

## Engineering Guide #26: Inclusion of Weight of Water in the Weight of “Refuse” Charged for Incinerators

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### Question:

When determining the allowable particulate emission rate from OAC rule 3745-17-09 for a sewage sludge or liquid waste incinerator, does the total "refuse charged" include the weight of water in sludge or liquid waste?

### Answer:

Yes. The weight of water in the sludge, liquid waste or any other material to be incinerated should be included in the weight of "refuse charged" to any incinerators for the purpose of determining the allowable particulate emission rate from OAC rule 3745-17-09.

This response is based on the definition of "refuse" in paragraph (B)(19) of OAC rule 3745-17-01 which reads as follows:

"'Refuse' means any discarded matter, or any matter which is to be reduced in volume, or otherwise changed in chemical or physical properties, in order to facilitate its discard, removal or disposal."

This definition covers a wide variety of materials which could include water. Therefore, from an analysis of the language used in this definition, the weight of water should be included in the weight of refuse charged to any incinerator which is subject to the requirements of OAC rule 3745-17-09.

Although the inclusion of the weight of water in the weight of the refuse charged results in a more lenient particulate emission limitation than if the weight of water were excluded, the Ohio EPA, DAPC believes that, for many situations, the emission limitations in OAC rule 3745-17-09 will result in the need to employ "reasonably available control technology" in order to comply with the stringent emission limits in this rule.

Circumvention of the rule by increasing the moisture content of the refuse charged to an incinerator should not be a problem due to the fact that it is in the incinerator owner's/operator's best economic interest to keep the moisture content as low as possible to minimize the high energy costs associated with evaporating water. If there is concern about circumvention or if it is deemed beneficial to restrict moisture content to ensure proper operation and compliance with emission limitations, then special terms and conditions may be added to the permit for any such incinerator.