



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

ELLEN ROY HERZFELDER
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner

**REPORTING POLICY FOR WASTE TO ENERGY FACILITIES
UNDER THE TOXICS USE REDUCTION ACT**

June 2004

PURPOSE

The purpose of this policy is to rescind a 1993 policy that exempted reporting of combustion-related emissions by Waste-to-Energy facilities under the Toxics Use Reduction Act (TURA), and to provide guidance on how these facilities should begin including combustion-related emissions, in their toxics use reports, beginning on July 1, 2004.

The Department of Environmental Protection (DEP) hereby rescinds "Policy for Waste to Energy Facilities Under the Toxics Use Reduction Act," dated May 28, 1993. Beginning with toxics use reports due on July 1, 2004, Waste-to-Energy facilities must report combustion-related emissions under TURA.

BACKGROUND AND RATIONALE

On May 28, 1993, DEP issued a policy entitled "Policy for Waste to Energy Facilities Under the Toxics Use Reduction Act." The 1993 Policy contained the following statement:

For purposes of complying with the requirements of TURA, waste-to-energy facilities need not consider toxic or hazardous substances manufactured or processed by facilities, including those that may be coincidentally manufactured as byproducts, such as hydrogen chloride.

Under the Toxics Use Reduction Act (TURA, M.G.L. c. 21I), a "toxics user" is a facility that "manufactures, processes or otherwise uses any toxic or hazardous substance..." and that falls within certain Standard Industrial Classification (SIC) codes. The effect of the 1993 Policy is that waste-to-energy facilities do not report (pursuant to TURA) to DEP the annual amounts of toxic chemicals they "use" in the combustion process. In general, waste-to-energy facilities (also known as Municipal Waste Combustors or "MWCs") do not "process" toxic chemicals (i.e., incorporate toxic chemicals into a product), but they do "coincidentally manufacture" toxic

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD Service - 1-800-298-2207.

DEP on the World Wide Web: <http://www.mass.gov/dep>

Printed on Recycled Paper

chemicals in the combustion process and they also “otherwise use” toxic chemicals in the combustion process and other aspects of their operations (for example, MWCs currently report under TURA toxic chemicals used in pollution control equipment, which are not covered by the 1993 Policy).

Part of the rationale for the 1993 Policy was that MWCs have limited direct control over the materials that enter the solid waste stream and that result in toxic chemical releases. While this does limit the information available to MWCs, other combustion sources, such as power plants, are required under TURA to report toxic chemicals coincidentally manufactured or otherwise used through the combustion process.

In addition, there has been an increasing focus on emissions of persistent bioaccumulative toxic (PBT) chemicals, some of which are emitted by MWCs (e.g., mercury, dioxin, lead). As a result of actions taken by the U.S. Environmental Protection Agency, beginning with TURA calendar year 2000 reporting, the thresholds for PBT chemicals were significantly lowered, so that many TURA facilities, including even moderately-sized combustion sources, are now reporting PBTs under TURA. However, the TURA data show an incomplete picture of PBT data since MWCs are not reporting PBT TURA data.

MWCs do have many federal and state reporting requirements, and even submit emissions data electronically to DEP for posting on the agency’s MWC web site (see www.mass.gov/dep/mwc/mwchome.htm). However, the emissions data for PBT chemicals submitted by MWCs under air quality regulations and facility permits are in the form of emission rates, and do not include annual quantities or address emissions from other media (e.g., quantity of chemicals disposed in combustion ash). MWCs already generate information that can be used to estimate and report toxic chemical quantities, which should facilitate TURA reporting so that the public has a more complete picture of toxic chemical use. TURA reporting of combustion-related chemicals also would bring MWC reporting in line with the TURA reporting obligations of other combustion sources.

POLICY FOR TURA REPORTING

In addition to other chemicals they already report under TURA, MWCs will report combustion-related chemical use in their toxics use reports that are due July 1, 2004, and in future years. Based on existing MWC data and TURA reporting thresholds, the following chemicals are subject to TURA reporting if they exceed their applicable TURA reporting thresholds: hydrogen chloride, mercury, the “dioxin and dioxin-like compounds” category, and lead. If MWCs burn petroleum fuels, they also should determine whether they exceed the reporting thresholds for the polycyclic aromatic compounds category and benzo(g,h,i)perylene and report as applicable.

DEP recognizes that MWCs do not have information about the amount of toxic chemicals in the solid waste streams that they accept, but calculate chemical use based on air emissions test results, ash test results (for dioxin), and pollution control efficiencies. DEP recognizes that such calculations represent a facility’s best efforts to estimate chemical use based on limited existing data.

For the combustion-related chemical use that MWCs must report under TURA, MWCs should report such use in the manner described in Attachment 1. If DEP determines that changes are needed to this guidance in the future, DEP will seek input from MWC facility operators prior to making revisions.

 [signature on original]
Robert W. Golledge, Jr.
Commissioner

 [June 10, 2004]
Date

Attachment 1
TURA Municipal Waste Combustor
Reporting Guidance for Combustion-Related Chemical Use

General

All applicable sections of the Form S Cover Sheet, Form S, and State-only Form R should be completed for combustion-related chemicals that exceed their reporting thresholds for those chemicals listed in this Guidance. These chemicals also should be factored into toxics use fee calculations.

Filling Out the State-only Form R and Form S

Mercury

MWCs should report “mercury” (not “mercury compounds”). MWCs currently measure total mercury in accordance with DEP’s air quality control regulations, which is a measure of the total weight of the mercury atoms from mercury and mercury compounds (e.g., mercuric chloride). DEP recognizes that the mercury use reported under TURA would reflect an estimate of total mercury.

Outlet stack test results should be used to estimate Form R stack emissions (Section 5.2). On-site waste treatment (Section 7A) should be completed and include a pollution control efficiency estimate. This efficiency factor and Pre-APC (Air Pollution Control Equipment) inlet test results should be used to estimate land disposal in ash (Section 6.2 for transfers to off-site landfills, or Section 5.5 for on-site landfilling). The sum of stack emissions and land disposal should be reported as total releases (Section 8.1), and also should be reported on Form S as otherwise used (Section 1.e.) and as byproduct (Section 1.f.).

Dioxin

MWCs should report dioxin/furans under the “dioxin and dioxin-like compounds” category. Outlet stack test results should be used to estimate Form R stack emissions (Section 5.2). Ash test results should be used to estimate land disposal in ash (Section 6.2 or Section 5.5). On-site waste treatment (Section 7A) should be completed, except that a pollution control efficiency estimate does not need to be provided (since the nature of dioxin formation and destruction in a MWC does not allow for accurate reporting of the MWC’s control efficiency for dioxin). The sum of stack emissions and land disposal should be reported as total releases (Section 8.1), and also should be reported on Form S as manufactured (Section 1.c.) and byproduct (Section 1.f.).

Hydrogen Chloride

For hydrogen chloride, outlet stack test results should be used to estimate Form R stack emissions (Section 5.2), which also should be reported as total releases (Section 8.1), and also should be reported on Form S as byproduct (Section 1.f.). On-site waste treatment (Section 7A) should be completed and include a pollution control efficiency estimate. This efficiency factor

should be used to estimate the amount treated onsite (Section 8.6), since most hydrogen chloride is consumed or transformed in the scrubber. The amount treated onsite also should be reported on Form S as chemical consumed (Section 2.b.). The sum of total releases and treated onsite should be reported on Form S as manufactured (Section 1.c.).

Lead

MWCs should report “lead” (not “lead compounds”), and should assume that they exceed the 100-pound use threshold for lead. Outlet test results should be used to estimate Form R stack emissions (Section 5.2). The default value of 1,750 ppm¹ lead concentration in ash should be used to estimate land disposal in ash (Section 6.2 or Section 5.5), or a MWC should use current or historical facility-specific data to estimate land disposal in ash. The sum of stack emissions and land disposal should be reported as total releases (Section 8.1), and also should be reported on Form S as otherwise used (Section 1.e.) and byproduct (Section 1.f.). On-site waste treatment (Section 7A) should be completed; the estimates of stack emissions and land disposal should be used to calculate the pollution control efficiency estimate.

¹ The default value of 1,750 ppm lead concentration in ash is based on DEP review of “*Solid Waste Management in Florida, 2001-2002*” and other sources.