**APPENDIX D. MUNICIPAL WASTE COMBUSTORS IN OZONE TRANSPORT REGION**

**(Data as of 09/01/2016)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **State** | **Municipal Waste Combustor (MWC) Facility** | **Unit # - Capacity (tons/day)** | **NOx Standard**  **(ppmvd @7% O2)** | **Ammonia Slip Limit** **(ppmvd @7% O2)** | **Averaging Time** | **Control Technology** | **Type of System** | **Date of Installation/Startup** |
| **CT** | Covanta Southeastern CT (Preston) | 1, 2 - 344.5 each | 150 for all**a** | 20**a** | 24 hr daily av. | SNCR | MB - WW | 12/4/1991 |
| Wheelabrator Bridgeport | 1, 2, 3 - 750 each | 150 for all**a** | 20**a** | 24 hr daily av. | SNCR | MB - WW | 1/13/1988 |
| Covanta Bristol | 1, 2 - 358 each | 150 for all**a** | 20**a** | 24 hr daily av. | SNCR | MB - WW | 10/23/1987 |
| Wheelabrator Lisbon | 1, 2 - 562.4 each | 150 for all**a** | 20**a** | 24 hr daily av. | SNCR | MB - WW | 10/19/1995 |
| MIRA (Hartford) | 1, 2, 3 - 675 each | 146 for all | 20**a** | 24 hr daily av. | SNCR | Processed MWC | 9/4/1987 |
| **MA** | SEMASS | 1, 2 - 1000 each | 250 for all | 10 - default | 24 hr |  | RDF Stoker | 1/1/1988 |
| SEMASS | 3 - 1000 | 180 | 24 hr | SNCR | RDF stoker |
| Wheelabrator N. Andover | 1, 2 - 750 each | 205 for all | 24 hr | SNCR | MB - WW | 3/1/1985, 4/1/1985 |
| Wheelabrator Saugus | 1, 2 - 750 each | 205 for all | 24 hr | SNCR | MB - WW | 6/30/1975 |
| Wheelabrator Millbury | 1, 2 - 750 each | 205 for all | 24 hr | SNCR | MB - WW | 9/17/1987 |
| Covanta Haverhill | 1, 2 - 825 each | 205 for all | 24 hr | SNCR | MB - WW | 4/1/1989 |
| Covanta Springfield | 1,2,3 - 136 each | 167 for all | 24 hr | FGR | MB - REF | 5/1/1988 |
| Covanta Pittsfield | 1,2,3 - 120 each | 192 for all | 24 hr | FGR | MB - REF | 6/1/1981 |
| **MD** | Wheelabrator | 3 - 750 | 205 |  | 24-hr | SNCR | MB - grate | 1985 |
| Mont. Covanta | 3 - 600 | 205 |  | 24-hr | SNCR | MB - grate | 1995 |
| **ME** | Eco Maine - Portland |  | 180 |  | daily av. | RDF |  |  |
| Maine Energy Recovery Co |  | 200 |  | daily av. | MB |  |  |
| Mid Maine Waste Action Corp |  |  |  |  |  |  |  |
| Penobscot Energy Recovery Co |  |  |  |  |  |  |  |
| **NH** | Wheelabrator – Concord |  |  |  | calendar day avg. | SNCR | MB | 1988 |
| Wheelabrator – Claremont |  |  |  | calendar day avg. | SNCR | MB | 1986 |
| **NJ** | Essex CRRF (PI 07736) | 1,2,3 – 2700 each | 150 for all | 50 | calendar day | SNCR | MB | 3/1988 |
| Warren CRRF (PI 85455) | 1,2 – 438 each | 150 for all | 50 | calendar day | SNCR | MB | 7/31/1986 |
| Camden CRRF (PI 51614) | 1,2,3 – 1236 each | 150 for all | 20 | calendar day | SNCR | MB | 12/7/1988 |
| Union CRRF (PI 41814) | 1,2,3 – 1540 each | 150 for all | 50 | calendar day | SNCR | MB | 12/30/1991 |
| Gloucester CRRF (PI 55793) | 1,2 – 575 each | 150 for all | 20 | calendar day | SNCR | MB | 6/9/1988 |
| **State** | **Municipal Waste Combustor (MWC) Facility** | **Unit # - Capacity (tons/day)** | **NOx Standard**  **(ppmvd @7% O2)** | **Ammonia Slip Limit** **(ppmvd @7% O2)** | **Averaging Time** | **Control Technology** | **Type of System** | **Date of Installation/Startup** |
| **NY** | Babylon RRF | 1, 2 - 375 each | 150 for all | none | 24 hr | SNCR | MB - SC | 1988 |
| Hempstead RRF | 1, 2, 3 - 773 each | 185 for all | none | 365 days rolling av. | Part 231 |  | 1989 |
| Huntington RRF | 1, 2, 3 - 250 each | 185 for all | 50 | 3 hr rolling | SNCR | MB - WW | 1991 |
| MacArthur RRF | 1, 2 - 242.5 each | 170 for all | none | 24 hr |  | MB - RC | 1989 |
| Dutchess Co RRF | 1, 2 - 228 each | 170 for all | none | 24 hr |  | MB - RC | 1989 |
| Wheelabrator Westchester | 1, 2 - 750 each | 184 for all | none | 24 hr |  | MB - SC | 1984 |
| Wheelabrator Hudson Falls | 1, 2 - 275 each | 372 for all | none | 1 hr |  | MB - WW | 1991 |
| Onondaga County RRF | 1, 2, 3 - 330 each | 200 for all | 50 | 3 hr | SNCR | MB - REF | 1994 |
| Oswego County RRF | 1, 2, 3, 4 - 50 each | none | none |  | none | RDF incinerator | 1984 |
| Covanta Niagara | 1, 2 - 1097.5 each | 205 for all | 50 | 24 hr | SNCR | MB - SC | 1996 |
| **PA**  **PA** | Covanta Delaware Valley | 1 - 585 | 180 | N/A | 24 hr | None | MB - RC | 3/1/1991 |
| 88.56 lb/hr | Unknown |
| 0.42 lb/MMBtu | Unknown |
| 2 - 585 | 180 | 24 hr | None | MB - RC | 3/1/1991 |
| 88.56 lb/hr | Unknown |
| 0.42 lb/MMBtu | Unknown |
| 3 - 585 | 180 | 24 hr | None | MB - RC | 3/1/1991 |
| 88.56 lb/hr | Unknown |
| 0.42 lb/MMBtu | Unknown |
| 4 - 585 | 180 | 24 hr | None | MB - RC | 4/18/1991 |
| 88.56 lb/hr | Unknown |
| 0.42 lb/MMBtu | Unknown |
| 5 - 585 | 180 | 24 hr | None | MB - RC | 4/23/1991 |
| 88.56 lb/hr | Unknown |
| 0.42 lb/MMBtu | Unknown |
| 6 - 585 | 180 | 24 hr | None | MB - RC | 6/8/1991 |
| 88.56 lb/hr | Unknown |
| 0.42 lb/MMBtu | Unknown |
| Covanta Plymouth | 1 - 608 | 205 | 10 | Unknown | SNCR | RG - WW | 1/1/1991 |
| 109 lb/hr | Unknown |
| 2 - 608 | 205 | Unknown | SNCR | RG - WW | 1/1/1991 |
| 109 lb/hr | Unknown |
| **Municipal Waste Combustor (MWC) Facility** | **Unit # - Capacity (tons/day)** | **NOx Standard**  **(ppmvd @7% O2)** | **Ammonia Slip Limit** **(ppmvd @7% O2)** | **Averaging Time** | **Control Technology** | **Type of System** | **Date of Installation/Startup** |
| Wheelabrator Falls Twp | 1 - 800 | 180 | No Limit | 24 hr | SNCR | MB - WW | 5/1/1994 |
| 102.6 lb/hr | Unknown |
| 2 - 800 | 180 | 24 hr | SNCR | MB - WW | 5/1/1994 |
| 102.6 lb/hr | Unknown |
| Lancaster Co. Resource Recovery | 1 - 400 | 180 | No Limit | 24 hr | SNCR | RG - WW | 12/1/1990 |
| 2 - 400 | 180 | 24 hr | SNCR | RG - WW | 12/1/1990 |
| 3 - 400 | 180 | 24 hr | SNCR | RG - WW | 12/1/1990 |
| York Co. Resource Recovery | 1 - 450 | 165 | N/A | 24 hr | None | RC | 10/23/1989 |
| 135 | Annual |
| 2 - 450 | 165 | 24 hr | None | RC | 10/23/1989 |
| 135 | Annual |
| 3 - 450 | 165 | 24 hr | None | RC | 10/23/1989 |
| 135 | Annual |
| Susquehanna Resource Harrisburg | 1 - 267 | 150 | 12 | 24 hr | SNCR | MB - WW | 12/30/2005 |
| 135 | 24 hr |
| 2 - 267 | 150 | 24 hr | SNCR | MB - WW | 2/1/2006 |
| 135 | 24 hr |
| 3 - 267 | 150 | 24 hr | SNCR | MB - WW | 3/1/2006 |
| 135 | 24 hr |
| **VA - OTR jurisdiction** | Covanta Fairfax, Inc (Reg # 71920) | 001 - 750 | 205 ppm, 206.3 lbs/hr, 716.2 tpyVA1 | NA | 24 hr | SNCR | RG-WW | 1987 |
| 002 - 750 | 205 ppm, 206.3 lbs/hr, 716.2 tpyVA1 | 24 hr | SNCR | RG-WW | 1987 |
| 003 - 750 | 205 ppm, 206.3 lbs/hr, 716.2 tpyVA1 | 24 hr | SNCR | RG-WW | 1987 |
| 004 - 750 | 205 ppm, 206.3 lbs/hr, 716.2 tpyVA1 | 24 hr | SNCR | RG-WW | 1987 |
| Covanta Alexandria/Arlington (Reg # 71895) | 001-325 | 205 ppm VA2 | NA | 24 hr | SNCR | RG-WW | 1988 |
| 002-325 | 205 ppm VA2 | 24 hr | SNCR | RG-WW | 1988 |
| 002-325 | 205 ppm VA2 | 24 hr | SNCR | RG-WW | 1988 |

Notes:

* No MWCs in DE, DC, RI & VT; CT: **a**Current Standard as of 08/02/16; VA: VA1Final 2008 O3 NAAQS RACT standard for Covanta Fairfax units has not yet been determined. Review/analysis is ongoing; VA2Final 2008 O3 NAAQS RACT standard for Covanta Alexandria/Arlington units has not yet been determined. Review/analysis is ongoing.
* Abbreviations: mass burn = MB; waterwall = WW; rotary waterwall = RC; refractory wall = REF; refuse-derived fuel = RDF; reciprocating grate waterwall= RG – WW; mass burn - single chamber = MB – SC;
* **2. MWC - RACT REGULATIONS**

|  |  |  |
| --- | --- | --- |
| **State** | **RACT REGULATIONS** | **State Inspector/Contact** |
| **CT** | RCSA section 22a-174-38 (effective 08/02/16): <http://eregulations.ct.gov/eRegsPortal/Search/RMRView/PR2015-192> | Merrily Gere, 860 424 3416, [Merrily.Gere@CT.gov](mailto:Merrily.Gere@CT.gov); |
| **MA** | 310 CMR 7.08(2): <http://www.mass.gov/courts/docs/lawlib/300-399cmr/310cmr7.pdf>  Covanta Springfield and Covanta Pittsfield - permit | SEMASS: Dan Disalvio, 508 946 2878, [dan.disalvio@state.ma.us](mailto:dan.disalvio@state.ma.us), Wheelabrator (N. Andover & Saugus) & Covanta Haverhill: Joseph Su, 978 694 3283, [joseph.su@state.ma.us](mailto:joseph.su@state.ma.us); Wheelabrator Millbury: Paul Dwiggins, 508 767 2760, [paul.dwiggins@state.ma.us](mailto:paul.dwiggins@state.ma.us); Covanta (Springfield & Pittsfield): Todd Wheeler, 413 755 2297, [todd.wheeler@state.ma.us](mailto:todd.wheeler@state.ma.us); |
| **MD** | COMAR 26.11.08.08; COMAR 26.11.08.07 & 26.11.08.08 - Revising NOx RACT for Large MWCs; planned proposal June 2016: [http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=26.11.08.\*](http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=26.11.08.*)  [http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=26.11.09.\*](http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=26.11.09.*) | Wheelabrator: Ariane Kouamou-Nouba, 410 537 4233, ariane.kouamou-nouba@maryland.gov;  Mont. Covanta: Mitchell Greger, 410 537 3235, [mitchell.greger@maryalnd.gov](mailto:mitchell.greger@maryalnd.gov); |
| **ME** | <http://www.maine.gov/dep/air/rules/> | Jeff Crawford, 207 287 7647, [jeff.s.crawford@maine.gov](mailto:jeff.s.crawford@maine.gov); |
| **NH** | Env-A 1309 (RACT) Env-A 3300; Evaluating comments from draft RACT submittal;  <http://des.nh.gov/organization/commissioner/legal/rulemaking/documents/env-a3300-adpt-pstd.pdf> | Gary Milbury, 603 271 2630, [gary.milbury@des.nh.gov;](mailto:gary.milbury@des.nh.gov;%20) |
| **NJ** | N.J.A.C. 7:27‑19.12  <http://www.state.nj.us/dep/aqm/Sub19.pdf> | Essex CRRF (PI 07736): Scott Michenfelder, 609 439 2432, Scott.Michenfelder@dep.nj.gov; Warren CRRF (PI 85455): Douglas Bannon, 973 656 4444, Douglas.Bannon@dep.nj.gov; Camden CRRF (PI 51614): Matthew Zehr, 609 439 9406, Matthew.Zehr@dep.nj.gov; Union CRRF (PI 41814): Robin Jones, 609 439 9418, [Robin.Jones@dep.nj.gov](mailto:Robin.Jones@dep.nj.gov); Gloucester CRRF (PI 55793): Vince Garbarino, 609 439 9396, [Vince.Garbarino@dep.nj.gov](mailto:Vince.Garbarino@dep.nj.gov); |
| **NY** | Babylon - RRF Subpart 219-2; Hempstead - RRF Part 231; Huntington - RRF 40 CFR 52.21; MacArthur RRF - 40 CFR 60.1705(a)(1); Dutchess Co RRF - 40 CFR 60.1705(a)(1); Wheelabrator Westchester - 40 CFR 52.21(j); Wheelabrator Hudson Falls - 40 CFR 52.21(j)(2); Onondaga County RRF- 40 CFR 52.21(j); Covanta Niagara - 40 CFR 60.33(b); Part 219, Effective 12/31/1988 | John Barnes, 518 402 8396, [john.barnes@dec.ny.gov](mailto:john.barnes@dec.ny.gov); |
| **PA** | Covanta Delaware Valley - 25 Pa. Code §127.12 (BAT) and 25 Pa. Code §129.91 (RACT); Covanta Plymouth, Wheelabrator Falls Twp - 25 Pa. Code §127.12 (BAT) and 40 CFR Part 60, Subpart Cb; Lancaster Co. Resource Recovery - 25 Pa. Code §127.12 (BAT); York Co. Resource Recovery - 25 Pa. Code §127.12 (BAT), 25 Pa. Code §129.91 (RACT); Susquehanna Resource Harrisburg - 40 CFR Part 60, Subpart Eb, 25 Pa. Code §127.12 (BAT);  Voluntary limit for netting purposes; Additional RACT Requirements for Major Sources of NOx and VOCs. Sections 129.96 - 129.100. Control of NOX from Major Sources of NOx and VOC. Effective April 23, 2016. Federal Register –TBD; <http://www.pacode.com/secure/data/025/articleICIII_toc.html> | Susan Hoyle shoyle@pa.gov  Randy Bordner ranbordner@pa.gov  Susan Foster sufoster@pa.gov  Sean Wenrich sewenrich@pa.gov |
| **VA** | 9 VAC 5 Chapter 40 Article 51 <http://www.deq.virginia.gov/Portals/0/DEQ/Air/Regulations/451.pdf> | Doris Mcleod  doris.mcleod@deq.virginia.gov |
| **VT** | No action to date; <http://dec.vermont.gov/air-quality/laws> | Doug Elliott, 802-377-5939, [Doug.Elliott@vermont.gov](mailto:Doug.Elliott@vermont.gov) |