

US EPA ARCHIVE DOCUMENT

|    | B                                    | C  |
|----|--------------------------------------|--|
| 1  | <b>Source Description</b>            |  |
| 2  |                                      |  |
| 3  | Phase I ID No.                       | 810  |
| 4  | EPA ID No.                           | TND003376928   |
| 5  | Facility Name                        | Eastman Chemical Company   |
| 6  | Facility Location                    |  |
| 7  | City                                 | Kingsport  |
| 8  | State                                | Tennessee  |
| 9  | Unit ID Name/No.                     | B-248D Liquid Chemical Destructor  |
| 10 | Other Sister Facilities              |  |
| 11 | Number of Sister Facilities          | 0  |
| 12 | Combustor Class                      | Onsite incinerator   |
| 13 | Combustor Type                       | Liquid injection   |
| 14 | Combustor Characteristics            | Only pumpable liquids for treatment.   |
| 15 | Capacity (MMBtu/hr)                  |  |
| 16 | Soot Blowing                         |  |
| 17 | APCS Detailed Acronym                | Q/SC/GS/WESP   |
| 18 | APCS General Class                   | WQ, LEWS, HE, WESP   |
|    | APCS Characteristics                 | Quench for gas cooling, rod scrubber for hydrogen chloride absorption, gas subcooling, and two wet electrostatic precipitators. New APCS for most recent data. Older data taken with APCS that has been removed. |
| 19 |                                      |  |
| 20 |                                      |  |
| 21 | Hazardous Wastes                     | Liq  |
| 22 | Haz Waste Description                | Organic wastes   |
| 23 | Supplemental Fuel                    | oil  |
| 24 |                                      | fuel oil   |
| 25 | Stack Characteristics                |  |
| 26 | Diameter (ft)                        | 3.50   |
| 27 | Height (ft)                          | 38.6   |
| 28 | Gas Velocity (ft/sec)                | 42.7   |
| 29 | Gas Temperature (°F)                 | 140  |
| 30 |                                      |  |
| 31 | Permitting Status                    | Cr and Pb spiked   |
| 32 | HWC Burn Status (Date if Terminated) |  |

|    | B                            | C   |
|----|------------------------------|---|
| 1  | <b>Condition Description</b> |   |
| 2  |                              |   |
| 3  | <b>810C10</b>                |   |
| 4  |                              |   |
| 5  | Report Name/Date             | Performance Test Report for Liquid Chemical Destructor, August 2000   |
| 6  | Report Prepare               | Franklin Engineering Group, Inc   |
| 7  | Testing Firm                 | Eastman Chemical Company  |
| 8  | Testing Dates                | June 13, 2000   |
| 9  | Cond Dates                   | Jun-00  |
| 10 | Condition Descr              | Worst-case cond, max feedrate   |
| 11 | Content                      | PM, HCl/Cl <sub>2</sub> , metals, PCDD/F  |
| 12 |                              |   |
| 13 | <b>810C1</b>                 |   |
| 14 |                              |   |
| 15 | Report Name/Date             | Metals Trial Burn, Tennessee Eastman's No. 1 Liquid Chemical Destructor, Tennessee Eastman Company, August 30, 1991   |
| 16 | Report Prepare               | Tennessee Eastman   |
| 17 | Testing Firm                 | Tennessee Eastman ?   |
| 18 | Cond Descr                   | Trial burn, LOW METALS FEED   |
| 19 | Testing Dates                | June 11-12, 1991  |
| 20 | Cond Dates                   | Jun-91  |
| 21 |                              |   |
| 22 |                              |   |
| 23 | <b>810C2</b>                 |   |
| 24 |                              |   |
| 25 | Report Name/Date             | Metals Trial Burn, Tennessee Eastman's No. 1 Liquid Chemical Destructor, Tennessee Eastman Company, August 30, 1991   |
| 26 | Report Prepare               | Tennessee Eastman   |
| 27 | Testing Firm                 | Tennessee Eastman ?   |
| 28 | Cond Descr                   | Trial burn, HIGH METALS FEED  |
| 29 | Testing Dates                | June 12, 1991   |
| 30 | Cond Dates                   | Jun-91  |
| 31 |                              |   |
| 32 | <b>810C3</b>                 |   |
| 33 |                              |   |
| 34 | Report Name/Date             | Trial Burn Report for Tennessee Eastman Company B-248 Incineration Facility, Tennessee Eastman Company, Eastman Road, P.O. Box 511, Kingsport TN 37662, Submitted to Tennessee Division of Solid Waste Management, April 1989 |
| 35 | Report Prepar                |   |
| 36 | Testing Firm                 |   |
| 37 | Testing Dates                | 17-Jan-89   |
| 38 | Cond Dates                   | Jan-89  |
| 39 | Cond Description             | Trial burn, max operating conditions, permit limit setting test cond  |
| 40 | Content                      | PM, HCl, CO, DRE  |

|    | B                            | C           | D       | E     | F   | G       | H        | I       | J        | K | L | M |
|----|------------------------------|-------------|---------|-------|-----|---------|----------|---------|----------|---|---|---|
| 1  | <b>Stack Gas Emissions 1</b> |             |         |       |     |         |          |         |          |   |   |   |
| 2  |                              |             |         |       |     |         |          |         |          |   |   |   |
| 3  |                              | Comments    | Units   | 7% O2 |     |         |          |         |          |   |   |   |
| 4  |                              |             |         |       |     |         |          |         |          |   |   |   |
| 5  | <b>810C10</b>                |             |         |       |     | R1      | R2       | R3      | Cond Avg |   |   |   |
| 6  |                              |             |         |       |     |         |          |         |          |   |   |   |
| 7  | PM                           | E1          | gr/dscf | y     |     | 0.003   | 0.0026   | 0.0024  | 0.003    |   |   |   |
| 8  | CO (RA)                      | E1          | ppmv    | y     |     | 43      | 2        | 2       | 15.7     |   |   |   |
| 9  | CO (MHRA)                    | E1          | ppmv    | y     |     | 156     | 2        | 3       | 53.7     |   |   |   |
| 10 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 11 | HCl                          | E1          | ppmv    | y     |     | 2.1     | 2.7      | 2.5     | 2.4      |   |   |   |
| 12 | Cl2                          | E1          | ppmv    | y     |     | 0.9     | 0.9      | 2.3     | 1.4      |   |   |   |
| 13 | Total Chlorine               | E1          | ppmv    | y     |     | 3.81    | 4.54     | 7.14    | 5.2      |   |   |   |
| 14 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 15 | Metals                       |             |         |       |     |         |          |         |          |   |   |   |
| 16 | Antimony                     | E2          | ug/dscm | y     | nd  | 6.3 nd  | 6.1 nd   | 6.6     | 6.3      |   |   |   |
| 17 | Arsenic                      | E2          | ug/dscm | y     | nd  | 2.2 nd  | 0.6 nd   | 0.6     | 1.1      |   |   |   |
| 18 | Barium                       | E2          | ug/dscm | y     |     | 2.5 nd  | 1.6      | 1.7     | 1.9      |   |   |   |
| 19 | Beryllium                    | E2          | ug/dscm | y     | nd  | 0.2 nd  | 0.2 nd   | 0.2     | 0.2      |   |   |   |
| 20 | Cadmium                      | E2          | ug/dscm | y     | nd  | 1.8 nd  | 1.2 nd   | 1.3     | 1.4      |   |   |   |
| 21 | Chromium                     | E2          | ug/dscm | y     |     | 42.1    | 39.6     | 42.8    | 41.5     |   |   |   |
| 22 | Lead                         | E2          | ug/dscm | y     |     | 3.6     | 3.7      | 3.9     | 3.7      |   |   |   |
| 23 | Nickel                       | E2          | ug/dscm | y     | nd  | 2.0 nd  | 1.6 nd   | 3.6     | 2.4      |   |   |   |
| 24 | Selenium                     | E2          | ug/dscm | y     | nd  | 1.1 nd  | 3.7 nd   | 0.9     | 1.9      |   |   |   |
| 25 | Silver                       | E2          | ug/dscm | y     | nd  | 1.3 nd  | 1.2 nd   | 1.3     | 1.3      |   |   |   |
| 26 | Thallium                     | E2          | ug/dscm | y     | nd  | 6.4 nd  | 6.5 nd   | 4.4     | 5.8      |   |   |   |
| 27 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 28 | SVM                          | E2          | ug/dscm | y     | 33  | 5.4 25  | 4.9 26   | 5.18    | 5.1      |   |   |   |
| 29 | LVM                          | E2          | ug/dscm | y     | 5.4 | 44.5 2  | 40.4 1.9 | 43.66   | 42.9     |   |   |   |
| 30 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 31 | Sampling Train               | PM, HCl/Cl2 | E1      |       |     |         |          |         |          |   |   |   |
| 32 | Stack Gas Flowrate           |             | dscfm   |       |     | 17700   | 17400    | 17500   | 17533.3  |   |   |   |
| 33 | O2                           |             | %       |       |     | 13.8    | 13.5     | 14      | 13.8     |   |   |   |
| 34 | Moisture                     |             | %       |       |     | 15.8    | 17.3     | 17.3    | 16.8     |   |   |   |
| 35 | Temperature                  |             | °F      |       |     | 139     | 139      | 137     | 138.3    |   |   |   |
| 36 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 37 | Sampling Train               | Metals      | E2      |       |     |         |          |         |          |   |   |   |
| 38 | Stack Gas Flowrate           |             | dscfm   |       |     | 18000   | 18400    | 17700.0 | 18033.3  |   |   |   |
| 39 | O2                           |             | %       |       |     | 13.8    | 13.5     | 14      | 13.8     |   |   |   |
| 40 | Moisture                     |             | %       |       |     | 17.4    | 15.1     | 17.5    | 16.7     |   |   |   |
| 41 | Temperature                  |             | °F      |       |     | 140     | 141      | 138     | 139.7    |   |   |   |
| 42 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 43 |                              |             |         |       |     |         |          |         |          |   |   |   |
| 44 | Sampling Train               | PCDD/F      | E3      |       |     |         |          |         |          |   |   |   |
| 45 | Stack Gas Flowrate           |             | dscfm   |       |     | 18100.0 | 17200    | 18300.0 | 17866.7  |   |   |   |
| 46 | O2                           |             | %       |       |     | 13.1    | 13.1     | 13.1    | 13.1     |   |   |   |
| 47 | Moisture                     |             | %       |       |     | 17.5    | 17.7     | 18.1    | 17.8     |   |   |   |
| 48 | Temperature                  |             | °F      |       |     | 137.1   | 137.5    | 136.3   | 137.0    |   |   |   |

|    | B                            | C      | D                    | E | F | G       | H | I       | J | K       | L | M        | N | O           |
|----|------------------------------|--------|----------------------|---|---|---------|---|---------|---|---------|---|----------|---|-------------|
| 1  | <b>Stack Gas Emissions 2</b> |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 2  |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 3  |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 4  | <b>810C1</b>                 |        |                      |   |   | R1      |   | R2      |   | R3      |   | Cond Avg |   |             |
| 5  |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 6  | CO (RA)                      | E2     | ppmv                 | y |   | 12.1    |   | 12.1    |   | 24.8    |   | 16.4     |   |             |
| 7  | Antimony                     | E2     | ug/dscm              | y |   | 245.5   |   | 107.0   |   | 356.0   |   | 236.2    |   |             |
| 8  | Arsenic                      | E2     | ug/dscm              | y |   | 25.7    |   | 10.4    |   | 27.2    |   | 21.1     |   |             |
| 9  | Cadmium                      | E2     | ug/dscm              | y |   | 102.4   |   | 48.3    |   | 108.3   |   | 86.3     |   |             |
| 10 | Chromium                     | E2     | ug/dscm              | y |   | 87.1    |   | 28.0    |   | 108.3   |   | 74.5     |   |             |
| 11 | Chromium (Hex)               | E1     | ug/dscm              | y |   | 20.1    |   | 38.2    |   | 43.1    |   | 33.8     |   |             |
| 12 | Lead                         | E2     | ug/dscm              | y |   | 926.5   |   | 473.3   |   | 1078.1  |   | 825.9    |   |             |
| 13 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 14 | SVM                          | E2     | ug/dscm              | y |   | 1028.8  |   | 521.6   |   | 1186.4  |   | 912.3    |   |             |
| 15 | LVM                          | E2     | ug/dscm              | y |   | 112.8   |   | 38.4    |   | 135.5   |   | 95.6     |   | As, Cr only |
| 16 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 17 | Sampling Train               | Cr Hex | E1                   |   |   |         |   |         |   |         |   |          |   |             |
| 18 | Stack Gas Flowrate           |        | dscfm                |   |   | 15434.0 |   | 15766.0 |   | 15631.0 |   |          |   |             |
| 19 | O2                           |        | %                    |   |   | 10.7    |   | 11.2    |   | 11.3    |   |          |   |             |
| 20 | Moisture                     |        | %                    |   |   | 31.4    |   | 31.4    |   | 27.7    |   |          |   |             |
| 21 | Temperature                  |        | °F                   |   |   | 207.0   |   | 203.0   |   | 204.0   |   |          |   |             |
| 22 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 23 | Sampling Train               | Metals | E2                   |   |   |         |   |         |   |         |   |          |   |             |
| 24 | Stack Gas Flowrate           |        | dscfm                |   |   | 15667.0 |   | 15795.0 |   | 15154.0 |   |          |   |             |
| 25 | O2                           |        | %                    |   |   | 10.7    |   | 11.2    |   | 11.3    |   |          |   |             |
| 26 | Moisture                     |        | %                    |   |   | 31.4    |   | 31.4    |   | 27.7    |   |          |   |             |
| 27 | Temperature                  |        | °F                   |   |   | 213.0   |   | 213.0   |   | 208.0   |   |          |   |             |
| 28 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 29 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 30 | <b>810C2</b>                 |        |                      |   |   | R1      |   | R2      |   | R3      |   | Cond Avg |   |             |
| 31 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 32 | CO (RA)                      | E2     | ppmv                 | y |   | 18.9    |   | 37.3    |   | 18.6    |   | 24.9     |   |             |
| 33 | Antimony                     | E2     | ug/dscm              | y |   | 737.9   |   | 659.8   |   | 579.7   |   | 659.1    |   |             |
| 34 | Arsenic                      | E2     | ug/dscm              | y |   | 70.8    |   | 74.0    |   | 68.5    |   | 71.1     |   |             |
| 35 | Cadmium                      | E2     | ug/dscm              | y |   | 186.0   |   | 176.9   |   | 137.2   |   | 166.7    |   |             |
| 36 | Chromium                     | E2     | ug/dscm              | y |   | 106.5   |   | 89.8    |   | 105.5   |   | 100.6    |   |             |
| 37 | Chromium (Hex)               | E1     | ug/dscm              | y |   | 12.4    |   | 12.3    |   | 18.0    |   | 14.2     |   |             |
| 38 | Lead                         | E2     | ug/dscm              | y |   | 1854.6  |   | 1713.4  |   | 1261.9  |   | 1610.0   |   |             |
| 39 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 40 | SVM                          | E2     |                      |   |   | 2040.5  |   | 1890.3  |   | 1399.1  |   | 1776.7   |   |             |
| 41 | LVM                          | E2     |                      |   |   | 177.3   |   | 163.8   |   | 173.9   |   | 171.7    |   | (No Be)     |
| 42 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 43 | Sampling Train               | Cr Hex | E1                   |   |   |         |   |         |   |         |   |          |   |             |
| 44 | Stack Gas Flowrate           |        | dscfm                |   |   | 14367.0 |   | 14766.0 |   | 14662.0 |   |          |   |             |
| 45 | O2                           |        | %                    |   |   | 10.9    |   | 10.9    |   | 10.9    |   |          |   |             |
| 46 | Moisture                     |        | %                    |   |   | 30.8    |   | 31.3    |   | 31.3    |   |          |   |             |
| 47 | Temperature                  |        | °F                   |   |   | 205.0   |   | 204.0   |   | 204.0   |   |          |   |             |
| 48 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 49 | Sampling Train               | Metals | E2                   |   |   |         |   |         |   |         |   |          |   |             |
| 50 | Stack Gas Flowrate           |        | dscfm                |   |   | 15045.0 |   | 14751.0 |   | 14809.0 |   |          |   |             |
| 51 | O2                           |        | %                    |   |   | 10.9    |   | 10.9    |   | 10.9    |   |          |   |             |
| 52 | Moisture                     |        | %                    |   |   | 30.8    |   | 31.3    |   | 31.3    |   |          |   |             |
| 53 | Temperature                  |        | °F                   |   |   | 214.0   |   | 218.0   |   | 211.0   |   |          |   |             |
| 54 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 55 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 56 | <b>810C3</b>                 |        |                      |   |   | R1      |   | R2      |   | R3      |   | Cond Avg |   |             |
| 57 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 58 | PM                           | E1     | gr/dscf              | y |   | 0.0219  |   | 0.0241  |   | 0.0118  |   | 0.0193   |   |             |
| 59 | CO (RA)                      | E1     | ppmv                 | y |   | 3       |   | 0       |   | 0       |   | 1.00     |   |             |
| 60 | CO (MHRA)                    | E1     | ppmv                 | y |   | 3       |   | 0       |   | 0       |   | 1.00     |   |             |
| 61 | HCl                          |        | lb/hr                |   |   | 3.67    |   | 3.58    |   | 3.08    |   |          |   |             |
| 62 | HCl                          | E1     | ppmv                 | y |   | 59.1    |   | 58.9    |   | 48.9    |   | 55.6     |   |             |
| 63 | Total Chlorine               | E1     | ppmv                 | y |   | 59.1    |   | 58.9    |   | 48.9    |   | 55.6     |   |             |
| 64 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 65 | POHC DRE                     |        | Carbon Tetrachloride |   |   |         |   |         |   |         |   |          |   |             |
| 66 | POHC Feedrate                |        | lb/hr                |   |   |         |   |         |   |         |   |          |   |             |
| 67 | POHC Emissions               |        | lb/hr                |   |   |         |   |         |   |         |   |          |   |             |
| 68 | POHC DRE                     |        | %                    |   |   | 99.9996 |   | 99.9994 |   | 99.9994 |   |          |   |             |
| 69 |                              |        |                      |   |   |         |   |         |   |         |   |          |   |             |
| 70 | POHC DRE                     |        | 1,2-Dichoroethane    |   |   |         |   |         |   |         |   |          |   |             |
| 71 | POHC Feedrate                |        | lb/hr                |   |   |         |   |         |   |         |   |          |   |             |

|    | B                  | C       | D     | E | F | G       | H | I       | J | K       | L | M       | N | O |
|----|--------------------|---------|-------|---|---|---------|---|---------|---|---------|---|---------|---|---|
| 72 | POHC Emissions     |         | lb/hr |   |   |         |   |         |   |         |   |         |   |   |
| 73 | POHC DRE           |         | %     |   |   | 99.9987 |   | 99.9981 |   | 99.9991 |   |         |   |   |
| 74 |                    |         |       |   |   |         |   |         |   |         |   |         |   |   |
| 75 | POHC DRE           | Toluene |       |   |   |         |   |         |   |         |   |         |   |   |
| 76 | POHC Feedrate      |         | lb/hr |   |   |         |   |         |   |         |   |         |   |   |
| 77 | POHC Emissions     |         | lb/hr |   |   |         |   |         |   |         |   |         |   |   |
| 78 | POHC DRE           |         | %     |   |   | 99.9998 |   | 99.9995 |   | 99.9997 |   |         |   |   |
| 79 |                    |         |       |   |   |         |   |         |   |         |   |         |   |   |
| 80 | Sampling Train     | PM, HCl | E1    |   |   |         |   |         |   |         |   |         |   |   |
| 81 | Stack Gas Flowrate |         | dscfm |   |   | 16641   |   | 16112   |   | 16191   |   | 16314.7 |   |   |
| 82 | O2                 |         | %     |   |   | 11.8    |   | 11.7    |   | 11.4    |   | 11.6    |   |   |
| 83 | Moisture           |         | %     |   |   | 34.84   |   | 32.17   |   | 32.45   |   | 33.2    |   |   |
| 84 | Temperature        |         | °F    |   |   | 194.9   |   | 225.8   |   | 226     |   | 215.6   |   |   |

|    | B                          | C          | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA |
|----|----------------------------|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| 1  | Feedstream 1               |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 2  |                            |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 3  |                            |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 4  | 810C10                     |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 5  |                            | Trial burn |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 6  | Feedstream Number          |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 7  | Feed Class                 |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 8  | Feed Class 2               |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 9  | Feedstream Description     |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 10 | Feed Rate                  | lb/hr      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 11 | Feed Rate                  | gpm        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 12 | Heating Value              | MM Btu/lb  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 13 | Ash                        | lb/hr      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 14 | Chlorine                   | lb/hr      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 15 | Chromium                   | lb/hr      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 16 | Lead                       | lb/hr      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 17 |                            |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 18 | Stack Gas Flowrate         | dscfm      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 19 | Oxygen                     | %          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 20 |                            |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 21 | Thermal Feedrate           | MMBtu/hr   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 22 | Estimated Firing Rate      | MMBtu/hr   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 23 |                            |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 24 | Feedrate MTEC Calculations |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 25 | Ash                        | mg/dscm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 26 | Chlorine                   | ug/dscm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 27 | Chromium                   | ug/dscm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 28 | Lead                       | ug/dscm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 29 |                            |            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 30 | SVM                        | ug/dscm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| 31 | LVM                        | ug/dscm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |

|    | B                         | AB       | A        | AD       | AE       | AF       | AG       | AH       | AI       | AJ       | AK       | AL       | AM       | AN       | AO       | AP       | AQ       | AR       | AS       | AT       | AU       |          |
|----|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1  | Feedstream 1              |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 2  |                           |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 3  |                           |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 4  | 810C10                    | Cond Avg | R1       | R2       | R3       | Cond Avg | R1       | R2       | R3       | Cond Avg | R1       | R2       | R3       | Cond Avg | R1       | R2       | R3       | Cond Avg | R1       | R2       | R3       |          |
| 5  | Feedstream Number         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 6  | Feed Class                |          | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       | F3       |
| 7  | Feed Class 2              | Non-HW   | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    | Spike    |
| 8  | Feedstream Description    |          | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   | Metals   |
| 9  | Feed Rate                 | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      | 200      |
| 10 | Feed Rate                 |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 11 | Heating Value             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 12 | Ash                       | 328      | 328      | 342      | 339      | 336.3    | 339      | 342      | 339      | 336.3    | 339      | 342      | 339      | 336.3    | 339      | 342      | 339      | 336.3    | 339      | 342      | 339      | 336.3    |
| 13 | Chlorine                  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 14 | Chromium                  | 5.01     | 5.01     | 4.86     | 5        | 5.0      | 5        | 4.86     | 5        | 5.0      | 5        | 4.86     | 5        | 5.0      | 5        | 4.86     | 5        | 5.0      | 5        | 4.86     | 5        | 5.0      |
| 15 | Lead                      | 0.28     | 0.28     | 0.24     | 0.24     | 0.3      | 0.24     | 0.24     | 0.24     | 0.3      | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     | 0.24     |
| 16 | Lead                      |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 17 | Stack Gas Flowrate        | 17700    | 17700    | 17400    | 17500    | 17533.3  | 17500    | 17400    | 17500    | 17533.3  | 17500    | 17400    | 17500    | 17533.3  | 17500    | 17400    | 17500    | 17533.3  | 17500    | 17400    | 17500    | 17533.3  |
| 18 | Oxygen                    | 13.8     | 13.8     | 13.5     | 14       | 13.8     | 14       | 13.5     | 14       | 13.8     | 14       | 13.5     | 14       | 13.8     | 14       | 13.5     | 14       | 13.8     | 14       | 13.5     | 14       | 13.8     |
| 19 | Oxygen                    |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 20 | Thermal Feedrate          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 21 | Estimated Firing Rate     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 22 | Estimated Firing Rate     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 23 | Feedrate MTEC Calculation |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 24 | Feedrate MTEC Calculation |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 25 | Ash                       | 9634.2   | 9634.2   | 9809.8   | 10358.8  | 9926.9   | 10358.8  | 9809.8   | 10358.8  | 9926.9   | 10358.8  | 9809.8   | 10358.8  | 9926.9   | 10358.8  | 9809.8   | 10358.8  | 9926.9   | 10358.8  | 9809.8   | 10358.8  | 9926.9   |
| 26 | Chlorine                  | 147156.1 | 147156.1 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 |
| 27 | Chromium                  | 8224.3   | 8224.3   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   |
| 28 | Lead                      |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 29 | Lead                      |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 30 | SVM                       | 8224.3   | 8224.3   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   | 7333.7   | 6884.1   | 7333.7   | 7477.1   |
| 31 | LVM                       | 147156.1 | 147156.1 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 | 152784.8 | 139402.9 | 152784.8 | 146296.2 |



|    | B                         | AV                | AV | AX                | AY | AZ                | BA                | BB                | BC                | BD | BE | BF | BG | BH                | BI                | BJ                | BK | BL | BM |
|----|---------------------------|-------------------|----|-------------------|----|-------------------|-------------------|-------------------|-------------------|----|----|----|----|-------------------|-------------------|-------------------|----|----|----|
| 1  | Feedstream 1              |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 2  |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 3  |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 4  | 810C10                    | R2                |    | R3                |    | Cond Avg          | R1                | R2                | R3                |    |    |    |    | Cond Avg          | R1                | R2                |    |    |    |
| 5  | Feedstream Number         | F5                |    | F5                |    | F5                | F6                | F6                | F6                |    |    |    |    | F6                | F7                | F7                |    |    |    |
| 6  | Feed Class                | Oil               |    | Oil               |    | Oil               | Oil               | Oil               | Oil               |    |    |    |    | Oil               | Oil               | Oil               |    |    |    |
| 7  | Feed Class 2              |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 8  | Feedstream Description    | C Nozzle Fuel Oil |    | C Nozzle Fuel Oil |    | C Nozzle Fuel Oil | D Nozzle Fuel Oil | D Nozzle Fuel Oil | D Nozzle Fuel Oil |    |    |    |    | D Nozzle Fuel Oil | F Burner Fuel Oil | F Burner Fuel Oil |    |    |    |
| 9  | Feed Rate                 | 804               |    | 810               |    | 810               | 804               | 810               | 810               |    |    |    |    | 810               | 810               | 810               |    |    |    |
| 10 | Feed Rate                 |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 11 | Heating Value             | 15.5              |    | 15.6              |    | 15.6              | 15.4              | 15.6              | 15.7              |    |    |    |    | 15.7              | 0.8               | 6.8               |    |    |    |
| 12 | Ash                       |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 13 | Chlorine                  |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 14 | Chromium                  |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 15 | Lead                      |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 16 | Stack Gas Flowrate        |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 17 | Oxygen                    |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 18 | Thermal Feedrate          |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 19 | Estimated Firing Rate     |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 20 |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 21 | Feedrate MTEC Calculation |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 22 | Ash                       |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 23 | Chlorine                  |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 24 | Chromium                  |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 25 | Lead                      |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 26 | SVM                       |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 27 | LVM                       |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 28 |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 29 |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 30 |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |
| 31 |                           |                   |    |                   |    |                   |                   |                   |                   |    |    |    |    |                   |                   |                   |    |    |    |

|    | B                         | BN                | BO                | BP                | BQ | BR | BS | BT       | BU | BV | BW | BX       | BY | BZ | CA | CB       | CC | CD | CE | CF       |
|----|---------------------------|-------------------|-------------------|-------------------|----|----|----|----------|----|----|----|----------|----|----|----|----------|----|----|----|----------|
| 1  | Feedstream 1              |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 2  |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 3  |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 4  | 810C10                    | R3                |                   | Cond Avg          | R1 | R2 | R3 | Cond Avg | R1 | R2 | R3 | Cond Avg | R1 | R2 | R3 | Cond Avg | R1 | R2 | R3 | Cond Avg |
| 5  |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 6  | Feedstream Number         | F7                | F7                |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 7  | Feed Class                | Oil               | Oil               |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 8  | Feed Class 2              |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 9  | Feedstream Description    | F Burner Fuel Oil | F Burner Fuel Oil | F Burner Fuel Oil | MF | MF | MF | MF       | MF | MF | MF | MF       | MF | MF | MF | MF       | MF | MF | MF | MF       |
| 10 | Feed Rate                 |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 11 | Feed Rate                 |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 12 | Heating Value             |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 13 | Ash                       |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 14 | Chlorine                  |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 15 | Chromium                  |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 16 | Lead                      |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 17 |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 18 | Stack Gas Flowrate        |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 19 | Oxygen                    |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 20 |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 21 | Thermal Feedrate          |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 22 | Estimated Firing Rate     |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 23 |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 24 | Feedrate MTEC Calculation |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 25 | Ash                       |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 26 | Chlorine                  |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 27 | Chromium                  |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 28 | Lead                      |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 29 |                           |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 30 | SVM                       |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |
| 31 | LVM                       |                   |                   |                   |    |    |    |          |    |    |    |          |    |    |    |          |    |    |    |          |

|    | B                      | C        | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y |
|----|------------------------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1  | Feedstreams 2          |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2  |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3  |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4  | 810C1                  |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5  | Feedstream Number      |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6  | Feed Class             |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7  | Feed Class 2           |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8  | Feedstream Description |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9  | Feedrate               | lb/hr    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 | Heating value          |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11 | Ash                    |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 | Antimony               | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 13 | Arsenic                | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 | Cadmium                | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 15 | Chromium               | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 16 | Chromium               | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 17 | Lead                   | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 18 | Stack Gas Flowrate     | dscfm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 19 | Oxygen                 | %        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 20 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 21 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 22 | Estimated Firing Rate  | MMBtu/hr |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 23 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 24 | Antimony               | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 25 | Arsenic                | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 26 | Cadmium                | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 27 | Chromium               | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 28 | Lead                   | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 29 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 30 | SVM                    | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 31 | LVM                    | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 32 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 33 | 810C2                  |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 34 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 35 | Feedstream Number      |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 36 | Feed Class             |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 37 | Feed Class 2           |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 38 | Feedstream Description |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 39 | Feedrate               | lb/hr    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 40 | Heating value          |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 41 | Ash                    |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 42 | Antimony               | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 43 | Arsenic                | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 44 | Cadmium                | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 45 | Chromium               | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 46 | Lead                   | ppmw     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 47 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 48 | Gas flowrate           | dscfm    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 49 | Oxygen                 | %        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 50 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 51 | Estimated Firing Rate  | MMBtu/hr |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 52 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 53 | Antimony               | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 54 | Arsenic                | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 55 | Cadmium                | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 56 | Chromium               | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 57 | Lead                   | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 58 |                        |          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 59 | SVM                    | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 60 | LVM                    | ug/dscm  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |



|    | B                      | AV      | AW      | AX    | AY       | AZ | BA      | BB          | BC | BD |
|----|------------------------|---------|---------|-------|----------|----|---------|-------------|----|----|
| 1  | <b>Feedstreams 2</b>   |         |         |       |          |    |         |             |    |    |
| 2  |                        |         |         |       |          |    |         |             |    |    |
| 3  |                        |         |         |       |          |    |         |             |    |    |
| 4  | <b>810C1</b>           | R1      | R2      | R3    | Cond Avg |    |         |             |    |    |
| 5  | Feedstream Number      | F6      | F6      | F6    | F6       |    |         |             |    |    |
| 6  | Feed Class             | Total   | Total   | Total | Total    |    |         |             |    |    |
| 7  | Feed Class 2           | Total   | Total   | Total | Total    |    |         |             |    |    |
| 8  | Feedstream Description | Total   | Total   | Total | Total    |    |         |             |    |    |
| 9  | Feedrate               |         |         |       |          |    |         |             |    |    |
| 10 | Heating value          |         |         |       |          |    |         |             |    |    |
| 11 | Ash                    |         |         |       |          |    |         |             |    |    |
| 12 | Antimony               |         |         |       |          |    |         |             |    |    |
| 13 | Arsenic                |         |         |       |          |    |         |             |    |    |
| 14 | Cadmium                |         |         |       |          |    |         |             |    |    |
| 15 | Chromium               |         |         |       |          |    |         |             |    |    |
| 16 | Lead                   |         |         |       |          |    |         |             |    |    |
| 17 | Stack Gas Flowrate     | 15434   | 15766   | 15631 | 15610    |    |         |             |    |    |
| 18 | Oxygen                 | 10.7    | 11.2    | 11.3  | 11.1     |    |         |             |    |    |
| 19 | Estimated Firing Rate  |         |         |       | 49.2     |    |         |             |    |    |
| 20 |                        |         |         |       |          |    |         |             |    |    |
| 21 |                        |         |         |       |          |    |         |             |    |    |
| 22 |                        |         |         |       |          |    |         |             |    |    |
| 23 |                        |         |         |       |          |    |         |             |    |    |
| 24 | Antimony               | 32155   | 33084   | 0     | 31317    | 0  | 32185   |             |    |    |
| 25 | Arsenic                | 1082    | 1119    | 1     | 1100     | 0  | 1100    |             |    |    |
| 26 | Cadmium                | 4257    | 4296    | 0     | 7079     | 0  | 5211    |             |    |    |
| 27 | Chromium               | 22884   | 22785   | 0     | 22934    | 0  | 22868   |             |    |    |
| 28 | Lead                   | 50721   | 52187   | 0     | 54036    | 0  | 52315   |             |    |    |
| 29 |                        |         |         |       |          |    |         |             |    |    |
| 30 | SVM                    | 54979   | 56483   | 0     | 61115    | 0  | 57526   |             |    |    |
| 31 | LVM                    | 23966   | 23904   | 0     | 24035    | 0  | 23968   | As, Cr only |    |    |
| 32 |                        |         |         |       |          |    |         |             |    |    |
| 33 | <b>810C2</b>           | R1      | R2      | R3    | Cond Avg |    |         |             |    |    |
| 34 |                        |         |         |       |          |    |         |             |    |    |
| 35 | Feedstream Number      | F6      | F6      | F6    | F6       |    |         |             |    |    |
| 36 | Feed Class             | Total   | Total   | Total | Total    |    |         |             |    |    |
| 37 | Feed Class 2           | Total   | Total   | Total | Total    |    |         |             |    |    |
| 38 | Feedstream Description | Total   | Total   | Total | Total    |    |         |             |    |    |
| 39 | Feedrate               |         |         |       |          |    |         |             |    |    |
| 40 | Heating value          |         |         |       |          |    |         |             |    |    |
| 41 | Ash                    |         |         |       |          |    |         |             |    |    |
| 42 | Antimony               |         |         |       |          |    |         |             |    |    |
| 43 | Arsenic                |         |         |       |          |    |         |             |    |    |
| 44 | Cadmium                |         |         |       |          |    |         |             |    |    |
| 45 | Chromium               |         |         |       |          |    |         |             |    |    |
| 46 | Lead                   |         |         |       |          |    |         |             |    |    |
| 47 | Gas flowrate           | 14367   | 14766   | 14662 | 14598    |    |         |             |    |    |
| 48 | Oxygen                 | 10.9    | 10.9    | 10.9  | 10.9     |    |         |             |    |    |
| 49 | Estimated Firing Rate  |         |         |       | 46.8     |    |         |             |    |    |
| 50 |                        |         |         |       |          |    |         |             |    |    |
| 51 |                        |         |         |       |          |    |         |             |    |    |
| 52 |                        |         |         |       |          |    |         |             |    |    |
| 53 | Antimony               | 1261031 | 1260572 | 0     | 1235663  | 0  | 1252422 |             |    |    |
| 54 | Arsenic                | 46642   | 42580   | 0     | 45703    | 0  | 44975   |             |    |    |
| 55 | Cadmium                | 51985   | 50580   | 0     | 51918    | 0  | 51494   |             |    |    |
| 56 | Chromium               | 998347  | 984389  | 0     | 991371   | 0  | 991369  |             |    |    |
| 57 | Lead                   | 624789  | 603043  | 0     | 612218   | 0  | 613350  |             |    |    |
| 58 |                        |         |         |       |          |    |         |             |    |    |
| 59 | SVM                    | 676774  | 653623  | 0     | 664137   | 0  | 664845  |             |    |    |
| 60 | LVM                    | 1044989 | 1026969 | 0     | 1037075  | 0  | 1036344 | As, Cr only |    |    |

|    | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y |
|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 62 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 63 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 64 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 65 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 66 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 67 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 68 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 69 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 70 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 71 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 72 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 73 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 74 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 75 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 76 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 77 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 78 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 79 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

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|    | B                          | Z     | AA       | AB       | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
|----|----------------------------|-------|----------|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 61 |                            |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 62 | <b>810C3</b>               | R3    |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 63 |                            |       |          | Cond Avg |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 64 | Feedstream Description     | Total |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 65 | Feed Class 2               | Total |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 66 | Feed Rate                  | Total | 13083    |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 67 | Heating Value              |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 68 | Chlorine                   |       | 1659     |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 69 | Ash                        |       | 782      |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 70 |                            |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 71 | Stack Gas Flowrate         |       | 16191    |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 72 | Oxygen                     |       | 11.4     |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 73 |                            |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 74 | Thermal Feedrate           |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 75 | Estimated Firing Rate      |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 76 |                            |       |          |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 77 | Feedrate MTEC Calculations |       | 39952842 |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 78 | Chlorine                   |       | 43449055 |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 79 | Ash                        |       | 19583    |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

|    | B                          | AV | AW | AX | AY | AZ | BA | BB | BC | BD |
|----|----------------------------|----|----|----|----|----|----|----|----|----|
| 61 |                            |    |    |    |    |    |    |    |    |    |
| 62 | <b>810C3</b>               |    |    |    |    |    |    |    |    |    |
| 63 |                            |    |    |    |    |    |    |    |    |    |
| 64 | Feedstream Description     |    |    |    |    |    |    |    |    |    |
| 65 | Feed Class 2               |    |    |    |    |    |    |    |    |    |
| 66 | Feed Rate                  |    |    |    |    |    |    |    |    |    |
| 67 | Heating Value              |    |    |    |    |    |    |    |    |    |
| 68 | Chlorine                   |    |    |    |    |    |    |    |    |    |
| 69 | Ash                        |    |    |    |    |    |    |    |    |    |
| 70 |                            |    |    |    |    |    |    |    |    |    |
| 71 | Stack Gas Flowrate         |    |    |    |    |    |    |    |    |    |
| 72 | Oxygen                     |    |    |    |    |    |    |    |    |    |
| 73 |                            |    |    |    |    |    |    |    |    |    |
| 74 | Thermal Feedrate           |    |    |    |    |    |    |    |    |    |
| 75 | Estimated Firing Rate      |    |    |    |    |    |    |    |    |    |
| 76 |                            |    |    |    |    |    |    |    |    |    |
| 77 | Feedrate MTEC Calculations |    |    |    |    |    |    |    |    |    |
| 78 | Chlorine                   |    |    |    |    |    |    |    |    |    |
| 79 | Ash                        |    |    |    |    |    |    |    |    |    |



|    | B   | C              | D | E     | F     | G     |
|----|---|----------------|---|-------|-------|-------|
| 1  | <b>Process Information</b>                  |                |   |       |       |       |
| 2  |   |                |   |       |       |       |
| 3  | <b>810C10</b>                               |                |   | Run 1 | Run 2 | Run 3 |
| 4  |   |                |   |       |       |       |
| 5  | Comb Temperature                            | F              |   | 1707  | 1701  | 1698  |
| 6  | Quench Outlet Temperature                   | F              |   | 169   | 169   | 169   |
| 7  | Quench Recycle Temperature                  | F              |   | 168   | 168   | 168   |
| 8  | Rod Scrubber Outlet Temperature             | F              |   | 129   | 129   | 129   |
| 9  | Rod Scrubber Recycle Temperature (pre-Hex)  | F              |   | 157   | 157   | 157   |
| 10 | Rod Scrubber Recycle Temperature (post-Hex) | F              |   | 131   | 131   | 131   |
| 11 | WESP 1 Outlet Temperature                   | F              |   | 135   | 135   | 135   |
| 12 | WESP 1 Recycle Temperature                  | F              |   | 134   | 134   | 133   |
| 13 | WESP 2 Outlet Temperature                   | F              |   | 131   | 131   | 131   |
| 14 | WESP 2 Recycle Temperature                  | F              |   | 130   | 130   | 130   |
| 15 | Comb Pressure                               | in. W.C        |   | -1    | -1.1  | -1.1  |
| 16 | Quench Discharge Pressure                   | in. W.C        |   | -3    | -3.3  | -3.4  |
| 17 | Rod Scrubber Pressure                       | in. W.C        |   | -5.8  | -6.2  | -6.2  |
| 18 | Rod Scrubber Discharge Pressure             | in. W.C        |   | -5.8  | -6.1  | -6.4  |
| 19 | WESP 1 Pressure                             | in. W.C        |   | -9.9  | -10.6 | -10.8 |
| 20 | WESP 1 Discharge Pressure                   | in. W.C        |   | -10.6 | -11.5 | -11.6 |
| 21 | WESP 2 Pressure                             | in. W.C        |   | -14.6 | -15.6 | -16   |
| 22 | WESP 2 Discharge Pressure                   | in. W.C        |   | -15   | -16.1 | -16.2 |
| 23 | Quench Recycle pH                           | pH             |   | 2.6   | 2.7   | 2.2   |
| 24 | Rod Scrubber Recycle pH                     | pH             |   | 3.3   | 5.4   | 6.2   |
| 25 | WESP 1 Recycle pH                           | pH             |   | 6.5   | 6.4   | 6.5   |
| 26 | WESP 2 Recycle pH                           | pH             |   | 6.3   | 6.3   | 6.3   |
| 27 | Quench Recycle Flow                         | gpm            |   | 486   | 489   | 461   |
| 28 | Quench Blowdown Flow                        | gpm            |   | 80    | 84    | 81    |
| 29 | Rod Scrubber Recycle Flow                   | gpm            |   | 2005  | 2024  | 2049  |
| 30 | Rod Scrubber Blowdown Flow                  | gpm            |   | 93    | 96    | 98    |
| 31 | WESP 1 Recycle Flow                         | gpm            |   | 277   | 279   | 279   |
| 32 | WESP 1 Blowdown Flow                        | gpm            |   | 12    | 15    | 15    |
| 33 | WESP 2 Recycle Flow                         | gpm            |   | 296   | 304   | 308   |
| 34 | WESP 1 Power                                | Watts          |   | 1672  | 1655  | 1690  |
| 35 | WESP 2 Power                                | Watts          |   | 7732  | 7645  | 7618  |
| 36 | WESP 1 Power -to-Gas Ratio                  | Watts/1000acfm |   | 618   | 67    | 68    |
| 37 | WESP 2 Power -to- Gas Ratio                 | Watts/1000acfm |   | 316   | 311   | 308   |

|    | C                            | D      | E    | F    | G    |
|----|------------------------------|--------|------|------|------|
| 1  | <b>Process Information 2</b> |        |      |      |      |
| 2  |                              |        |      |      |      |
| 3  | <b>810C1</b>                 |        | R1   | R2   | R3   |
| 4  |                              |        |      |      |      |
| 5  | Combustion Temperature       | F      | 2110 | 2107 | 2115 |
| 6  | WS Pressure Drop             | in H2O | 53.7 | 53.4 | 53.5 |
| 7  | WS pH                        |        | 1.03 | 0.89 | 0.88 |
| 8  | WS pH                        |        | 7.01 | 6.97 | 6.77 |
| 9  |                              |        |      |      |      |
| 10 | <b>810C2</b>                 |        |      |      |      |
| 11 |                              |        |      |      |      |
| 12 | Combustion Temperature       | F      |      | 2106 | 2103 |
| 13 | WS Pressure Drop             | in H2O | 53.2 | 52.9 | 53.7 |
| 14 | WS pH                        |        | 0.5  | 0.96 | 0.62 |
| 15 | WS pH                        |        | 6.15 | 6.23 | 6.16 |

| A  | B                              | C                             | D    | E      | F      | G      | H      | I    | J       | K       | L       | M       | N    | O       | P       | Q       | R       |
|----|--------------------------------|-------------------------------|------|--------|--------|--------|--------|------|---------|---------|---------|---------|------|---------|---------|---------|---------|
| 1  | PCDD/PCDF                      |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 2  | N                              |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 3  | Facility Name and ID:          | Eastman Chemical Company      |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 4  | Condition ID:                  | 810C10                        |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 5  | Condition/Test Date:           | Worst-case cond, max feedrate |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 6  |                                |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 7  |                                | I-TEF                         |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 8  |                                | Wght Fact                     |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 9  |                                |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 10 | Detected in sample volume (ng) |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 11 | 2,3,7,8-TCDD                   | 1                             | nd   | 0.0015 | 0.0015 | 0.0007 | 0.0007 | nd   | 0.00138 | 0.001   | 0.001   | 0.001   | nd   | 0.002   | 0.002   | 0.001   | 0.001   |
| 12 | 1,2,3,7,8-PCDD                 | 0.5                           |      | 0.0064 | 0.0032 | 0.0064 | 0.0032 | nd   | 0.00363 | 0.002   | 0.002   | 0.001   | nd   | 0.001   | 0.001   | 0.000   | 0.000   |
| 13 | 1,2,3,4,7,8-HxCDD              | 0.1                           | nd   | 0.0053 | 0.0005 | 0.0027 | 0.0003 | nd   | 0.0053  | 0.001   | 0.003   | 0.000   | nd   | 0.003   | 0.000   | 0.002   | 0.000   |
| 14 | 1,2,3,6,7,8-HxCDD              | 0.1                           | nd   | 0.0058 | 0.0006 | 0.0029 | 0.0003 | nd   | 0.00583 | 0.001   | 0.003   | 0.000   | nd   | 0.004   | 0.000   | 0.002   | 0.000   |
| 15 | 1,2,3,7,8,9-HxCDD              | 0.1                           | nd   | 0.0053 | 0.0005 | 0.0026 | 0.0003 | nd   | 0.00529 | 0.001   | 0.003   | 0.000   | nd   | 0.003   | 0.000   | 0.002   | 0.000   |
| 16 | 1,2,3,4,6,7,8-HpCDD            | 0.01                          |      | 0.0354 | 0.0004 | 0.0354 | 0.0004 |      | 0.0301  | 0.000   | 0.030   | 0.000   |      | 0.024   | 0.000   | 0.024   | 0.000   |
| 17 | OCDD                           | 0.001                         |      | 0.1110 | 0.0001 | 0.1110 | 0.0001 |      | 0.11    | 0.000   | 0.110   | 0.000   |      | 0.076   | 0.000   | 0.076   | 0.000   |
| 18 | 2,3,7,8-TCDF                   | 0.1                           |      | 0.0095 | 0.0009 | 0.0095 | 0.0009 |      | 0.00606 | 0.001   | 0.006   | 0.001   |      | 0.008   | 0.001   | 0.008   | 0.001   |
| 19 | 1,2,3,7,8-PCDF                 | 0.05                          |      | 0.0181 | 0.0009 | 0.0181 | 0.0009 |      | 0.0103  | 0.001   | 0.010   | 0.001   |      | 0.012   | 0.001   | 0.012   | 0.001   |
| 20 | 2,3,4,7,8-PCDF                 | 0.5                           |      | 0.0209 | 0.0105 | 0.0209 | 0.0105 |      | 0.0155  | 0.008   | 0.016   | 0.008   |      | 0.015   | 0.008   | 0.015   | 0.008   |
| 21 | 1,2,3,4,7,8-HxCDF              | 0.1                           |      | 0.0199 | 0.0020 | 0.0199 | 0.0020 |      | 0.0142  | 0.001   | 0.014   | 0.001   |      | 0.015   | 0.002   | 0.015   | 0.002   |
| 22 | 1,2,3,6,7,8-HxCDF              | 0.1                           |      | 0.0200 | 0.0020 | 0.0200 | 0.0020 |      | 0.012   | 0.001   | 0.012   | 0.001   |      | 0.013   | 0.001   | 0.013   | 0.001   |
| 23 | 2,3,4,6,7,8-HxCDF              | 0.1                           |      | 0.0118 | 0.0012 | 0.0118 | 0.0012 |      | 0.00935 | 0.001   | 0.009   | 0.001   |      | 0.009   | 0.001   | 0.009   | 0.001   |
| 24 | 1,2,3,7,8,9-HxCDF              | 0.1                           |      | 0.0073 | 0.0007 | 0.0073 | 0.0007 |      | 0.00524 | 0.001   | 0.005   | 0.001   |      | 0.005   | 0.000   | 0.005   | 0.000   |
| 25 | 1,2,3,4,6,7,8-HpCDF            | 0.01                          |      | 0.0491 | 0.0005 | 0.0491 | 0.0005 |      | 0.0317  | 0.000   | 0.032   | 0.000   |      | 0.032   | 0.000   | 0.032   | 0.000   |
| 26 | 1,2,3,4,7,8,9-HpCDF            | 0.01                          |      | 0.0080 | 0.0001 | 0.0080 | 0.0001 |      | 0.00643 | 0.000   | 0.006   | 0.000   |      | 0.006   | 0.000   | 0.006   | 0.000   |
| 27 | OCDF                           | 0.001                         |      | 0.0233 | 0.0000 | 0.0233 | 0.0000 |      | 0.0222  | 0.000   | 0.022   | 0.000   |      | 0.018   | 0.000   | 0.018   | 0.000   |
| 28 | Total TCDD                     | 0                             |      | 0.0302 | 0.0000 | 0.0302 | 0.0000 |      | 0       | 0.000   | 0.034   | 0.000   |      | 0.024   | 0.000   | 0.024   | 0.000   |
| 29 | Total PCDD                     | 0                             |      | 0.0549 | 0.0000 | 0.0549 | 0.0000 |      | 0.0202  | 0.000   | 0.020   | 0.000   |      | 0.027   | 0.000   | 0.027   | 0.000   |
| 30 | Total HxCDD                    | 0                             |      | 0.0680 | 0.0000 | 0.0680 | 0.0000 |      | 0.056   | 0.000   | 0.056   | 0.000   |      | 0.049   | 0.000   | 0.049   | 0.000   |
| 31 | Total HpCDD                    | 0                             |      | 0.0714 | 0.0000 | 0.0714 | 0.0000 |      | 0.0606  | 0.000   | 0.061   | 0.000   |      | 0.050   | 0.000   | 0.050   | 0.000   |
| 32 | Total TCDF                     | 0                             |      | 0.2760 | 0.0000 | 0.2760 | 0.0000 |      | 0.188   | 0.000   | 0.188   | 0.000   |      | 0.201   | 0.000   | 0.201   | 0.000   |
| 33 | Total PCDF                     | 0                             |      | 0.2300 | 0.0000 | 0.2300 | 0.0000 |      | 0.158   | 0.000   | 0.158   | 0.000   |      | 0.161   | 0.000   | 0.161   | 0.000   |
| 34 | Total HxCDF                    | 0                             |      | 0.1190 | 0.0000 | 0.1190 | 0.0000 |      | 0.0852  | 0.000   | 0.085   | 0.000   |      | 0.085   | 0.000   | 0.085   | 0.000   |
| 35 | Total HpCDF                    | 0                             |      | 0.0759 | 0.0000 | 0.0759 | 0.0000 |      | 0.0556  | 0.000   | 0.056   | 0.000   |      | 0.054   | 0.000   | 0.054   | 0.000   |
| 36 |                                |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 37 | Gas sample volume (dsfc)       |                               |      | 122.53 | 122.53 | 122.53 | 122.53 |      | 116.367 | 116.367 | 116.367 | 116.367 |      | 123.350 | 123.350 | 123.350 | 123.350 |
| 38 | O2 (%)                         |                               |      | 13.10  | 13.10  | 13.10  | 13.10  |      | 13.100  | 13.100  | 13.100  | 13.100  |      | 13.100  | 13.100  | 13.100  | 13.100  |
| 39 |                                |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 40 | PCDD/PCDF (ng in sample)       |                               |      | 0.03   | 0.03   | 1.1    | 0.02   |      | 0.019   | 0.019   | 0.790   | 0.016   |      | 0.744   | 0.744   | 0.744   | 0.016   |
| 41 | PCDD/PCDF (ng/dscm @ 7% O2)    |                               | 12.1 | 0.013  | 0.013  | 0.54   | 0.012  | 26.0 | 0.010   | 0.010   | 0.425   | 0.009   | 20.6 | 0.009   | 0.009   | 0.378   | 0.008   |
| 42 |                                |                               |      |        |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 43 | TEQ Cond Avg                   |                               |      | 0.01   |        |        |        |      |         |         |         |         |      |         |         |         |         |
| 44 | Total Cond Avg                 |                               |      | 0.45   |        |        |        |      |         |         |         |         |      |         |         |         |         |