TABLE 11a.—TYPICAL UNCONTROLLED EMISSIONS FROM NEW MWI'S—Continued

Pollutant	Continuous	Intermittent	Batch
Pb, mg/dscm	4.2	4.2	4.2
Cd, mg/dscm	0.29	0.29	0.29
Hg, mg/dscm	3.1	3.1	3.1

TABLE 11b.—TYPICAL UNCONTROLLED	EMISSIONS	FROM	EXISTING	MWI's
		1110101		1010010

Pollutant	Continuous (0.25-sec)	Continuous (1-sec)	Intermittent	Batch
PM, mg/dscm CO, ppmv CDD/CDF, ng/dscm HCI, ppmv SO ₂ , ppmv NO _x , ppmv Pb, mg/dscm Cd, mg/dscm Hg, mg/dscm	570	300	570	570
	690	300	690	690
	25,000	6,600	25,000	25,000
	1,400	1,400	1,400	1,400
	16	16	16	16
	140	140	140	140
	4.2	4.2	4.2	4.2
	0.29	0.29	0.29	0.29
	3.1	3.1	3.1	3.1

One specific approach which EPA is considering and on which EPA requests comment is that of further subcategorizing batch and intermittent MWI's by size or capacity to burn medical waste. Some have suggested, for example, that EPA examine alternatives, such as subcategorizing these categories into incinerators with capacities of 50 pounds per hour or less, 100 pounds per hour or less, 200 pounds per hour or less, etc. A number of States have already established subcategories based on size which exempt the smallest incinerators or impose less stringent requirements on such incinerators. Current State regulations, therefore, may provide a basis for further subcategorizing the categories of batch and intermittent MWI's.

To fully consider subcategorization by size within the batch and intermittent categories, however, a mechanism must be available to accurately and consistently determine the capacity of an MWI. Only if such a mechanism exists, will enforcement personnel, as well as owners and operators of MWI's, be assured that MWI's are subject to a consistent set of requirements.

The EPA believes this may be a serious problem. It appears there is no common or widely used mechanism or "standard" within the MWI industry for sizing or determining the capacity of an incinerator to burn medical waste. As a result, it seems that one vendor's 50 pound per hour capacity incinerator can be another vendor's 100 pound per hour capacity incinerator. It also appears the same vendor may sell one customer a 50 pound per hour capacity MWI and then sell another customer the same incinerator as a 100 pound per hour MWI. The EPA believes that a manufacturer's or vendor's "nameplate

capacity'' is not an accurate and reliable means for determining the size or capacity of an MWI.

The EPA recognizes that the composition of medical waste changes across generators, over time, and in response to changes in waste handling or recycling practices in a way that may affect the amount of medical waste a specific incinerator is able to burn. For the purposes of enforcing regulations that may vary by size or capacity, a common mechanism or "standard" to measure or determine the capacity of MWI's is necessary.

Consequently, EPA specifically requests comments on a mechanism or "standard" for accurately and consistently determining the capacity of MWI's in the enforcement of whatever regulation might be adopted. For example, the comments might outline the mechanisms or approaches used by States to ensure all MWI's of the same capacity are subject to the same requirements. Or, the comments may offer alternative measures of capacity that serve as a better basis for identifying small intermittent and/or small batch MWI's. Finally, the manufacturers may choose to develop a voluntary approach providing a consistent measure of rated capacity.

H. Performance of Technology

Medical waste incinerator emissions are mixtures of pollutants including acid gases (HCl and SO₂), NO_X, CO, PM, CDD/CDF, and metals (Pb, Cd, and Hg). There are basically two approaches to controlling these emissions: combustion control and add-on air pollution control. These approaches will be discussed in sections 1. and 2. below.

The first approach, combustion control, can be broken down into three

levels that are based on the flue gas residence time in the secondary chamber. These three levels are 0.25-sec combustion, 1-sec combustion, and 2sec combustion.

The second approach can be further broken down into various add-on control systems, including wet systems, fabric filter systems without activated carbon injection, and fabric filter systems with activated carbon injection. The control of NO_X will also be discussed under add-on control systems.

One additional area that has been suggested for consideration is waste segregation. This topic will be discussed in paragraph 3. of this section.

1. Combustion Control

Combustion control includes the proper design, construction, operation, and maintenance of an MWI to destroy or prevent the formation of air pollutants prior to their release to the atmosphere. Test data indicate that as secondary chamber residence time and temperature increase, emissions decrease. Combustion control is most effective in reducing CDD/CDF, PM, and CO emissions.

The 0.25-sec combustion level includes a minimum secondary chamber temperature of 927 °C (1700 °F) and a 0.25-sec secondary chamber residence time. These combustion conditions are typical of older MWI's.

The 1-sec combustion level includes a minimum secondary chamber temperature of 927°C (1700°F) and residence time of 1-sec. These combustion conditions are typical of newer MWI's. Compared to 0.25-sec combustion, 1-sec combustion will achieve substantial reductions in CDD/ CDF and CO emissions, and will