



## U.S. Environmental Protection Agency Applicability Determination Index

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**Control Number: 9900003**

**Category:** NSPS  
**EPA Office:** METD  
**Date:** 01/14/1999  
**Title:** Steam Generating Unit Defined  
**Recipient:** Katz, Judith  
**Author:** Rasnic, John

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**Subparts:** Part 60, Db, Indust.-Comm.-Inst. Steam Gen. Units

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**References:** 60.40b  
60.41b

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**Abstract:**

Q. Does a proposed nonrecovery coke plant in Region III meet the definition of a steam generating unit under Subpart Db provisions, and therefore become subject to Subpart Db?

A. The proposed nonrecovery coke plant, as described, does not meet the Subpart Db definition of a steam generating unit. Therefore, Subpart Db does not apply to this proposed plant.

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**Letter:**

January 14, 1999

SUBJECT: Applicability of New Source Performance Standards Subpart Db to Region III Proposed Nonrecovery Coke Plant

FROM: John B. Rasnic, Director  
Manufacturing, Energy and Transportation Division Office of Compliance

TO: Judith Katz, Director  
Air Protection Division  
Region III

This memorandum provides an applicability determination that the New Source Performance Standards (NSPS) for Industrial- Commercial-Institutional Steam Generating Units (Subpart Db) do not apply to a proposed nonrecovery coke plant in Region III. The issue is whether this proposed plant meets the definition of a steam generating unit under Subpart Db provisions, and is therefore subject to these provisions. This memorandum is in response to an October 2, 1998, inquiry from the Air Protection Division of Region III. The determination was made in conjunction with an ad-hoc group representing the Office of Compliance (OC), the Office of Regulatory Enforcement (ORE), the Office of Air Quality Planning and Standards (OAQPS), and Regions III and V.

In coke plants, coal is heated in ovens and undergoes a chemical conversion to coke, also known as coal carbonization. Volatiles are driven off during the conversion, producing what is referred to as coke oven gas. In the proposed nonrecovery coke plant which is the subject of this determination, the coke oven gas is combusted in the ovens, and in passageways around and under the ovens, to provide the heat necessary to sustain the carbonization process. The spent gas then exits through a duct to waste heat boilers which are separate from the ovens, and water in boiler tubes is converted to steam that is used elsewhere in the facility for various purposes including, but not limited to, generating electricity. There are no burners in the duct or the boilers, no combustion air inlets in the boilers, and no supplemental fuels (e.g., natural gas, oil) combusted.

Subpart Db Section 60.40b(a) describes the applicability of the provisions as follows:

The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hr).

Section 60.41b defines a steam generating unit as ". . . a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium." But it also states: "This term does not include process heaters as they are defined in this subpart."

Section 60.41b defines process heaters as:

. . . a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Heat input is defined in Section 60.41b as:

. . . heat derived from combustion of fuel in a steam generating unit and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

It has been determined that the proposed nonrecovery coke plant, as described, is not subject to Subpart Db, because neither the coke ovens nor the waste heat boilers meet the above definition of a steam generating unit. The coke ovens more closely match the definition of process heaters, and are therefore excluded from the steam generator definition, because their primary purpose is to initiate the chemical conversion of coal to coke using the heat from the combustion of the coke oven gas. The waste heat boilers do not have burners or air introduction, and as a result, there is no combustion occurring in them. Also, these boilers have zero heat input, because their heat is from the excluded category of ". . .exhaust gases from other sources, . . ." 60.41b.

If you have any questions about this determination, please contact Jordan Spooner of my staff at (202) 564-7058.

cc: Christopher Oh, OC  
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