

Draft Definition of Incineration

for: NETP&P Advisory Group
by: Technologies Sub-Committee
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Draft Definition of Incineration

Incineration is an engineered process designed to effect complete oxidation of the organic materials present in municipal solid waste where the conversion process is characterized as controlled, stable and rapid high-temperature flame combustion in a continuous process in the presence of a stoichiometric excess of oxygen and without treatment of the intermediate products of combustion.

Draft Definition of Incineration

In the definition statement, the following terms have the assigned meanings:

- “engineered process” means a process that is designed using sound engineering and scientific principles and that is required and expected to meet accepted and approved performance standards
- "flame" means the glowing gaseous part of a fire
- "intermediate products" means products of thermal degradation characterized by partial oxidation

Draft Definition of Incineration

In the definition statement, the following terms have the assigned meanings:

- “complete oxidation” means the conversion of the various hydrocarbons and other reactive elements present in the MSW into carbon dioxide and water vapour and other oxides
- "continuous process" means a process that occurs without any temporal or spatial interruption

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In the definition statement, the following terms have the assigned meanings:

- "high-temperature" means generally in excess of 1000 degrees Celsius
- "rapid" means in matter of seconds
- "stoichiometric excess of oxygen" means a quantity of oxygen greater than the amount required for complete oxidation as calculated from models of the chemical reactions involved

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In the definition statement, the following terms have the assigned meanings:

- "treatment" means a process designed to remove or otherwise treat potentially harmful or hazardous byproducts

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Generic thermal process types* would be classified as follows according to the draft definition of incineration :

(* Refer to the Oct. 15 Advisory Group meeting information - MacViro Presentation on REOIs
<http://www.toronto.ca/wes/techservices/involved/swm/net/about.htm#october>)

Incineration

- Single Stage Combustion Facility
- RDF Production and Combustion Facility
- Two Stage Combustion Facility or,
- Close Coupled Gasifier Facility
- Another Pyrolysis Facility (with no pre-treatment of syngas before thermal oxidation)

Not Incineration

- Physical or biological treatment Facility
- Typical Pyrolysis Facility**
- Typical Fixed Bed Gasifier Facility **
- Typical Fluidized Bed Gasifier Facility **
- Typical High Temperature Gasifier Facility **
- Typical Plasma Gasifier Facility **

** with pre-treatment of syngas before thermal oxidation