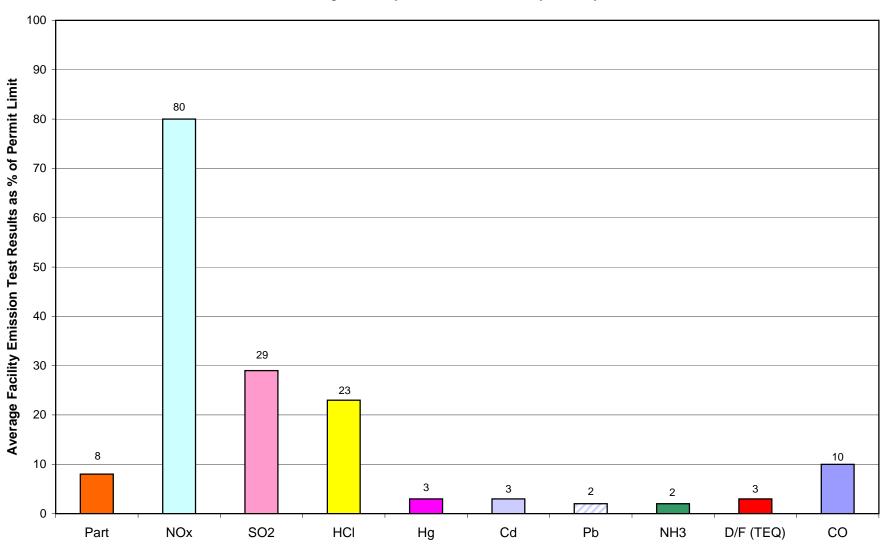
| Particulates (gr/dscf @ Particulates (mg/dscm @ Particulates (mg/dscm @ Sulfur Dioxide (ppmdv & Sulfur Dioxide (lb/hr)  Nitrogen Oxides (ppm Nitrogen Oxides (lb/hr & Polychlorinated Diben (ng/dscm @ 7% C (lb/hr) - NY TEQs & Hydrogen Chloride (pp Hydrogen Chloride (lb HCI Removal Efficie & Ammonia (lb/hr)  Cadmium (mg/dscm)  Cadmium (mg/dscm)  Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 3   | mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  prop-Dioxins and prop-Diox | Furan     | Unit 1  0.000852  1.95  18.5  7.56  165  48.3  3.6  0.60 | 0.000980 2.24 0.57 0.22 161 46.6 5.7 1.04       | 0.000958 2.19 16.4 6.35 160 44.9    | Permit Limit <sup>1</sup> 0.010 27  30 16.2  180 58 | % of Limit <sup>2</sup> Fac Ave 9.3 7.9 39.4 29.1 90.0 80.3 | % of Limit <sup>3</sup> Max Unit 9.8 8.3 61.7 46.7 | P/F? P P P    |
|--|---|-----------|--|---|-------------------------------------|---|---|--|---------------|
| Particulates (gr/dscf © Particulates (mg/dscm © Particulates (mg/dscm © Particulates (mg/dscm © Particulates (mg/dscm © Sulfur Dioxide (lp/my)  Nitrogen Oxides (lp/my)  Carbon Monoxide (lp/my)  Carbon Monoxide (lb/my)  Polychlorinated Diben (ng/dscm @ 7% C (µg/dscm @ 7% C (µg/dscm @ 7% C (µg/dscm @ 7% C (µg/dscm @ 10 C)  Hydrogen Chloride (pp-mydrogen Chloride (lb/my)  HCI Removal Efficient  Ammonia (lp/mr)  Cadmium (mg/dscm)  Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 10 C)   | mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  prop-Dioxins and prop-Diox | Furan     | Unit 1  0.000852  1.95  18.5  7.56  165  48.3  3.6  0.60 | 0.000980<br>2.24<br>0.57<br>0.22<br>161<br>46.6 | 0.000958 2.19 16.4 6.35 160 44.9    | 0.010<br>27<br>30<br>16.2                           | Limit <sup>2</sup> Fac Ave 9.3 7.9 39.4 29.1                | Limit <sup>3</sup> Max Unit 9.8 8.3 61.7 46.7      | P<br>P<br>P   |
| Particulates (mg/dscm Sulfur Dioxide (ppmdv Sulfur Dioxide (lb/hr) Nitrogen Oxides (ppm Nitrogen Oxides (lb/hr Carbon Monoxide (pp) Carbon Monoxide (lb/l) Polychlorinated Diben (ng/dscm @ 7% C (lb/hr) - NY TEQs Hydrogen Chloride (pp Hydrogen Chloride (lb HCI Removal Efficie Ammonia (lb/hr) Cadmium (mg/dscm) Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr) Mercury (µg/dscm @ 3  | mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  prop-Dioxins and prop-Diox | Furan     | 1.95<br>18.5<br>7.56<br>165<br>48.3<br>3.6<br>0.60       | 2.24<br>0.57<br>0.22<br>161<br>46.6<br>5.7      | 2.19<br>16.4<br>6.35<br>160<br>44.9 | 30<br>16.2<br>180                                   | 7.9<br>39.4<br>29.1<br>90.0                                 | 9.8<br>8.3<br>61.7<br>46.7                         | P<br>P<br>P   |
| Particulates (mg/dscm Sulfur Dioxide (ppmdv Sulfur Dioxide (lb/hr) Nitrogen Oxides (ppm Nitrogen Oxides (lb/hr Carbon Monoxide (pp) Carbon Monoxide (lb/l) Polychlorinated Diben (ng/dscm @ 7% C (lb/hr) - NY TEQs Hydrogen Chloride (pp Hydrogen Chloride (lb HCI Removal Efficie Ammonia (lb/hr) Cadmium (mg/dscm) Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr) Mercury (µg/dscm @ 3  | mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  prop-Dioxins and prop-Diox | Furan     | 18.5<br>7.56<br>165<br>48.3<br>3.6<br>0.60               | 0.57<br>0.22<br>161<br>46.6<br>5.7              | 16.4<br>6.35<br>160<br>44.9         | 30<br>16.2<br>180                                   | 39.4<br>29.1<br>90.0  | 61.7<br>46.7                                       | P<br>P        |
| Sulfur Dioxide (lb/hr)  Nitrogen Oxides (ppm Nitrogen Oxides (lb/hr)  Carbon Monoxide (pp) Carbon Monoxide (lb/hr)  Polychlorinated Diben  | dv @ 7% O <sub>2</sub> )  mdv @ 7% O <sub>2</sub> )  mr)  zo-p-Dioxins and  | Furan     | 7.56<br>165<br>48.3<br>3.6<br>0.60                       | 0.22<br>161<br>46.6<br>5.7                      | 6.35<br>160<br>44.9                 | 16.2  | 29.1<br>90.0  | 46.7   | Р             |
| Nitrogen Oxides (ppm Nitrogen Oxides (lb/hr Carbon Monoxide (ppc Carbon Monoxide (lb/hr Calported Diben (ng/dscm @ 7% C (lb/hr) - NY TEQs Hydrogen Chloride (pphydrogen Chloride (lbhydrogen C | mdv @ 7% O <sub>2</sub> )  proposition of the control of the c                       | Furan     | 165<br>48.3<br>3.6<br>0.60                               | 161<br>46.6<br>5.7                              | 160<br>44.9                         | 180   | 90.0  |  |               |
| Nitrogen Oxides (lb/hr Carbon Monoxide (pp) Carbon Monoxide (lb/l) Carbon Monoxide (lb/l) Carbon Monoxide (lb/l) Carbon Monoxide (lb/l) Colychlorinated Diben (ng/dscm @ 7% C (µg/dscm @ 7% C (lb/hr) - NY TEQs Clb/hr) - NY TEQS Cl | mdv @ 7% O <sub>2</sub> )  proposition of the control of the c                       | Furan     | 3.6<br>0.60  | 46.6<br>5.7                                     | 44.9                                |   |   | 91.7   | P             |
| Nitrogen Oxides (lb/hr Carbon Monoxide (pp) Carbon Monoxide (lb/l) Carbon Monoxide (lb/l) Carbon Monoxide (lb/l) Carbon Monoxide (lb/l) Colychlorinated Diben (ng/dscm @ 7% C (µg/dscm @ 7% C (lb/hr) - NY TEQs Clb/hr) - NY TEQS Cl | mdv @ 7% O <sub>2</sub> )  proposition of the control of the c                       | Furan     | 3.6<br>0.60  | 46.6<br>5.7                                     | 44.9                                |   |   | 91.1   |               |
| Carbon Monoxide (lb/l Polychlorinated Diben   (ng/dscm @ 7% C   (µg/dscm @ 7% C   (lb/hr) - NY TEQs Hydrogen Chloride (pp Hydrogen Chloride (lb HCI Removal Efficie Ammonia (ppmdv @ 7 Ammonia (lb/hr) Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr)  Mercury (µg/dscm @ 7   | zo-p-Dioxins and 2) - Total 2) - NY TEQs  omdv @ 7% O <sub>2</sub> )  | Furan     | 0.60   | _   |                                     |   | 50.5  | 83.3   | P             |
| Carbon Monoxide (lb/l Polychlorinated Diben   (ng/dscm @ 7% C   (µg/dscm @ 7% C   (lb/hr) - NY TEQs Hydrogen Chloride (pp Hydrogen Chloride (lb HCI Removal Efficie Ammonia (ppmdv @ 7 Ammonia (lb/hr) Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr)  Mercury (µg/dscm @ 7   | zo-p-Dioxins and 2) - Total 2) - NY TEQs  omdv @ 7% O <sub>2</sub> )  | Furan     | 0.60   | _   | 4.3                                 | 45  | 10.1  | 12.7   | Р             |
| (ng/dscm @ 7% C (µg/dscm @ 7% C (lb/hr) - NY TEQs  Hydrogen Chloride (lb HCl Removal Efficie  Ammonia (ppmdv @ 7  Ammonia (lb/hr)  Cadmium (mg/dscm)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 7   | 2) - Total<br>2) - NY TEQs<br>2) omdv @ 7% O <sub>2</sub> )   | Furan     | nc.  | 1.0-7   | 0.77                                | 8.04  | 10.0  | 12.7   | <u>.</u><br>Р |
| (ng/dscm @ 7% C (µg/dscm @ 7% C (lb/hr) - NY TEQs  Hydrogen Chloride (lb HCl Removal Efficie  Ammonia (ppmdv @ 7  Ammonia (lb/hr)  Cadmium (mg/dscm)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 7   | 2) - Total<br>2) - NY TEQs<br>2) omdv @ 7% O <sub>2</sub> )   | Furar     |  |   |                                     |   |   |  |               |
| (µg/dscm @ 7% C (lb/hr) - NY TEQs  Hydrogen Chloride (pp Hydrogen Chloride (lb HCl Removal Efficie  Ammonia (ppmdv @ 7  Ammonia (lb/hr)  Cadmium (mg/dscm)  Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 7  | omdv @ 7% O <sub>2</sub> )  |           | 1.65   | 1.86  | 1.26                                | 30  | 5.3   | 6.2  | Р             |
| (lb/hr) - NY TEQs  Hydrogen Chloride (pp Hydrogen Chloride (lb HCl Removal Efficient Ammonia (ppmdv @ 7 Ammonia (lb/hr)  Cadmium (mg/dscm) Cadmium (lb/hr)  Lead (mg/dscm) Lead (lb/hr)  Mercury (µg/dscm @ 7  | omdv @ 7% O <sub>2</sub> )  |           | 0.0000329  | 0.0000275                                       | 0.0000121                           | 0.0004  | 6.0   | 8.2  | P             |
| Hydrogen Chloride (lb HCl Removal Efficie Ammonia (ppmdv @ 7 Ammonia (lb/hr) Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr)  Wercury (µg/dscm @ 7   |   |           | 4.79E-09   | 3.70E-09  | 1.85E-09                            | 1.29E-07  | 2.7   | 3.7  | <u>.</u><br>Р |
| Hydrogen Chloride (lb HCl Removal Efficie Ammonia (ppmdv @ 7 Ammonia (lb/hr) Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr)  Wercury (µg/dscm @ 7   |   |           | 4.88   | 4.89  | 5.92                                | 25  | 20.9  | 23.7   | Р             |
| HCI Removal Efficie  Ammonia (ppmdv @ 7  Ammonia (lb/hr)  Cadmium (mg/dscm)  Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 7   |   |           | 1.10   | 1.12  | 1.38                                | 5.24  | 22.9  | 26.3   | P             |
| Ammonia (ppmdv @ 7 Ammonia (lb/hr)  Cadmium (mg/dscm)  Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ 7   |   |           | 99.2   | 99.0  | 99.0                                | >=95  | 104   | 104  | <u>.</u><br>Р |
| Ammonia (lb/hr)  Cadmium (mg/dscm)  Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @  |   |           | 0.00   | 1.00  | 0.05                                | F0  | 4.7   | 2.2  |               |
| Cadmium (mg/dscm) Cadmium (lb/hr) Lead (mg/dscm) Lead (lb/hr)  Mercury (µg/dscm @  | (% U <sub>2</sub> )   |           | 0.86<br>0.090  | 1.09<br>0.12                                    | 0.65<br>0.07                        | 50<br>4.88  | 1.7<br>1.9  | 2.2  | P<br>P        |
| Cadmium (lb/hr)  Lead (mg/dscm)  Lead (lb/hr)  Mercury (µg/dscm @ **   |   |           |  |   | 0.01                                | 7.00  |   |  |               |
| Lead (mg/dscm) Lead (lb/hr)  Mercury (µg/dscm @  |   |           | 0.00044  | 0.00043   | 0.00041                             | 0.040   | 1.1   | 1.1  | P             |
| Lead (lb/hr)  Mercury (µg/dscm @   |   |           | 6.47E-05   | 6.41E-05  | 6.46E-05                            | 1.90E-03  | 3.4   | 3.4  | Р             |
| Mercury (µg/dscm @   |   |           | 0.00637  | 0.00377   | 0.00410                             | 0.44  | 1.1   | 1.4  | Р             |
| ,  |   |           | 9.43E-04   | 5.57E-04  | 6.45E-04                            | 3.81E-02  | 1.9   | 2.5  | Р             |
|  | 7% O <sub>2</sub> )   |           | 1.90   | 4.63  | 1.65                                | 28  | 9.7   | 16.5   | Р             |
| Mercury (lb/hr)  |   |           | 0.000280   | 0.000682  | 0.000257                            | 0.012   | 3.4   | 5.7  | Р             |
| Mercury Removal E  | fficiency (%)   |           | 98.0   | 96.9  | 97.8                                | >=85  | 115   | 115  | Р             |
| PM <sub>10</sub> (gr/dscf @ 7% (   | O <sub>2</sub> )  | N         | 0.000852   | 0.000980  | 0.000958                            | 0.010   | 9.3   | 9.8  | Р             |
| PM <sub>10</sub> (lb/hr)   | - 21  | N         | 0.26   | 0.33  | 0.32                                | 3.16  | 9.6   | 10.4   | Р             |
|  |   |           |  |   |                                     |   |   |  |               |
| >>> Testing performe   | d May 8-11. 2006  |           |  |   |                                     |   |   |  |               |
| Permit limits obtained f   |   |           | P, New York Sta  | te Department of                                | Environmental                       |   |   |  |               |
| Conservation Title V P   |   |           |  |   |                                     | of 3/24/2003  |   |  |               |
| Calculated as the aver   | age of the three uni  | t test ru | uns (each unit res                                       | sult is an average                              | of three replicate t                | est runs) over th                                   | ie  |  |               |
| Permit limit expressed   |   |           | -  |   |                                     |   |   |  |               |
| Calculated as the max  |   |           |  |   |                                     | test runs) over                                     | the   |  |               |
| Permit limit expressed   | as a percent; for lin   | nits invo | oiving >=, the mir                                       | nimum value was                                 | used                                |   |   |  |               |
| Units:   |   | -4        | and aubit for  |   |                                     |   |   |  |               |
|  | = grains per dry<br>= parts per million   |           |  |   |                                     |   |   |  |               |
| 1  | pounds per hou  |           | VOIGITIE   |   |                                     |   |   |  |               |
|  | m = nanograms (   |           | th's of a gram)  | per dry standa                                  | rd cubic meter                      |   |   |  |               |
|  |   |           |  |   | ard cubic meter                     |   |   |  |               |
| N1 =   | = Iorograms   | 10        |  | L DM 40   | ervatively assum                    |   | , , <del>, -</del>  | N. (1. 1. 1.                                       |               |

## **2006 Average Facility Air Emissions Test Results**

Onondaga County Resource Recovery Facility



## Comparison: Long-Term Facility Average vs. 2006 Test Results

Onondaga County Resource Recovery Facility

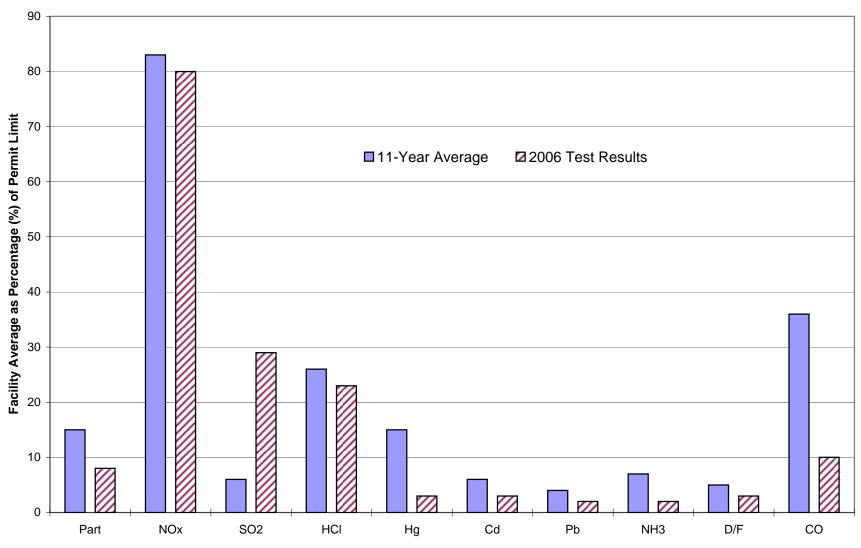


Figure 27. Mercury Emissions & Control System Effectiveness

Onondaga County Resource Recovery Facility

