UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

July 12, 2010

Thomas Rheaume, Manager
Permits Branch, Air Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: Applicability Determination (AD) under Clean Air Act (CAA) 40 CFR Part 63 Subpart EEE Hazardous Waste Combustion (HWC) Maximum Achievable Control Technology (MACT); Thermal Treatment Units operated at the Rineco Facility located in Benton, Arkansas.

Dear Mr. Rheaume:

This letter is in response to your department's request for an Applicability Determination (AD) as referenced above for the Rineco facility located in Benton, Arkansas. The United States Environmental Protection Agency (EPA) has determined that the HWC MACT is applicable to the Thermal Metals Wash Unit (TMWU) operated in series with the Thermal Oxidizer Unit (TOU), as explained within this letter.

Applicability under the CAA depends entirely upon two separate considerations. The first consideration involves assessing the definitions provided in 40 CFR § 63.1201 for a "hazardous waste combustor." Each type of particular combustor unit is further defined in the same section of the rule under specific combustor unit type definitions that refer directly back to the definitions found in 40 CFR § 260.10 (Resource Conservation and Recovery Act, RCRA, definitions). If a thermal treatment unit is defined as a hazardous waste combustor under the HWC MACT, then the second consideration involves an evaluation of any exemptions that might apply in accordance with 40 CFR § 63.1200(c). Our evaluation of each of these considerations is provided below, based upon information readily available for the facility in our files.

The TMWU is a thermal desorption unit. The vapors that are separated by indirect heating in the TMWU are then passed directly into the TOU for destruction by controlled flame combustion. Therefore, the TOU (fired with natural gas) is considered an *afterburner chamber* for the combustion process initiated in the TMWU. Subsequently, the two process units together (i.e., the TMWU followed by the TOU) are classified as an incinerator. Please see the 1998 Policy Memorandum issued by EPA's Office of Solid Waste and Emergency Response (OSWER), provided as an enclosure to this letter. In this memorandum, EPA OSWER indicates that although the RCRA regulations do not specifically define "thermal desorber", the

term generally applies to a unit that treats waste thermally to extract the contaminants from the matrix. Subsequently, the OSWER memo clarifies the following:

> *A thermal desorber utilizing controlled flame combustion (e.g., equipped with a directly fired desorption chamber and/or a fired afterburner to destroy organics) would meet the [RCRA] regulatory definition of an incinerator. On the other hand, a thermal desorber that did not use controlled flame combustion (e.g., equipped with an indirectly heated desorption chamber and the desorbed organics were not "controlled"/destroyed with an afterburner) would be classified as a "miscellaneous unit".*

Therefore, in answer to your specific question pertaining to a CAA AD, EPA believes that the TMWU and the TOU, together, are considered an ***incinerator*** in accordance with the OSWER Memorandum (enclosed) under RCRA, and therefore, the HWC MACT would be directly applicable in accordance with 40 CFR § 63.1201.

Finally, we have evaluated information available for the Rineco facility and have also determined that none of the exemptions/exclusions identified in 40 CFR §63.1200(c) apply. However, if new information becomes available, this determination would be subject to reevaluation. If you have any questions, please feel free to call Ms. Cynthia Kaleri of my staff at (214) 665-6772.

Sincerely,

David F. Garcia,
Associate Director
Air/Toxics & Inspection
Coordination Branch

Enclosure

cc: Derick Warrick
RCRA Combustion Permits,
ADEQ

Susan Branning
RCRA
EPA Region 6

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Mr. Parker E. Brugge
Patton Boggs, L.L.P.
2550 M Street, N. W.
Washington, D.C. 20037-1350

Dear Mr. Brugge:

This letter is in response to your April 7, 1998, letter seeking clarification on the distinction between thermal desorbers and incinerators. Under the U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 260.10), thermal treatment units that are enclosed devices using controlled flame combustion, and that are neither boilers nor industrial furnaces, are classified as incinerators subject to regulation under 40 CFR Part 264, Subpart 0. Thermal treatment units that do not use controlled flame combustion, and that are neither boilers nor industrial furnaces, are classified as "miscellaneous units" subject to regulation under 40 CFR Part 264, Subpart X.

EPA regulations do not define "thermal desorber", but the term generally applies to a unit that treats waste thermally to extract the contaminants from the matrix. A thermal desorber utilizing controlled flame combustion (e.g., equipped with a directly fired desorption chamber and/or a fired afterburner to destroy organics) would meet the regulatory definition of an incinerator. On the other hand, a thermal desorber that did not use controlled flame combustion (e.g., equipped with an indirectly heated desorption chamber and the desorbed organics were not "controlled"/destroyed with an afterburner) would be classified as a "miscellaneous unit".

With regard to the September 1993 Presumptive Remedy guidance entitled: `Presumptive Remedies: Site Characterization and Technology Selection for CERCLA Sites with Volatile Organic Compounds in Soils" (Directive Number 9355.0-48FS) that you mentioned, EPA identified thermal &sorption and incineration as the second and third preferred technologies, respectively. The intent of the guidance is that units that can be generally described as thermal desorbers, whether or not they are also incinerators, are second in the preference list. However, if a thermal desorber that meets the RCRA definition of incinerator is used to treat hazardous waste at a CERCLA site, the unit must meet RCRA's incinerator standards, EPA developed the preferential order set out in this guidance based on historical patterns of remedy selection and EPA's

scientific and engineering evaluation of performance data on technology implementation. There was no intent implied or stated in the Presumptive Remedy guidance that the preferential order was based on the temperature of operation; the guidance does not limit the thermal desorbers technologies to those that are low-temperature thermal desorbers.

We appreciate that as technologies evolve, the distinctions between units often become blurred, and, in the case of thermal desorbers, may fail within two separate classifications depending on the design of the unit. Classification of a "thermal treatment" unit, however, is defined by 40 CFR 260.10.

Both the RCRA regulatory framework and the CERCLA remedy selection process provide adequate flexibility to ensure that the unit is operated in a protective manner and that there is adequate and informed public participation. If you have any further questions, please contact either Andrew O'Palko, Office of Solid Waste, at (703) 308-8646 or Robin Anderson, Office of Emergency and Remedial Response, at (703) 603-8747.

Sincerely,

Elizabeth Cotsworth
Acting Director
Office of Solid Waste

Sincerely,

Stephen D. Luftig
Director
Office of Emergency and
Remedial Response

cc: Andrew O'Palko, OSW
Bob Holloway, OSW
Robin Anderson, OERR
Karen Kraus, OGC
Superfund Regional Response Managers
RCRA Senior Policy Advisors

PATTON BOGGS, L.L.P.

2550 M STREET. N.W.
WASHINGTON. D.C. 20037-1350
(202) 457-6000 (202) 457-5225

April 2, 1998

Ms. Elizabeth A. Cotsworth
Acting Director
Office of Solid Waste
U.S. Environmental Protection Agency
401 M Street, S.W. (5301W)
Washington, D.C. 20460

Dear Ms. Cotsworth:

I am writing to seek clarification on the distinction between thermal desorbers and incinerators.

It is my understanding that thermal treatment units which are enclosed devices using controlled flame combustion, and that are neither boilers nor industrial furnaces, are classified as incinerators subject to regulation under 40 CFR Part 264, Subpart O. It is also my understanding that thermal treatment units which do not use controlled flame combustion, and that are not industrial furnaces, are classified as "miscellaneous units" subject to regulation under 40 CFR Part 264, Subpart X.

Thus, a thermal desorber is subject to regulation as an incinerator if it is equipped with a fired afterburner, or if the desorption chamber is directly fired. However, I would assume that, although such a device is subject to regulation under Subpart O, it nevertheless remains a "thermal desorber." The fact that it must meet the standards set forth in Subpart O for incinerators does not transform it somehow into an incinerator for CERCLA purposes.

For example, EPA issued guidance in September 1993 explaining that at a Superfund site which has soil contaminated with volatile organic compounds, the range of remedial technologies set forth in a Record of Decision may be soil-vapor extraction ("SVE"), low-temperature thermal desorption ("LTTD"), and incineration. The preferred order is SVE, LTTD, and, as a last resort, incineration. A thermal desorber with a fired afterburner, or one whose desorption chamber is directly fired, must fall within the "thermal desorption" family of technologies, even though it would be subject to regulation under Subpart O as an incinerator.

To hold otherwise would disqualify the large majority of LTTD units, which are directly fired and use afterburners for air pollution control. This result would be contrary to EPA's CERCLA guidance and to the Administrator's emphasis on reducing incineration which involves the high-temperature burning of contaminated soil.

There appears to be some confusion on this issue, for which we would appreciate your help in clarifying. Please call me if you have any questions or if you would like to discuss this issue further.

Sincerely,

Parker E. Brugge

cc: Bob Holloway