 | 1.39E-01 | 1.00 | LNB | EA<100% | 27 | 1.13E-01 | 3.39E-01 | 0.90 | No |
| Heater, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | CB | EA<100% | 6 | 5.91E-01 | 3.70E-01 | 0.00 | LNB | EA<100% | 18 | 3.96E-01 | 3.69E-01 | 0.00 | No |
| Heater, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | CB | EA<100% | 6 | 5.91E-01 | 3.70E-01 | 0.00 | LNB | EA>100% | 3 | 1.71E-01 | 8.53E-03 | 0.00 | No |
| Heater, Ref. Gas | VOC | Hydrogen Sulfide | lbs/MMcf | LNB | EA<100% | 18 | 3.96E-01 | 3.69E-01 | 0.00 | LNB | EA>100% | 3 | 1.71E-01 | 8.53E-03 | 0.00 | No |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | CB | EA<100% | 15 | 9.76E-02 | 1.05E-01 | 0.52 | LNB | EA<100% | 24 | 1.12E-01 | 2.43E-01 | 0.66 | No |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | CB | EA<100% | 15 | 9.76E-02 | 1.05E-01 | 0.52 | LNB | EA>100% | 3 | 1.84E-01 | 9.57E-03 | 0.00 | No |
| Heater, Ref. Gas | VOC | Toluene | lbs/MMcf | LNB | EA<100% | 24 | 1.12E-01 | 2.43E-01 | 0.66 | LNB | EA>100% | 3 | 1.84E-01 | 9.57E-03 | 0.00 | No |
| Heater, Ref. Gas | VOC | Xylene (Total) | lbs/MMcf | CB | EA<100% | 9 | 3.29E-02 | 4.09E-02 | 0.91 | LNB | EA<100% | 6 | 5.46E-02 | 4.37E-03 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Acenaphthene | lbs/MMcf | CB | EA<100% | 3 | 1.38E-06 | 9.82E-07 | 0.90 | LNB | EA<100% | 3 | 7.01E-07 | 5.56E-08 | 0.36 | No |
| SG, Natural/CVR Gas | PAH | Acenaphthylene | lbs/MMcf | CB | EA<100% | 3 | 4.74E-06 | 5.06E-06 | 0.97 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Anthracene | lbs/MMcf | CB | EA<100% | 3 | 2.04E-06 | 1.41E-06 | 0.93 | LNB | EA<100% | 3 | 2.14E-06 | 1.51E-06 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(a)anthracene | lbs/MMcf | CB | EA<100% | 3 | 1.13E-06 | 2.46E-08 | 0.00 | LNB | EA<100% | 3 | 1.32E-06 | 7.61E-07 | 0.83 | No |
| SG, Natural/CVR Gas | PAH | Benzo(a)pyrene | lbs/MMcf | CB | EA<100% | 3 | 7.14E-07 | 5.34E-07 | 0.62 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |

TABLE A6-13. EXTERNAL COMBUSTION BURNER TYPE AND EXCESS AIR COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | Second Sample Statistics | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | Size | Average | Standard Deviation | Detect Ratio | Description | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Burner Type | Excess Air | | | | | Burner Type | Excess Air | | | | | |
| SG, Natural/CVR Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | CB | EA<100% | 3 | 3.35E-06 | 1.93E-06 | 1.00 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | CB | EA<100% | 3 | 1.30E-06 | 7.71E-07 | 0.89 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | CB | EA<100% | 3 | 9.84E-07 | 5.11E-07 | 0.86 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Chrysene | lbs/MMcf | CB | EA<100% | 3 | 1.86E-06 | 4.06E-08 | 0.00 | LNB | EA<100% | 3 | 1.25E-06 | 7.95E-07 | 0.82 | No |
| SG, Natural/CVR Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | CB | EA<100% | 3 | 4.02E-07 | 8.80E-09 | 0.00 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | Yes |
| SG, Natural/CVR Gas | PAH | Fluoranthene | lbs/MMcf | CB | EA<100% | 3 | 6.03E-06 | 3.93E-06 | 1.00 | LNB | EA<100% | 3 | 1.29E-06 | 4.76E-07 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Fluorene | lbs/MMcf | CB | EA<100% | 3 | 9.08E-06 | 8.02E-06 | 1.00 | LNB | EA<100% | 3 | 2.18E-06 | 5.44E-07 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | CB | EA<100% | 3 | 1.87E-06 | 1.09E-06 | 0.92 | LNB | EA<100% | 3 | 6.58E-07 | 2.32E-08 | 0.00 | No |
| SG, Natural/CVR Gas | PAH | Naphthalene | lbs/MMcf | CB | EA<100% | 3 | 4.11E-04 | 1.42E-04 | 1.00 | LNB | EA<100% | 3 | 1.66E-04 | 1.46E-05 | 1.00 | Yes |
| SG, Natural/CVR Gas | PAH | Phenanthrene | lbs/MMcf | CB | EA<100% | 3 | 2.16E-05 | 1.34E-05 | 1.00 | LNB | EA<100% | 3 | 1.11E-05 | 3.63E-06 | 1.00 | No |
| SG, Natural/CVR Gas | PAH | Pyrene | lbs/MMcf | CB | EA<100% | 3 | 1.02E-05 | 7.40E-06 | 1.00 | LNB | EA<100% | 3 | 1.82E-06 | 1.06E-06 | 1.00 | No |
| SG, Natural/CVR Gas | SVOC | Ethylbenzene | lbs/MMcf | CB | EA<100% | 3 | 7.32E-03 | 6.84E-05 | 0.00 | LNB | EA<100% | 3 | 1.11E-02 | 7.47E-03 | 0.89 | No |
| SG, Natural/CVR Gas | VOC | Benzene | lbs/MMcf | CB | EA<100% | 3 | 6.14E-03 | 5.74E-05 | 0.00 | LNB | EA<100% | 3 | 2.64E-03 | 8.58E-05 | 0.00 | Yes |
| SG, Natural/CVR Gas | VOC | Toluene | lbs/MMcf | CB | EA<100% | 3 | 2.68E-02 | 4.63E-03 | 1.00 | LNB | EA<100% | 3 | 1.75E-02 | 4.71E-03 | 1.00 | No |
| SG, Natural/CVR Gas | VOC | Xylene (Total) | lbs/MMcf | CB | EA<100% | 3 | 1.46E-02 | 1.37E-04 | 0.00 | LNB | EA<100% | 3 | 2.16E-02 | 1.62E-02 | 1.00 | No |

TABLE A6-14. RICE STROKES PER CYCLE AND OXYGEN COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | Second Sample Statistics | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | Size | Average | Standard Deviation | Detect Ratio | Description | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Oxygen | | | | | Strokes | Oxygen | | | | | |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | 4S | Lean | 9 | 3.40E-04 | 3.05E-04 | 1.00 | 4S | Rich | 3 | 1.94E-03 | 1.26E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | 4S | Lean | 9 | 2.88E-03 | 3.87E-03 | 1.00 | 4S | Rich | 3 | 1.24E-02 | 1.74E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | 4S | Lean | 9 | 1.65E-04 | 9.21E-05 | 1.00 | 4S | Rich | 3 | 1.18E-03 | 1.02E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | 4S | Lean | 9 | 6.51E-05 | 2.94E-05 | 1.00 | 4S | Rich | 3 | 2.93E-04 | 2.70E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | 4S | Lean | 9 | 1.36E-05 | 1.79E-05 | 0.66 | 4S | Rich | 3 | 1.11E-04 | 3.18E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | 4S | Lean | 9 | 1.36E-04 | 2.98E-04 | 0.96 | 4S | Rich | 3 | 2.37E-04 | 5.53E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | 4S | Lean | 9 | 3.93E-05 | 8.27E-05 | 0.99 | 4S | Rich | 3 | 1.90E-04 | 4.48E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | 4S | Lean | 9 | 1.82E-04 | 3.69E-04 | 0.98 | 4S | Rich | 3 | 1.03E-04 | 2.07E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | 4S | Lean | 9 | 4.17E-05 | 4.35E-05 | 0.99 | 4S | Rich | 3 | 3.10E-01 | 7.77E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | 4S | Lean | 9 | 5.44E-06 | 4.60E-06 | 0.67 | 4S | Rich | 3 | 1.28E-05 | 0.72E-06 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | 4S | Lean | 9 | 2.77E-04 | 1.26E-04 | 1.00 | 4S | Rich | 3 | 2.90E-04 | 1.08E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | 4S | Lean | 9 | 4.44E-04 | 2.14E-04 | 0.65 | 4S | Rich | 3 | 7.91E-03 | 7.09E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | 4S | Lean | 9 | 4.47E-05 | 9.47E-05 | 1.00 | 4S | Rich | 3 | 1.69E-04 | 3.43E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | 4S | Lean | 9 | 5.74E-02 | 6.59E-02 | 1.00 | 4S | Rich | 3 | 7.65E-02 | 1.58E-02 | 1.00 | No |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | 4S | Lean | 9 | 1.53E-03 | 7.46E-04 | 1.00 | 4S | Rich | 3 | 7.07E-03 | 1.92E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | 4S | Lean | 9 | 1.66E-04 | 8.39E-05 | 1.00 | 4S | Rich | 3 | 1.79E-03 | 7.66E-04 | 1.00 | Yes |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | Lean | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | Lean | 6 | 7.11E-02 | 3.58E-02 | 1.00 | No |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | Lean | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | Rich | 3 | 1.16E-02 | 3.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 4S | Lean | 6 | 7.11E-02 | 3.58E-02 | 1.00 | 4S | Rich | 3 | 1.16E-02 | 3.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | VOC | 1,3-Butadiene | lbs/MMcf | 4S | Lean | 6 | 3.67E-01 | 6.37E-02 | 1.00 | 4S | Rich | 3 | 1.04E-01 | 3.92E-04 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | 4S | Lean | 21 | 3.00E+00 | 2.75E+00 | 1.00 | 4S | Rich | 6 | 8.83E-01 | 9.05E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | 4S | Lean | 20 | 1.16E+00 | 1.45E+00 | 0.99 | 4S | Rich | 9 | 5.47E-01 | 4.57E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | Lean | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | Lean | 20 | 9.09E-01 | 6.62E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | Lean | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | Rich | 17 | 1.26E+00 | 3.24E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 4S | Lean | 20 | 9.09E-01 | 6.62E-01 | 1.00 | 4S | Rich | 17 | 1.26E+00 | 3.24E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | Lean | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | Lean | 30 | 2.16E+01 | 1.60E+01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | Lean | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | Rich | 21 | 1.69E+00 | 3.57E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 4S | Lean | 30 | 2.16E+01 | 1.60E+01 | 1.00 | 4S | Rich | 21 | 1.69E+00 | 3.57E+00 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | 4S | Lean | 20 | 1.47E+01 | 1.81E+01 | 0.97 | 4S | Rich | 5 | 1.60E+01 | 2.15E+01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | Lean | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | Lean | 20 | 3.60E-01 | 1.53E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | Lean | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | Rich | 5 | 1.07E+00 | 1.32E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 4S | Lean | 20 | 3.60E-01 | 1.53E-01 | 1.00 | 4S | Rich | 5 | 1.07E+00 | 1.32E+00 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (m,p) | lbs/MMcf | 4S | Lean | 14 | 8.63E-02 | 3.99E-02 | 1.00 | 4S | Rich | 2 | 4.41E-01 | 1.78E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (o) | lbs/MMcf | 4S | Lean | 14 | 4.94E-02 | 1.95E-02 | 0.95 | 4S | Rich | 2 | 2.17E-01 | 7.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | Lean | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | Lean | 6 | 3.46E-01 | 2.97E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | Lean | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | Rich | 3 | 6.02E-02 | 1.86E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 4S | Lean | 6 | 6.46E-01 | 2.97E-01 | 1.00 | 4S | Rich | 3 | 6.02E-02 | 1.86E-02 | 1.00 | Yes |

TABLE A6-15. RICE STROKES PER CYCLE AND SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | Second Sample Statistics | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | Size | Average | Standard Deviation | Detect Ratio | Description | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Capacity | | | | | Strokes | Capacity | | | | | |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | 4S | <650Hp | 6 | 1.33E-03 | 1.05E-03 | 1.00 | 4S | >650Hp | 6 | 1.51E-04 | 5.09E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | 4S | <650Hp | 6 | 1.10E-02 | 2.40E-03 | 1.00 | 4S | >650Hp | 6 | 5.25E-04 | 1.25E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | 4S | <650Hp | 6 | 1.08E-03 | 9.09E-04 | 1.00 | 4S | >650Hp | 6 | 1.19E-04 | 3.91E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | 4S | <650Hp | 6 | 1.88E-03 | 1.43E-04 | 1.00 | 4S | >650Hp | 6 | 5.88E-05 | 3.32E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | 4S | <650Hp | 6 | 2.81E-05 | 2.97E-05 | 0.84 | 4S | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | 4S | ≤650Hp | 6 | 2.82E-04 | 3.36E-04 | 0.97 | 4S | >650Hp | 6 | 4.09E-05 | 2.32E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | 4S | <650Hp | 6 | 1.49E-04 | 1.03E-04 | 1.00 | 4S | >650Hp | 6 | 7.54E-06 | 6.05E-06 | 0.92 | Yes |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | 4S | ≤650Hp | 6 | 3.16E-04 | 4.04E-04 | 0.98 | 4S | >650Hp | 6 | 7.83E-06 | 3.54E-06 | 0.93 | No |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | 4S | <650Hp | 6 | 2.93E-04 | 1.38E-04 | 1.00 | 4S | >650Hp | 6 | 1.43E-05 | 7.20E-06 | 0.96 | Yes |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | 4S | <650Hp | 6 | 1.17E-03 | 2.88E-03 | 1.00 | 4S | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | Yes |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | 4S | ≤650Hp | 6 | 6.23E-04 | 4.30E-04 | 1.00 | 4S | >650Hp | 6 | 2.91E-04 | 1.46E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | 4S | ≤650Hp | 6 | 3.69E-03 | 3.75E-03 | 0.94 | 4S | >650Hp | 6 | 4.36E-04 | 2.53E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | 4S | <650Hp | 6 | 1.41E-04 | 1.02E-04 | 1.00 | 4S | >650Hp | 6 | 7.17E-06 | 3.12E-06 | 0.96 | Yes |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | 4S | <650Hp | 6 | 9.91E-02 | 6.21E-02 | 1.00 | 4S | >650Hp | 6 | 2.51E-02 | 4.56E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | 4S | ≤650Hp | 6 | 3.98E-03 | 3.60E-03 | 1.00 | 4S | >650Hp | 6 | 1.86E-03 | 6.89E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | 4S | ≤650Hp | 6 | 9.57E-04 | 1.03E-03 | 1.00 | 4S | >650Hp | 6 | 1.87E-04 | 9.30E-05 | 1.00 | No |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | >650Hp | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | <650Hp | 3 | 1.16E-02 | 3.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | >650Hp | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | ≥650Hp | 6 | 7.11E-02 | 3.58E-02 | 1.00 | No |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 4S | <650Hp | 3 | 1.16E-02 | 3.13E-03 | 1.00 | 4S | >650Hp | 6 | 7.11E-02 | 3.58E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | 1,3-Butadiene | lbs/MMcf | 4S | <650Hp | 3 | 1.04E-01 | 3.92E-04 | 1.00 | 4S | >650Hp | 6 | 3.97E-01 | 8.47E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | 4S | <650Hp | 21 | 3.11E+00 | 2.64E+00 | 1.00 | 4S | >650Hp | 6 | 5.29E-01 | 1.04E+00 | 0.96 | Yes |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | 4S | <650Hp | 23 | 1.21E+00 | 1.31E+00 | 1.00 | 4S | >650Hp | 6 | 5.90E-02 | 5.20E-02 | 0.45 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | >650Hp | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | ≤650Hp | 31 | 1.24E+00 | 2.40E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | >650Hp | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | >650Hp | 6 | 2.18E-01 | 2.66E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 4S | ≤650Hp | 31 | 1.24E+00 | 2.40E+00 | 1.00 | 4S | >650Hp | 6 | 2.18E-01 | 2.66E-02 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | >650Hp | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | ≤650Hp | 42 | 1.52E+01 | 1.59E+01 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | ≥650Hp | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | >650Hp | 9 | 4.71E+00 | 7.43E+00 | 0.97 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 4S | <650Hp | 42 | 1.52E+01 | 1.59E+01 | 1.00 | 4S | >650Hp | 9 | 4.71E+00 | 7.43E+00 | 0.97 | No |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | 4S | <650Hp | 19 | 1.80E+01 | 2.01E+01 | 0.98 | 4S | >650Hp | 6 | 5.38E+00 | 3.30E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | >650Hp | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | ≤650Hp | 19 | 5.85E-01 | 7.01E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | >650Hp | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | ≥650Hp | 6 | 2.39E-01 | 1.12E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 4S | ≤650Hp | 19 | 5.85E-01 | 7.01E-01 | 1.00 | 4S | >650Hp | 6 | 2.39E-01 | 1.12E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | >650Hp | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | <650Hp | 3 | 6.02E-02 | 1.86E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | >650Hp | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | >650Hp | 6 | 6.46E-01 | 2.97E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 4S | <650Hp | 3 | 6.02E-02 | 1.86E-02 | 1.00 | 4S | >650Hp | 6 | 6.46E-01 | 2.97E-01 | 1.00 | Yes |

TABLE A6-16. RICE STROKES PER CYCLE, OXYGEN, AND SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | | Second Sample Statistics | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Oxygen | Capacity | | | | | Strokes | Oxygen | Capacity | | | | | |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 4.62E-04 | 2.53E-04 | 0.70 | 4S | O2<13% | >650Hp | 3 | 1.46E-03 | 1.85E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 4.62E-04 | 2.53E-04 | 0.70 | 4S | O2>13% | <650Hp | 6 | 4.52E-03 | 7.95E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 4.62E-04 | 2.53E-04 | 0.70 | 4S | O2>13% | >650Hp | 9 | 2.37E-03 | 3.26E-03 | 0.06 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.46E-03 | 1.85E-03 | 1.00 | 4S | O2>13% | <650Hp | 6 | 4.52E-03 | 7.95E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.46E-03 | 1.85E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.37E-03 | 3.26E-03 | 0.06 | No |
| ICE, Diesel | PAH | Acenaphthene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 4.52E-03 | 7.95E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.37E-03 | 3.26E-03 | 0.06 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 7.96E-04 | 5.25E-04 | 0.88 | 4S | O2<13% | >650Hp | 3 | 1.57E-03 | 4.17E-04 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 7.96E-04 | 5.25E-04 | 0.88 | 4S | O2>13% | <650Hp | 6 | 5.40E-03 | 6.49E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 7.96E-04 | 5.25E-04 | 0.88 | 4S | O2>13% | >650Hp | 9 | 2.70E-03 | 3.08E-03 | 0.17 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.57E-03 | 4.17E-04 | 1.00 | 4S | O2>13% | <650Hp | 6 | 5.40E-03 | 6.49E-03 | 1.00 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.57E-03 | 4.17E-04 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.70E-03 | 3.08E-03 | 0.17 | No |
| ICE, Diesel | PAH | Acenaphthylene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 5.40E-03 | 6.49E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.70E-03 | 3.08E-03 | 0.17 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.25E-04 | 9.03E-05 | 0.38 | 4S | O2<13% | >650Hp | 3 | 2.53E-04 | 2.86E-05 | 1.00 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.25E-04 | 9.03E-05 | 0.38 | 4S | O2>13% | <650Hp | 6 | 1.17E-03 | 1.04E-03 | 1.00 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.25E-04 | 9.03E-05 | 0.38 | 4S | O2>13% | >650Hp | 9 | 2.74E-03 | 3.01E-03 | 0.19 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.53E-04 | 2.86E-05 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.17E-03 | 1.04E-03 | 1.00 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.53E-04 | 2.86E-05 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.74E-03 | 3.01E-03 | 0.19 | No |
| ICE, Diesel | PAH | Anthracene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.17E-03 | 1.04E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.74E-03 | 3.01E-03 | 0.19 | No |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.84E-04 | 1.06E-04 | 0.24 | 4S | O2<13% | >650Hp | 3 | 3.36E-06 | 1.01E-06 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.84E-04 | 1.06E-04 | 0.24 | 4S | O2>13% | <650Hp | 6 | 3.04E-04 | 1.88E-04 | 1.00 | No |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.84E-04 | 1.06E-04 | 0.24 | 4S | O2>13% | >650Hp | 9 | 2.63E-03 | 3.08E-03 | 0.15 | No |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 3.36E-06 | 1.01E-06 | 1.00 | 4S | O2>13% | <650Hp | 6 | 3.04E-04 | 1.88E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 3.36E-06 | 1.01E-06 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.63E-03 | 3.08E-03 | 0.15 | No |
| ICE, Diesel | PAH | Benzo(a)anthracene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 3.04E-04 | 1.88E-04 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.63E-03 | 3.08E-03 | 0.15 | No |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.58E-04 | 1.34E-04 | 0.05 | 4S | O2<13% | >650Hp | 3 | 5.35E-07 | 7.02E-09 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.58E-04 | 1.34E-04 | 0.05 | 4S | O2>13% | <650Hp | 6 | 1.84E-06 | 6.99E-07 | 0.42 | Yes |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.58E-04 | 1.34E-04 | 0.05 | 4S | O2>13% | >650Hp | 9 | 2.25E-03 | 3.34E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 5.35E-07 | 7.02E-09 | 0.00 | 4S | O2>13% | <650Hp | 6 | 1.84E-06 | 6.99E-07 | 0.42 | Yes |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 5.35E-07 | 7.02E-09 | 0.00 | 4S | O2>13% | >650Hp | 9 | 2.25E-03 | 3.34E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(a)pyrene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.84E-06 | 6.99E-07 | 0.42 | 4S | O2>13% | >650Hp | 9 | 2.25E-03 | 3.34E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.17E-04 | 7.28E-05 | 0.10 | 4S | O2<13% | >650Hp | 3 | 7.84E-06 | 3.89E-07 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.17E-04 | 7.28E-05 | 0.10 | 4S | O2>13% | <650Hp | 3 | 1.47E-04 | 1.40E-05 | 1.00 | No |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.17E-04 | 7.28E-05 | 0.10 | 4S | O2>13% | >650Hp | 6 | 3.36E-03 | 3.65E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 7.84E-06 | 3.89E-07 | 1.00 | 4S | O2<13% | <650Hp | 3 | 1.47E-04 | 1.40E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 7.84E-06 | 3.89E-07 | 1.00 | 4S | O2>13% | >650Hp | 6 | 3.36E-03 | 3.65E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b)fluoranthene | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 1.47E-04 | 1.40E-05 | 1.00 | 4S | O2>13% | >650Hp | 6 | 3.36E-03 | 3.65E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(b+k)fluoranthene | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 1.44E-06 | 2.72E-08 | 0.00 | 4S | O2>13% | >650Hp | 3 | 2.85E-06 | 1.15E-07 | 0.00 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.78E-04 | 1.11E-04 | 0.22 | 4S | O2<13% | >650Hp | 3 | 4.30E-06 | 4.49E-07 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.78E-04 | 1.11E-04 | 0.22 | 4S | O2>13% | <650Hp | 6 | 3.52E-05 | 2.77E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.78E-04 | 1.11E-04 | 0.22 | 4S | O2>13% | >650Hp | 9 | 2.37E-03 | 3.25E-03 | 0.05 | No |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 4.30E-06 | 4.49E-07 | 1.00 | 4S | O2>13% | <650Hp | 6 | 3.52E-05 | 2.77E-05 | 1.00 | No |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 4.30E-06 | 4.49E-07 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.37E-03 | 3.25E-03 | 0.05 | No |
| ICE, Diesel | PAH | Benzo(g,h,i)perylene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 3.52E-05 | 2.77E-05 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.37E-03 | 3.25E-03 | 0.05 | No |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.55E-04 | 1.38E-04 | 0.07 | 4S | O2<13% | >650Hp | 3 | 1.23E-06 | 4.17E-07 | 1.00 | No |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.55E-04 | 1.38E-04 | 0.07 | 4S | O2>13% | <650Hp | 3 | 2.42E-05 | 8.80E-06 | 1.00 | No |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.55E-04 | 1.38E-04 | 0.07 | 4S | O2>13% | >650Hp | 6 | 3.37E-03 | 3.65E-03 | 0.00 | No |

TABLE A6-16. RICE STROKES PER CYCLE, OXYGEN, AND SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | | Second Sample Statistics | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Oxygen | Capacity | | | | | Strokes | Oxygen | Capacity | | | | | |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.23E-06 | 4.17E-07 | 1.00 | 4S | O2>13% | <650Hp | 3 | 2.42E-05 | 1.60E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.23E-06 | 4.17E-07 | 1.00 | 4S | O2>13% | >650Hp | 9 | 3.37E-03 | 3.66E-03 | 0.00 | No |
| ICE, Diesel | PAH | Benzo(k)fluoranthene | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 2.42E-05 | 8.80E-06 | 1.00 | 4S | O2>13% | >650Hp | 9 | 3.37E-03 | 3.66E-03 | 0.00 | No |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.46E-04 | 4.05E-05 | 0.43 | 4S | O2<13% | >650Hp | 3 | 2.64E-05 | 3.24E-06 | 1.00 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.46E-04 | 4.05E-05 | 0.43 | 4S | O2>13% | <650Hp | 6 | 6.13E-05 | 9.09E-06 | 1.00 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.46E-04 | 4.05E-05 | 0.43 | 4S | O2>13% | >650Hp | 9 | 2.40E-03 | 3.23E-03 | 0.07 | No |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.64E-05 | 3.24E-06 | 1.00 | 4S | O2>13% | <650Hp | 6 | 6.13E-05 | 9.09E-06 | 1.00 | Yes |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.64E-05 | 3.24E-06 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.40E-03 | 3.23E-03 | 0.07 | No |
| ICE, Diesel | PAH | Chrysene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 6.13E-05 | 9.09E-06 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.40E-03 | 3.23E-03 | 0.07 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.64E-04 | 1.27E-04 | 0.00 | 4S | O2<13% | >650Hp | 3 | 5.35E-07 | 7.02E-09 | 0.00 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.64E-04 | 1.27E-04 | 0.00 | 4S | O2>13% | <650Hp | 6 | 3.00E-05 | 3.16E-05 | 0.99 | Yes |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.64E-04 | 1.27E-04 | 0.00 | 4S | O2>13% | >650Hp | 9 | 2.36E-03 | 3.25E-03 | 0.04 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 5.35E-07 | 7.02E-09 | 0.00 | 4S | O2>13% | <650Hp | 6 | 3.00E-05 | 3.16E-05 | 0.99 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 5.35E-07 | 7.02E-09 | 0.00 | 4S | O2>13% | >650Hp | 9 | 2.36E-03 | 3.25E-03 | 0.04 | No |
| ICE, Diesel | PAH | Dibenz(a,h)anthracene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 3.00E-05 | 3.16E-05 | 0.99 | 4S | O2>13% | >650Hp | 9 | 2.36E-03 | 3.25E-03 | 0.04 | No |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 4.18E-04 | 1.52E-04 | 0.67 | 4S | O2<13% | >650Hp | 3 | 2.89E-04 | 3.71E-05 | 1.00 | No |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 4.18E-04 | 1.52E-04 | 0.67 | 4S | O2>13% | <650Hp | 6 | 1.81E-03 | 5.51E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 4.18E-04 | 1.52E-04 | 0.67 | 4S | O2>13% | >650Hp | 9 | 2.78E-03 | 2.97E-03 | 0.20 | No |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.89E-04 | 3.71E-05 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.81E-03 | 5.51E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.89E-04 | 3.71E-05 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.78E-03 | 2.97E-03 | 0.20 | No |
| ICE, Diesel | PAH | Fluoranthene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.81E-03 | 5.51E-04 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.78E-03 | 2.97E-03 | 0.20 | No |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.02E-03 | 8.15E-04 | 0.86 | 4S | O2<13% | >650Hp | 3 | 1.02E-03 | 1.98E-04 | 1.00 | No |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.02E-03 | 8.15E-04 | 0.86 | 4S | O2>13% | <650Hp | 6 | 7.86E-03 | 1.84E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.02E-03 | 8.15E-04 | 0.86 | 4S | O2>13% | >650Hp | 9 | 1.44E-02 | 1.63E-02 | 0.95 | No |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.02E-03 | 1.98E-04 | 1.00 | 4S | O2>13% | <650Hp | 6 | 7.86E-03 | 1.84E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.02E-03 | 1.98E-04 | 1.00 | 4S | O2>13% | >650Hp | 9 | 1.44E-02 | 1.63E-02 | 0.95 | No |
| ICE, Diesel | PAH | Fluorene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 7.86E-03 | 1.84E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 1.44E-02 | 1.63E-02 | 0.95 | No |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.68E-04 | 1.22E-04 | 0.08 | 4S | O2<13% | >650Hp | 3 | 9.07E-07 | 1.51E-07 | 1.00 | No |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.68E-04 | 1.22E-04 | 0.08 | 4S | O2>13% | <650Hp | 6 | 2.42E-05 | 1.60E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.68E-04 | 1.22E-04 | 0.08 | 4S | O2>13% | >650Hp | 9 | 2.34E-03 | 3.27E-03 | 0.03 | No |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 9.07E-07 | 1.51E-07 | 1.00 | 4S | O2>13% | <650Hp | 6 | 2.42E-05 | 1.60E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 9.07E-07 | 1.51E-07 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.34E-03 | 3.27E-03 | 0.03 | No |
| ICE, Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 2.42E-05 | 1.60E-05 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.34E-03 | 3.27E-03 | 0.03 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.04E-02 | 8.26E-03 | 1.00 | 4S | O2<13% | >650Hp | 3 | 2.83E-02 | 3.19E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.04E-02 | 8.26E-03 | 1.00 | 4S | O2>13% | <650Hp | 6 | 7.35E-02 | 7.33E-02 | 1.00 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 1.04E-02 | 8.26E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 4.30E-02 | 3.90E-02 | 1.00 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.83E-02 | 3.19E-03 | 1.00 | 4S | O2>13% | <650Hp | 6 | 7.35E-02 | 7.33E-02 | 1.00 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.83E-02 | 3.19E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 4.30E-02 | 3.90E-02 | 1.00 | No |
| ICE, Diesel | PAH | Naphthalene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 7.35E-02 | 7.33E-02 | 1.00 | 4S | O2>13% | >650Hp | 9 | 4.30E-02 | 3.90E-02 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.98E-03 | 2.90E-03 | 1.00 | 4S | O2<13% | >650Hp | 3 | 5.88E-03 | 6.05E-04 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.98E-03 | 2.90E-03 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.33E-02 | 8.00E-03 | 1.00 | Yes |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.98E-03 | 2.90E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.66E-02 | 3.01E-02 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 5.88E-03 | 6.05E-04 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.33E-02 | 8.00E-03 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 5.88E-03 | 6.05E-04 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.66E-02 | 3.01E-02 | 1.00 | No |
| ICE, Diesel | PAH | Phenanthrene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.33E-02 | 8.00E-03 | 1.00 | 4S | O2>13% | >650Hp | 9 | 2.66E-02 | 3.01E-02 | 1.00 | No |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 3.98E-04 | 1.26E-04 | 0.65 | 4S | O2<13% | >650Hp | 3 | 1.94E-04 | 4.28E-05 | 1.00 | Yes |

TABLE A6-16. RICE STROKES PER CYCLE, OXYGEN, AND SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | | Second Sample Statistics | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Oxygen | Capacity | | | | | Strokes | Oxygen | Capacity | | | | | |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 3.96E-04 | 1.29E-04 | 0.65 | 4S | O2>13% | <650Hp | 6 | 1.06E-03 | 3.92E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 3.96E-04 | 1.29E-04 | 0.65 | 4S | O2>13% | >650Hp | 3 | 1.94E-04 | 4.28E-05 | 1.00 | Yes |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.94E-04 | 4.28E-05 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.06E-03 | 3.92E-04 | 1.00 | Yes |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.94E-04 | 4.28E-05 | 1.00 | 4S | O2>13% | >650Hp | 9 | 5.81E-03 | 4.63E-03 | 0.74 | No |
| ICE, Diesel | PAH | Pyrene | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.06E-03 | 3.92E-04 | 1.00 | 4S | O2>13% | >650Hp | 9 | 5.81E-03 | 4.63E-03 | 0.74 | Yes |
| ICE, Diesel | VOC | Acetaldehyde | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.47E-03 | 2.61E-03 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.06E-01 | 3.92E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Acetaldehyde | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.47E-03 | 2.61E-03 | 1.00 | 4S | O2>13% | >650Hp | 3 | 6.48E-02 | 5.78E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Acetaldehyde | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.06E-01 | 3.92E-03 | 1.00 | 4S | O2>13% | >650Hp | 3 | 6.48E-02 | 5.78E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Acrolein | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 1.07E-03 | 6.19E-04 | 0.56 | 4S | O2>13% | <650Hp | 3 | 7.35E-03 | 6.42E-04 | 0.35 | Yes |
| ICE, Diesel | VOC | Acrolein | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 1.07E-03 | 6.19E-04 | 0.56 | 4S | O2>13% | >650Hp | 3 | 1.87E-02 | 1.17E-02 | 1.00 | No |
| ICE, Diesel | VOC | Acrolein | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 7.35E-03 | 6.42E-04 | 0.35 | 4S | O2>13% | >650Hp | 3 | 1.87E-02 | 1.17E-02 | 1.00 | No |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 1.01E-01 | 2.73E-03 | 1.00 | 4S | O2>13% | <650Hp | 3 | 6.94E-02 | 3.18E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 1.01E-01 | 2.73E-03 | 1.00 | 4S | O2>13% | >650Hp | 6 | 1.04E-01 | 7.91E-02 | 1.00 | No |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.88E-01 | 4.33E-02 | 1.00 | 4S | O2>13% | <650Hp | 3 | 6.94E-02 | 3.18E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.88E-01 | 4.33E-02 | 1.00 | 4S | O2>13% | >650Hp | 6 | 1.04E-01 | 7.91E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Benzene | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 6.94E-02 | 3.18E-03 | 1.00 | 4S | O2>13% | >650Hp | 6 | 1.04E-01 | 7.91E-02 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.05E-02 | 1.65E-02 | 1.00 | 4S | O2<13% | >650Hp | 3 | 1.46E-01 | 3.83E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.05E-02 | 1.65E-02 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.04E-01 | 1.26E-01 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 4S | O2<13% | <650Hp | 6 | 2.05E-02 | 1.65E-02 | 1.00 | 4S | O2>13% | >650Hp | 9 | 7.86E-01 | 1.03E+00 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.46E-01 | 3.83E-02 | 1.00 | 4S | O2>13% | <650Hp | 6 | 1.04E-01 | 1.26E-01 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.46E-01 | 3.83E-02 | 1.00 | 4S | O2>13% | >650Hp | 9 | 7.86E-01 | 1.03E+00 | 1.00 | No |
| ICE, Diesel | VOC | Formaldehyde | lbs/Mgal | 4S | O2>13% | <650Hp | 6 | 1.04E-01 | 1.26E-01 | 1.00 | 4S | O2>13% | >650Hp | 9 | 7.86E-01 | 1.03E+00 | 1.00 | No |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.85E-01 | 3.10E-02 | 1.00 | 4S | O2<13% | >650Hp | 3 | 2.97E-01 | 4.54E-02 | 1.00 | No |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.85E-01 | 3.10E-02 | 1.00 | 4S | O2>13% | <650Hp | 3 | 1.78E-01 | 3.54E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.85E-01 | 3.10E-02 | 1.00 | 4S | O2>13% | >650Hp | 3 | 6.38E-01 | 6.69E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.97E-01 | 4.54E-02 | 1.00 | 4S | O2<13% | >650Hp | 3 | 2.97E-01 | 4.54E-02 | 1.00 | No |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 2.97E-01 | 4.54E-02 | 1.00 | 4S | O2>13% | <650Hp | 3 | 1.78E-01 | 3.54E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Propylene | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 1.78E-01 | 3.54E-02 | 1.00 | 4S | O2>13% | >650Hp | 3 | 6.38E-01 | 6.69E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.74E-02 | 1.22E-03 | 1.00 | 4S | O2<13% | >650Hp | 3 | 8.50E-02 | 2.38E-02 | 1.00 | Yes |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.74E-02 | 1.22E-03 | 1.00 | 4S | O2>13% | <650Hp | 3 | 3.60E-02 | 1.38E-03 | 1.00 | No |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 3.74E-02 | 1.22E-03 | 1.00 | 4S | O2>13% | >650Hp | 3 | 7.41E-02 | 1.48E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 8.50E-02 | 2.38E-02 | 1.00 | 4S | O2>13% | <650Hp | 3 | 3.60E-02 | 1.38E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 8.50E-02 | 2.38E-02 | 1.00 | 4S | O2>13% | >650Hp | 3 | 7.41E-02 | 1.48E-03 | 1.00 | No |
| ICE, Diesel | VOC | Toluene | lbs/Mgal | 4S | O2>13% | <650Hp | 3 | 3.60E-02 | 1.38E-03 | 1.00 | 4S | O2>13% | >650Hp | 3 | 7.41E-02 | 1.48E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Xylene (Total) | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 2.68E-02 | 1.03E-03 | 1.00 | 4S | O2<13% | >650Hp | 3 | 1.51E-02 | 6.93E-03 | 1.00 | Yes |
| ICE, Diesel | VOC | Xylene (Total) | lbs/Mgal | 4S | O2<13% | <650Hp | 3 | 2.68E-02 | 1.03E-03 | 1.00 | 4S | O2>13% | >650Hp | 3 | 3.59E-02 | 1.48E-02 | 1.00 | No |
| ICE, Diesel | VOC | Xylene (Total) | lbs/Mgal | 4S | O2<13% | >650Hp | 3 | 1.51E-02 | 6.93E-03 | 1.00 | 4S | O2>13% | >650Hp | 3 | 3.59E-02 | 1.48E-02 | 1.00 | No |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 7.17E-04 | 2.14E-04 | 1.00 | 4S | Lean | >650Hp | 6 | 1.51E-04 | 5.09E-06 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 7.17E-04 | 2.14E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 1.94E-03 | 1.26E-03 | 1.00 | No |
| ICE, Natural Gas | PAH | Acenaphthene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 1.51E-04 | 5.09E-06 | 1.00 | 4S | Rich | <650Hp | 3 | 1.94E-03 | 1.26E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 7.59E-03 | 3.15E-03 | 1.00 | 4S | Lean | >650Hp | 6 | 5.25E-04 | 1.25E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 7.59E-03 | 3.15E-03 | 1.00 | 4S | Rich | <650Hp | 3 | 1.46E-02 | 1.74E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Acenaphthylene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 5.25E-04 | 1.25E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 1.46E-02 | 1.74E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 2.56E-04 | 1.06E-04 | 1.00 | 4S | Lean | >650Hp | 6 | 1.19E-04 | 3.91E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 2.56E-04 | 1.06E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 1.84E-03 | 3.92E-04 | 1.00 | Yes |

TABLE A6-16. RICE STROKES PER CYCLE, OXYGEN, AND SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | | Second Sample Statistics | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Oxygen | Capacity | | | | | Strokes | Oxygen | Capacity | | | | | |
| ICE, Natural Gas | PAH | Anthracene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 1.19E-04 | 3.91E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 1.04E-03 | 3.82E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 7.78E-05 | 1.84E-05 | 1.00 | 4S | Lean | >650Hp | 6 | 5.88E-05 | 3.32E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 7.78E-05 | 1.84E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 2.04E-04 | 1.08E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)anthracene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 5.88E-05 | 3.32E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 2.04E-04 | 1.08E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 3.55E-05 | 1.42E-05 | 0.76 | 4S | Lean | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 3.55E-05 | 1.42E-05 | 0.76 | 4S | Rich | <650Hp | 3 | 1.11E-04 | 5.18E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(a)pyrene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | 4S | Rich | <650Hp | 3 | 1.11E-04 | 5.18E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 3.27E-04 | 5.22E-04 | 0.95 | 4S | Lean | >650Hp | 6 | 4.09E-05 | 2.32E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 3.27E-04 | 5.22E-04 | 0.95 | 4S | Rich | <650Hp | 3 | 2.37E-04 | 5.53E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(b)fluoranthene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 4.09E-05 | 2.32E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 2.37E-04 | 5.53E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.03E-04 | 1.35E-04 | 1.00 | 4S | Lean | >650Hp | 6 | 7.54E-06 | 6.05E-06 | 0.92 | No |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.03E-04 | 1.35E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 1.95E-04 | 4.46E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(g,h,i)perylene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 7.54E-06 | 6.05E-06 | 0.92 | 4S | Rich | <650Hp | 3 | 1.95E-04 | 4.46E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 5.30E-04 | 5.21E-04 | 0.98 | 4S | Lean | >650Hp | 6 | 7.83E-06 | 3.54E-06 | 0.93 | Yes |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 5.30E-04 | 5.21E-04 | 0.98 | 4S | Rich | <650Hp | 3 | 1.03E-04 | 2.07E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Benzo(k)fluoranthene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 7.83E-06 | 3.54E-06 | 0.93 | 4S | Rich | <650Hp | 3 | 1.03E-04 | 2.07E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 9.64E-05 | 2.63E-05 | 1.00 | 4S | Lean | >650Hp | 6 | 1.43E-05 | 7.20E-06 | 0.96 | Yes |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 9.64E-05 | 2.63E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 3.10E-04 | 7.71E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Chrysene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 1.43E-05 | 7.20E-06 | 0.96 | 4S | Rich | <650Hp | 3 | 3.10E-04 | 7.71E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.09E-05 | 3.86E-06 | 1.00 | 4S | Lean | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | Yes |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.09E-05 | 3.86E-06 | 1.00 | 4S | Rich | <650Hp | 3 | 1.25E-05 | 1.72E-06 | 1.00 | No |
| ICE, Natural Gas | PAH | Dibenz(a,h)anthracene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 2.70E-06 | 9.68E-07 | 0.00 | 4S | Rich | <650Hp | 3 | 1.25E-05 | 1.72E-06 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 2.50E-04 | 9.05E-05 | 1.00 | 4S | Lean | >650Hp | 6 | 2.91E-04 | 1.46E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 2.50E-04 | 9.05E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 9.96E-04 | 1.94E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluoranthene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 2.91E-04 | 1.46E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 9.96E-04 | 1.94E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 4.60E-04 | 1.50E-04 | 0.00 | 4S | Lean | >650Hp | 6 | 4.36E-04 | 2.53E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 4.60E-04 | 1.50E-04 | 0.00 | 4S | Rich | <650Hp | 3 | 6.91E-03 | 1.99E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Fluorene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 4.36E-04 | 2.53E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 6.91E-03 | 1.99E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.20E-04 | 1.62E-04 | 1.00 | 4S | Lean | >650Hp | 6 | 7.17E-06 | 3.12E-06 | 0.96 | No |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.20E-04 | 1.62E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 1.89E-04 | 3.43E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Indeno(1,2,3-cd)pyrene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 7.17E-06 | 3.12E-06 | 0.96 | 4S | Rich | <650Hp | 3 | 1.89E-04 | 3.43E-05 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.22E-01 | 8.93E-02 | 1.00 | 4S | Lean | >650Hp | 6 | 2.51E-02 | 4.56E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.22E-01 | 8.93E-02 | 1.00 | 4S | Rich | <650Hp | 3 | 7.65E-02 | 1.58E-02 | 1.00 | No |
| ICE, Natural Gas | PAH | Naphthalene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 2.51E-02 | 4.56E-03 | 1.00 | 4S | Rich | <650Hp | 3 | 7.65E-02 | 1.58E-02 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 8.93E-04 | 3.36E-04 | 1.00 | 4S | Lean | >650Hp | 6 | 1.85E-03 | 6.89E-04 | 1.00 | No |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 8.93E-04 | 3.36E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 7.07E-03 | 1.92E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Phenanthrene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 1.85E-03 | 6.89E-04 | 1.00 | 4S | Rich | <650Hp | 3 | 7.07E-03 | 1.92E-03 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.23E-04 | 5.07E-05 | 1.00 | 4S | Lean | >650Hp | 6 | 1.87E-04 | 9.30E-05 | 1.00 | No |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | 4S | Lean | <650Hp | 3 | 1.23E-04 | 5.07E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 1.79E-03 | 7.63E-04 | 1.00 | Yes |
| ICE, Natural Gas | PAH | Pyrene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 1.87E-04 | 9.30E-05 | 1.00 | 4S | Rich | <650Hp | 3 | 1.79E-03 | 7.63E-04 | 1.00 | Yes |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | Lean | >650Hp | 6 | 7.11E-02 | 3.58E-02 | 1.00 | No |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 6.46E-02 | 0.00E+00 | 0.00 | 4S | Rich | <650Hp | 3 | 1.16E-02 | 3.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | SVOC | Ethylbenzene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 7.11E-02 | 3.58E-02 | 1.00 | 4S | Rich | <650Hp | 3 | 1.16E-02 | 3.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | VOC | 1,3-Butadiene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 3.87E-01 | 6.37E-02 | 1.00 | 4S | Rich | <650Hp | 3 | 1.04E-01 | 3.92E-04 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | 4S | Lean | <650Hp | 15 | 3.99E+00 | 2.59E+00 | 1.00 | 4S | Lean | >650Hp | 6 | 5.29E-01 | 1.04E+00 | 0.96 | Yes |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | 4S | Lean | <650Hp | 15 | 3.99E+00 | 2.59E+00 | 1.00 | 4S | Rich | <650Hp | 6 | 8.83E-01 | 9.05E-01 | 1.00 | Yes |

TABLE A6-16. RICE STROKES PER CYCLE, OXYGEN, AND SIZE COMPARISON.

| Major Group | Category | Substance | EF Unit | First Sample Statistics | | | | | | | Second Sample Statistics | | | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Description | | | Size | Average | Standard Deviation | Detect Ratio | Description | | | Size | Average | Standard Deviation | Detect Ratio | |
| | | | | Strokes | Oxygen | Capacity | | | | | Strokes | Oxygen | Capacity | | | | | |
| ICE, Natural Gas | VOC | Acetaldehyde | lbs/MMcf | 4S | Lean | >650Hp | 6 | 5.29E-01 | 1.04E+00 | 0.96 | 4S | Rich | <650Hp | 6 | 8.83E-01 | 9.05E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | 4S | Lean | <650Hp | 14 | 1.63E+00 | 1.60E+00 | 1.00 | 4S | Lean | >650Hp | 6 | 5.90E-02 | 5.20E-02 | 0.45 | Yes |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | 4S | Lean | <650Hp | 14 | 1.63E+00 | 1.60E+00 | 1.00 | 4S | Rich | <650Hp | 9 | 5.47E-01 | 4.57E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Acrolein | lbs/MMcf | 4S | Lean | >650Hp | 6 | 5.90E-02 | 5.20E-02 | 0.45 | 4S | Rich | <650Hp | 9 | 5.47E-01 | 4.57E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | Lean | <650Hp | 14 | 1.21E+00 | 5.70E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | Lean | ≥650Hp | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | Lean | >650Hp | 6 | 2.18E-01 | 2.66E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 2.95E-01 | 3.65E-02 | 1.00 | 4S | Rich | <650Hp | 17 | 1.26E+00 | 3.24E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 4S | Lean | <650Hp | 14 | 1.21E+00 | 5.70E-01 | 1.00 | 4S | Lean | >650Hp | 6 | 2.18E-01 | 2.66E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 4S | Lean | <650Hp | 14 | 1.21E+00 | 5.70E-01 | 1.00 | 4S | Rich | <650Hp | 17 | 1.26E+00 | 3.24E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Benzene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 2.18E-01 | 2.66E-02 | 1.00 | 4S | Rich | <650Hp | 17 | 1.26E+00 | 3.24E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | Lean | >650Hp | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | Lean | <650Hp | 21 | 2.87E+01 | 1.10E+01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | Lean | ≥650Hp | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | Lean | >650Hp | 9 | 4.71E+00 | 7.43E+00 | 0.97 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 2S | Lean | >650Hp | 9 | 5.15E+00 | 7.50E+00 | 0.91 | 4S | Rich | <650Hp | 21 | 1.69E+00 | 3.57E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 4S | Lean | <650Hp | 21 | 2.87E+01 | 1.10E+01 | 1.00 | 4S | Lean | >650Hp | 9 | 4.71E+00 | 7.43E+00 | 0.97 | Yes |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 4S | Lean | <650Hp | 21 | 2.87E+01 | 1.10E+01 | 1.00 | 4S | Rich | <650Hp | 21 | 1.69E+00 | 3.57E+00 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Formaldehyde | lbs/MMcf | 4S | Lean | >650Hp | 9 | 4.71E+00 | 7.43E+00 | 0.97 | 4S | Rich | <650Hp | 21 | 1.69E+00 | 3.57E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | 4S | Lean | <650Hp | 14 | 1.87E+01 | 2.04E+01 | 0.97 | 4S | Lean | >650Hp | 6 | 5.38E+00 | 3.30E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | 4S | Lean | <650Hp | 14 | 1.87E+01 | 2.04E+01 | 0.97 | 4S | Rich | <650Hp | 5 | 1.60E+01 | 2.15E+01 | 1.00 | No |
| ICE, Natural Gas | VOC | Propylene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 5.38E+00 | 3.30E+00 | 1.00 | 4S | Rich | <650Hp | 5 | 1.60E+01 | 2.15E+01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | Lean | <650Hp | 14 | 4.12E-01 | 1.40E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | Lean | ≥650Hp | 6 | 2.39E-01 | 1.12E-01 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 2S | Lean | >650Hp | 3 | 1.89E-01 | 1.28E-01 | 1.00 | 4S | Rich | <650Hp | 5 | 1.07E+00 | 1.32E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 4S | Lean | <650Hp | 14 | 4.12E-01 | 1.40E-01 | 1.00 | 4S | Lean | >650Hp | 6 | 2.39E-01 | 1.12E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 4S | Lean | <650Hp | 14 | 4.12E-01 | 1.40E-01 | 1.00 | 4S | Rich | <650Hp | 5 | 1.07E+00 | 1.32E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Toluene | lbs/MMcf | 4S | Lean | >650Hp | 6 | 2.39E-01 | 1.12E-01 | 1.00 | 4S | Rich | <650Hp | 5 | 1.07E+00 | 1.32E+00 | 1.00 | No |
| ICE, Natural Gas | VOC | Xylene (m,p) | lbs/MMcf | 4S | Lean | <650Hp | 14 | 8.63E-02 | 3.99E-02 | 1.00 | 4S | Rich | <650Hp | 2 | 4.41E-01 | 1.78E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (o) | lbs/MMcf | 4S | Lean | <650Hp | 14 | 4.94E-02 | 1.95E-02 | 0.95 | 4S | Rich | <650Hp | 2 | 2.17E-01 | 7.13E-03 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | Lean | >650Hp | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | Lean | ≥650Hp | 6 | 6.46E-01 | 2.97E-01 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 2S | Lean | >650Hp | 3 | 1.29E-01 | 0.00E+00 | 0.00 | 4S | Rich | <650Hp | 3 | 6.02E-02 | 1.86E-02 | 1.00 | Yes |
| ICE, Natural Gas | VOC | Xylene (Total) | lbs/MMcf | 4S | Lean | >650Hp | 6 | 6.46E-01 | 2.97E-01 | 1.00 | 4S | Rich | <650Hp | 3 | 6.02E-02 | 1.86E-02 | 1.00 | Yes |

ATTACHMENT 7. EMISSION FACTOR GROUP COMPARISON (t-statistics)

| Major Group | Category | Substance | EF Unit | Value Type | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Description Sub Group | Size | Average | Standard Deviation | Detect Ratio | Description Sub Group | Size | Average | Standard Deviation | Detect Ratio | |
| Asphalt Prod., Diesel | Metals | Arsenic | lbs/ton production | EF | 1 | 3 | 2.73E-07 | 3.93E-09 | 0.00 | 2 | 3 | 6.60E-08 | 4.74E-08 | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Arsenic | lbs/ton production | EF | 1 | 3 | 2.73E-07 | 3.93E-09 | 0.00 | 3 | 1 | 8.02E-06 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Arsenic | lbs/ton production | EF | 2 | 3 | 6.60E-08 | 4.74E-08 | 1.00 | 3 | 1 | 8.02E-06 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Beryllium | lbs/ton production | EF | 1 | 3 | 5.46E-07 | 7.86E-09 | 0.00 | 2 | 3 | 1.50E-07 | 1.42E-08 | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Beryllium | lbs/ton production | EF | 1 | 3 | 5.46E-07 | 7.86E-09 | 0.00 | 3 | 1 | 4.01E-06 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Beryllium | lbs/ton production | EF | 2 | 3 | 1.50E-07 | 1.42E-08 | 0.00 | 3 | 1 | 4.01E-06 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Cadmium | lbs/ton production | EF | 1 | 3 | 1.62E-06 | 3.24E-06 | 1.00 | 2 | 3 | 1.38E-07 | 3.92E-08 | 0.78 | Yes |
| Asphalt Prod., Diesel | Metals | Cadmium | lbs/ton production | EF | 1 | 1 | 1.62E-06 | | 1.00 | 3 | 1 | 4.41E-05 | | 1.00 | NA |
| Asphalt Prod., Diesel | Metals | Cadmium | lbs/ton production | EF | 2 | 3 | 1.38E-07 | 3.92E-08 | 0.78 | 3 | 1 | 4.41E-05 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Chromium (Hex) | lbs/ton production | EF | 1 | 3 | 1.61E-07 | 1.59E-07 | 1.00 | 2 | 3 | 8.56E-08 | 3.14E-08 | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Chromium (Total) | lbs/ton production | EF | 1 | 3 | 1.96E-06 | 1.27E-06 | 1.00 | 2 | 3 | 5.23E-07 | 3.40E-07 | 1.00 | No |
| Asphalt Prod., Diesel | Metals | Chromium (Total) | lbs/ton production | EF | 1 | 3 | 1.96E-06 | 1.27E-06 | 1.00 | 3 | 1 | 8.41E-05 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Chromium (Total) | lbs/ton production | EF | 2 | 3 | 5.23E-07 | 3.40E-07 | 1.00 | 3 | 1 | 8.41E-05 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Copper | lbs/ton production | EF | 1 | 2 | 1.50E-06 | 2.22E-07 | 1.00 | 2 | 3 | 1.12E-06 | 3.16E-07 | 1.00 | No |
| Asphalt Prod., Diesel | Metals | Copper | lbs/ton production | EF | 1 | 2 | 1.50E-06 | 2.22E-07 | 1.00 | 3 | 1 | 1.33E-04 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Copper | lbs/ton production | EF | 2 | 3 | 1.12E-06 | 3.16E-07 | 1.00 | 3 | 1 | 1.33E-04 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Lead | lbs/ton production | EF | 1 | 3 | 2.01E-06 | 8.58E-07 | 1.00 | 2 | 3 | 2.27E-06 | 1.54E-06 | 1.00 | No |
| Asphalt Prod., Diesel | Metals | Lead | lbs/ton production | EF | 1 | 3 | 2.01E-06 | 8.58E-07 | 1.00 | 3 | 1 | 2.19E-03 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Lead | lbs/ton production | EF | 2 | 3 | 2.27E-06 | 1.54E-06 | 1.00 | 3 | 1 | 2.19E-03 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Manganese | lbs/ton production | EF | 1 | 3 | 1.24E-05 | 4.38E-06 | 1.00 | 2 | 3 | 9.11E-07 | 1.82E-07 | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Manganese | lbs/ton production | EF | 1 | 3 | 1.24E-05 | 4.38E-06 | 1.00 | 3 | 1 | 1.44E-03 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Manganese | lbs/ton production | EF | 2 | 3 | 9.11E-07 | 1.82E-07 | 1.00 | 3 | 1 | 2.16E-03 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Mercury | lbs/ton production | EF | 1 | 3 | 4.88E-08 | 2.84E-08 | 0.52 | 2 | 3 | 7.06E-07 | 7.92E-08 | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Mercury | lbs/ton production | EF | 1 | 3 | 4.88E-08 | 2.84E-08 | 0.52 | 3 | 1 | 8.02E-07 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Mercury | lbs/ton production | EF | 2 | 3 | 7.06E-07 | 7.92E-08 | 0.00 | 3 | 1 | 8.02E-07 | | 1.00 | No |
| Asphalt Prod., Diesel | Metals | Nickel | lbs/ton production | EF | 1 | 3 | 2.73E-06 | 3.93E-08 | 0.00 | 2 | 3 | 5.35E-07 | 2.00E-07 | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Nickel | lbs/ton production | EF | 1 | 3 | 2.73E-06 | 3.93E-08 | 0.00 | 3 | 1 | 3.81E-04 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Nickel | lbs/ton production | EF | 2 | 3 | 5.35E-07 | 2.00E-07 | 1.00 | 3 | 1 | 3.81E-04 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Selenium | lbs/ton production | EF | 1 | 3 | 2.73E-07 | 3.93E-09 | 0.00 | 2 | 3 | 1.16E-06 | 6.06E-07 | 0.50 | Yes |
| Asphalt Prod., Diesel | Metals | Selenium | lbs/ton production | EF | 1 | 3 | 2.73E-07 | 3.93E-09 | 0.00 | 3 | 1 | 8.02E-06 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Selenium | lbs/ton production | EF | 2 | 3 | 1.16E-06 | 5.08E-07 | 0.50 | 3 | 1 | 8.02E-06 | | 0.00 | Yes |
| Asphalt Prod., Diesel | Metals | Zinc | lbs/ton production | EF | 1 | 3 | 1.82E-05 | 5.62E-06 | 1.00 | 2 | 3 | 6.71E-06 | 6.28E-06 | 1.00 | No |
| Asphalt Prod., Diesel | Metals | Zinc | lbs/ton production | EF | 1 | 3 | 1.82E-05 | 5.62E-06 | 1.00 | 3 | 1 | 4.62E-03 | | 1.00 | Yes |
| Asphalt Prod., Diesel | Metals | Zinc | lbs/ton production | EF | 2 | 3 | 6.71E-06 | 6.28E-06 | 1.00 | 3 | 1 | 4.62E-03 | | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Acenaphthene | lbs/ton production | EF | 1 | 3 | 4.80E-07 | 4.21E-07 | 1.00 | 2 | 3 | 2.11E-08 | 1.08E-08 | 1.00 | No |
| Asphalt Prod., Diesel | PAH | Acenaphthylene | lbs/ton production | EF | 1 | 3 | 3.36E-07 | 2.72E-07 | 1.00 | 2 | 3 | 2.04E-08 | 1.89E-08 | 1.00 | No |
| Asphalt Prod., Diesel | PAH | Anthracene | lbs/ton production | EF | 1 | 3 | 3.21E-08 | 7.68E-09 | 1.00 | 2 | 3 | 1.68E-08 | 7.64E-09 | 1.00 | No |
| Asphalt Prod., Diesel | PAH | Benzo(a)anthracene | lbs/ton production | EF | 1 | 3 | 6.12E-08 | 2.51E-08 | 1.00 | 2 | 3 | 6.41E-09 | 2.56E-09 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Benzo(a)pyrene | lbs/ton production | EF | 1 | 3 | 2.79E-08 | 1.44E-08 | 1.00 | 2 | 3 | 3.13E-10 | 5.29E-11 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Benzo(b)fluoranthene | lbs/ton production | EF | 1 | 3 | 1.39E-08 | 9.49E-09 | 1.00 | 2 | 3 | 4.39E-09 | 6.44E-09 | 1.00 | No |
| Asphalt Prod., Diesel | PAH | Benzo(g,h,i)perylene | lbs/ton production | EF | 1 | 3 | 1.90E-09 | 3.76E-10 | 0.23 | 2 | 3 | 5.03E-10 | 3.10E-11 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Benzo(k)fluoranthene | lbs/ton production | EF | 1 | 3 | 5.13E-09 | 2.90E-09 | 1.00 | 2 | 3 | 1.13E-09 | 1.31E-09 | 1.00 | No |
| Asphalt Prod., Diesel | PAH | Chrysene | lbs/ton production | EF | 1 | 3 | 2.70E-08 | 1.23E-08 | 1.00 | 2 | 3 | 1.25E-09 | 3.67E-10 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Dibenz(a,h)anthracene | lbs/ton production | EF | 1 | 3 | 1.76E-09 | 8.74E-10 | 0.00 | 2 | 3 | 1.90E-10 | 1.08E-10 | 0.00 | Yes |
| Asphalt Prod., Diesel | PAH | Fluoranthene | lbs/ton production | EF | 1 | 3 | 2.17E-07 | 1.63E-08 | 1.00 | 2 | 3 | 8.67E-08 | 3.88E-08 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Fluorene | lbs/ton production | EF | 1 | 3 | 4.61E-07 | 3.04E-07 | 1.00 | 2 | 3 | 2.78E-07 | 1.92E-07 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Indeno(1,2,3-cd)pyrene | lbs/ton production | EF | 1 | 3 | 2.00E-09 | 6.13E-10 | 0.25 | 2 | 3 | 3.00E-10 | 6.03E-12 | 1.00 | Yes |
| Asphalt Prod., Diesel | PAH | Naphthalene | lbs/ton production | EF | 1 | 3 | 4.75E-05 | 2.78E-05 | 1.00 | 2 | 3 | 1.08E-05 | 4.70E-06 | 1.00 | No |
| Asphalt Prod., Diesel | PAH | Phenanthrene | lbs/ton production | EF | 1 | 3 | 6.27E-07 | 2.36E-07 | 1.00 | 2 | 3 | 7.23E-07 | 3.10E-07 | 1.00 | No |

ATTACHMENT 7. EMISSION FACTOR GROUP COMPARISON (t-statistics)

| Major Group | Category | Substance | EF Unit | Value Type | First Sample Statistics | | | | | Second Sample Statistics | | | | | Significant Difference at 95%Confidence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Description Sub Group | Size | Average | Standard Deviation | Detect Ratio | Description Sub Group | Size | Average | Standard Deviation | Detect Ratio | |
| Asphalt Prod., Diesel | PAH | Pyrene | lbs/ton production | EF | 1 | 3 | 1.69E-07 | 8.21E-09 | 1.00 | 2 | 3 | 5.99E-08 | 2.66E-08 | 1.00 | Yes |
| Asphalt Prod., Diesel | VOC | Benzene | lbs/ton production | EF | 1 | 3 | 1.56E-02 | 1.62E-03 | 1.00 | 2 | 3 | 1.04E-03 | 4.65E-05 | 0.00 | Yes |
| Asphalt Prod., Diesel | VOC | Benzene | lbs/ton production | EF | 1 | 3 | 1.56E-02 | 1.62E-03 | 1.00 | 3 | 1 | 3.05E-04 | | 1.00 | Yes |
| Asphalt Prod., Diesel | VOC | Benzene | lbs/ton production | EF | 2 | 3 | 1.04E-03 | 4.65E-05 | 0.00 | 3 | 1 | 3.05E-04 | | 1.00 | Yes |
| Asphalt Prod., Diesel | VOC | Formaldehyde | lbs/ton production | EF | 1 | 3 | 1.32E-04 | 5.94E-05 | 1.00 | 2 | 3 | 2.43E-04 | 7.74E-05 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Arsenic | lbs/Mgal | EF | 1 | 9 | 1.08E-03 | 5.51E-04 | 1.00 | 2 | 24 | 5.69E-04 | 8.40E-04 | 0.53 | No |
| Boiler, Fuel Oil | Metals | Beryllium | lbs/Mgal | EF | 1 | 9 | 1.48E-05 | 1.60E-05 | 0.62 | 2 | 23 | 4.20E-04 | 1.03E-03 | 0.94 | No |
| Boiler, Fuel Oil | Metals | Cadmium | lbs/Mgal | EF | 1 | 9 | 2.23E-04 | 2.32E-04 | 1.00 | 2 | 22 | 3.43E-03 | 1.08E-02 | 0.95 | No |
| Boiler, Fuel Oil | Metals | Chromium (Hex) | lbs/Mgal | EF | 1 | 9 | 1.81E-04 | 1.72E-04 | 0.90 | 2 | 18 | 3.50E-04 | 3.83E-04 | 0.16 | No |
| Boiler, Fuel Oil | Metals | Chromium (Total) | lbs/Mgal | EF | 1 | 9 | 6.09E-04 | 2.44E-04 | 1.00 | 2 | 24 | 1.64E-03 | 1.97E-03 | 0.84 | No |
| Boiler, Fuel Oil | Metals | Copper | lbs/Mgal | EF | 1 | 9 | 1.40E-03 | 5.60E-04 | 1.00 | 2 | 24 | 4.37E-03 | 4.69E-03 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Lead | lbs/Mgal | EF | 1 | 9 | 1.61E-03 | 1.12E-03 | 1.00 | 2 | 24 | 4.49E-03 | 1.00E-02 | 0.87 | No |
| Boiler, Fuel Oil | Metals | Manganese | lbs/Mgal | EF | 1 | 9 | 1.58E-03 | 1.37E-03 | 1.00 | 2 | 24 | 4.38E-02 | 1.39E-01 | 1.00 | No |
| Boiler, Fuel Oil | Metals | Mercury | lbs/Mgal | EF | 1 | 9 | 3.06E-03 | 1.91E-03 | 0.00 | 2 | 24 | 1.93E-04 | 3.12E-04 | 0.67 | Yes |
| Boiler, Fuel Oil | Metals | Nickel | lbs/Mgal | EF | 1 | 9 | 9.75E-02 | 5.45E-02 | 1.00 | 2 | 24 | 1.30E-01 | 1.61E-01 | 0.99 | No |
| Boiler, Fuel Oil | Metals | Selenium | lbs/Mgal | EF | 1 | 9 | 9.61E-04 | 6.71E-04 | 0.87 | 2 | 24 | 3.23E-03 | 9.22E-03 | 0.64 | No |
| Boiler, Fuel Oil | Metals | Zinc | lbs/Mgal | EF | 1 | 9 | 1.41E-02 | 8.27E-03 | 1.00 | 2 | 24 | 8.66E-02 | 2.27E-01 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Acenaphthene | lbs/Mgal | EF | 1 | 12 | 3.11E-06 | 3.67E-06 | 0.99 | 2 | 27 | 2.30E-05 | 3.16E-05 | 0.04 | No |
| Boiler, Fuel Oil | PAH | Acenaphthylene | lbs/Mgal | EF | 1 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 2 | 27 | 3.13E-06 | 4.43E-06 | 0.24 | Yes |
| Boiler, Fuel Oil | PAH | Anthracene | lbs/Mgal | EF | 1 | 12 | 2.27E-06 | 1.56E-06 | 0.90 | 2 | 27 | 4.12E-06 | 5.83E-06 | 0.03 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)anthracene | lbs/Mgal | EF | 1 | 12 | 2.08E-06 | 3.45E-06 | 0.52 | 2 | 27 | 2.24E-06 | 3.20E-06 | 0.01 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(a)pyrene | lbs/Mgal | EF | 1 | 12 | 1.08E-06 | 2.09E-07 | 0.00 | 2 | 27 | 2.30E-05 | 3.16E-05 | 0.04 | Yes |
| Boiler, Fuel Oil | PAH | Benzo(b+k)fluoranthene | lbs/Mgal | EF | 1 | 12 | 1.52E-06 | 1.52E-06 | 0.34 | 2 | 6 | 1.60E-06 | 1.28E-06 | 0.43 | No |
| Boiler, Fuel Oil | PAH | Benzo(g,h,i)perylene | lbs/Mgal | EF | 1 | 12 | 1.29E-06 | 7.46E-07 | 0.23 | 2 | 27 | 2.49E-06 | 3.17E-06 | 0.02 | Yes |
| Boiler, Fuel Oil | PAH | Chrysene | lbs/Mgal | EF | 1 | 12 | 1.14E-06 | 2.70E-07 | 0.12 | 2 | 27 | 2.35E-06 | 3.23E-06 | 0.13 | Yes |
| Boiler, Fuel Oil | PAH | Dibenz(a,h)anthracene | lbs/Mgal | EF | 1 | 12 | 1.10E-06 | 2.11E-07 | 0.09 | 2 | 27 | 2.26E-06 | 3.11E-06 | 0.02 | Yes |
| Boiler, Fuel Oil | PAH | Fluoranthene | lbs/Mgal | EF | 1 | 12 | 3.24E-06 | 4.80E-06 | 0.87 | 2 | 27 | 2.77E-06 | 3.80E-06 | 0.27 | Yes |
| Boiler, Fuel Oil | PAH | Fluorene | lbs/Mgal | EF | 1 | 12 | 3.75E-06 | 3.60E-06 | 0.90 | 2 | 27 | 4.16E-06 | 5.71E-06 | 0.04 | Yes |
| Boiler, Fuel Oil | PAH | Indeno(1,2,3-cd)pyrene | lbs/Mgal | EF | 1 | 12 | 1.26E-06 | 6.42E-07 | 0.21 | 2 | 27 | 2.28E-06 | 3.13E-06 | 0.01 | Yes |
| Boiler, Fuel Oil | PAH | Naphthalene | lbs/Mgal | EF | 1 | 12 | 3.21E-03 | 2.85E-03 | 1.00 | 2 | 27 | 4.95E-03 | 1.34E-02 | 1.00 | No |
| Boiler, Fuel Oil | PAH | Phenanthrene | lbs/Mgal | EF | 1 | 12 | 7.47E-06 | 7.63E-06 | 0.97 | 2 | 27 | 4.38E-05 | 6.67E-05 | 0.57 | No |
| Boiler, Fuel Oil | PAH | Pyrene | lbs/Mgal | EF | 1 | 12 | 2.50E-06 | 3.53E-06 | 0.78 | 2 | 27 | 2.55E-05 | 3.51E-05 | 0.05 | Yes |
| Boiler, Fuel Oil | VOC | Acetaldehyde | lbs/Mgal | EF | 1 | 3 | 5.33E-03 | 4.23E-03 | 0.82 | 2 | 9 | 2.31E-03 | 2.16E-03 | 0.22 | No |
| Boiler, Fuel Oil | VOC | Benzene | lbs/Mgal | EF | 1 | 9 | 3.49E-04 | 2.54E-05 | 0.00 | 2 | 26 | 3.32E-02 | 1.01E-01 | 0.95 | No |
| Boiler, Fuel Oil | VOC | Formaldehyde | lbs/Mgal | EF | 1 | 9 | 4.90E-02 | 5.13E-02 | 1.00 | 2 | 21 | 5.25E-02 | 1.21E-01 | 0.96 | No |
| Boiler, Ref. Gas | Metals | Arsenic | lbs/MMcf | EF | 1 | 3 | 7.04E-04 | 4.65E-04 | 1.00 | 2 | 3 | 3.57E-03 | 3.05E-03 | 0.71 | No |
| Boiler, Ref. Gas | Metals | Beryllium | lbs/MMcf | EF | 1 | 2 | 1.55E-04 | 2.08E-06 | 1.00 | 2 | 3 | 2.60E-04 | 5.35E-05 | 0.00 | No |
| Boiler, Ref. Gas | Metals | Cadmium | lbs/MMcf | EF | 1 | 3 | 2.30E-03 | 5.44E-04 | 1.00 | 2 | 3 | 6.60E-04 | 1.36E-04 | 0.00 | Yes |
| Boiler, Ref. Gas | Metals | Chromium (Hex) | lbs/MMcf | EF | 1 | 3 | 7.70E-03 | 3.09E-03 | 0.00 | 2 | 3 | 2.38E-04 | 7.18E-05 | 0.00 | Yes |
| Boiler, Ref. Gas | Metals | Chromium (Total) | lbs/MMcf | EF | 1 | 3 | 1.28E-02 | 1.57E-02 | 1.00 | 2 | 3 | 2.46E-03 | 8.57E-05 | 0.34 | No |
| Boiler, Ref. Gas | Metals | Copper | lbs/MMcf | EF | 1 | 2 | 6.30E-03 | 1.98E-03 | 1.00 | 2 | 3 | 5.30E-03 | 5.18E-03 | 0.71 | No |
| Boiler, Ref. Gas | Metals | Lead | lbs/MMcf | EF | 1 | 2 | 2.42E-03 | 9.38E-05 | 1.00 | 2 | 3 | 3.01E-03 | 4.09E-03 | 0.94 | No |
| Boiler, Ref. Gas | Metals | Manganese | lbs/MMcf | EF | 1 | 2 | 2.39E-03 | 1.06E-03 | 1.00 | 2 | 3 | 1.43E-01 | 2.19E-01 | 1.00 | No |
| Boiler, Ref. Gas | Metals | Mercury | lbs/MMcf | EF | 1 | 3 | 3.23E-04 | 5.60E-05 | 0.00 | 2 | 3 | 1.10E-03 | 2.89E-04 | 0.00 | Yes |
| Boiler, Ref. Gas | Metals | Nickel | lbs/MMcf | EF | 1 | 2 | 5.59E-03 | 2.03E-03 | 1.00 | 2 | 3 | 1.97E-02 | 2.60E-02 | 0.84 | No |
| Boiler, Ref. Gas | Metals | Selenium | lbs/MMcf | EF | 1 | 3 | 2.08E-03 | 9.62E-04 | 0.16 | 2 | 3 | 3.30E-01 | 3.08E-01 | 1.00 | No |
| Boiler, Ref. Gas | Metals | Zinc | lbs/MMcf | EF | 1 | 3 | 3.42E+00 | 5.51E+00 | 1.00 | 2 | 3 | 9.89E-02 | 1.55E-01 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Acenaphthene | lbs/MMcf | EF | 1 | 3 | 5.88E-06 | 5.28E-07 | 0.37 | 2 | 3 | 1.23E-05 | 6.63E-06 | 1.00 | No |
| Boiler, Ref. Gas | PAH | Acenaphthylene | lbs/MMcf | EF | 1 | 3 | 2.56E-06 | 5.23E-08 | 0.00 | 2 | 3 | 1.42E-04 | 1.19E-04 | 1.00 | No |