UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 23 2015

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Stewart Fletcher
Vice President – General Manager
Heritage Thermal Services
1250 St. George Street
East Liverpool, Ohio 43920

Re: Finding of Violation

Dear Mr. Fletcher:

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to Heritage Thermal Services (you) under Section 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3). We find that you are violating National Emission Standards for Hazardous Air Pollutants (NESHAP) from Hazardous Waste Combustors and your Title V permit at your East Liverpool, Ohio facility.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

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The EPA contact in this matter is Linda H. Rosen. You may call her at (312) 886-6810 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

George T. Czerniak
Director
Air and Radiation Division

Enclosure

cc: Ed Fasko
Air Pollution Control Manager
Northeast District Office
Ohio Environmental Protection Agency

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	FINDING OF VIOLATION
	)	
Heritage Thermal Services, Inc. d/b/a Heritage Thermal Services, East Liverpool, Ohio	))))	EPA-5-15-OH-12
Proceedings Pursuant to Section 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3).	))	

FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) issues this Finding of Violation (FOV) to Heritage Thermal Services, Inc. d/b/a Heritage Thermal Services (Heritage) for violations of the Clean Air Act (CAA), 42 U.S.C. §§ 7401 *et seq.*, at its hazardous waste incinerator located in East Liverpool, Ohio (the Facility). Specifically, Heritage violated Section 112 of the CAA, 42 U.S.C. § 7412, the National Emission Standards for Hazardous Air Pollutants (NESHAP) from Hazardous Waste Combustors at 40 C.F.R. Part 63, Subpart EEE, 40 C.F.R. §§ 63.1200 through 63.1221 (HWC MACT), Title V of the CAA, 42 U.S.C. §§ 7661-7661f, and its implementing regulations at 40 C.F.R. Part 70, 40 C.F.R. §§ 70.1 through 70.12, and the Facility's Title V permit.

EPA issues this FOV pursuant to Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3). The authority to issue this FOV has been delegated to the Regional Administrator of EPA, Region 5, and re-delegated to the Director of the Air and Radiation Division, Region 5.

STATUTORY REGULATORY AUTHORITY

HWC MACT

1. Section 112(d) of the CAA, 42 U.S.C. § 7412(d), requires EPA to promulgate regulations for particular industrial sources that emit significant quantities of one or more of the hazardous air pollutants (HAPs) listed in Section 112(b) of the CAA, 42 U.S.C. § 7412(b). These emission standards are called the NESHAPs.

2. Pursuant to Section 112(l) of the CAA, 42 U.S.C. § 7412(l), EPA may delegate to a State the authority to implement portions of the CAA in that state.

3. As part of the approval process of the Ohio Title V program under Section 502(d) of the CAA, 42 U.S.C. § 7661a(d), EPA delegated authority to the Ohio Environmental Protection Agency (Ohio EPA) to implement the NESHAPs in Ohio, including NESHAPs not yet promulgated. *See* 60 *Fed. Reg.* 42,045 (Aug. 15, 1995); 60 *Fed. Reg.* 18,790 (April 13, 1995).

4. Pursuant to Section 112(c) of the CAA, 42 U.S.C. § 7412(c), on July 16, 1992 (*see* 57 *Fed Reg.* 31,476), EPA identified hazardous waste combustors as a category of sources of HAPs, and pursuant to Section 112(d) of the CAA, 42 U.S.C. § 7412(d), EPA promulgated the HWC MACT on September 30, 1999. *See* 64 *Fed. Reg.* 53,038. The HWC MACT is set forth at 40 C.F.R. §§ 63.1200 through 63.1221.

5. The HWC MACT applies to both "area sources" and "major sources" of HAPs. *See* 40 C.F.R. § 63.1200. "Major sources" are sources or groups of stationary sources located within a contiguous area and under common control that emit or have the potential to emit ten tons per year or more of any HAP, or twenty-five tons per year or more of any combination of HAPs. *See* 42 U.S.C. § 7412(a)(1); 40 C.F.R. § 63.2. An "area source" is any stationary source of HAPs that is not a "major source." *See* 42 U.S.C. § 7412(a)(2).

6. A "stationary source" is any building, structure, facility, or installation that emits or may emit any air pollutant. *See* 42 U.S.C. § 7412(a).

7. The "affected source" to which the HWC MACT applies is, among other things, all hazardous waste combustors, which are defined to include "hazardous waste incinerators." *See* 40 C.F.R. § 63.1200.

8. A "hazardous waste incinerator" is a device defined as an incinerator under 40 C.F.R. § 260.10 that burns hazardous waste at any time, and includes all associated firing systems and air pollution control devices, as well as the combustion chamber equipment. *See* 40 C.F.R. § 63.1201(a).

9. An "incinerator" is defined to include "any enclosed device that: (1) uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or (2) meets the definition of infrared incinerator or plasma arc incinerator." *See* 40 C.F.R. § 260.10.

10. The HWC MACT implements section 112(d) of the CAA by requiring hazardous waste combustors to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT).

11. The emission standards and operating requirements of the HWC MACT apply at all times except: (i) during periods of startup, shutdown, and malfunction, and (ii) when hazardous waste is not in the combustion chamber. *See* 40 C.F.R. § 63.1206(b)(1).

Compliance Requirements

12. To demonstrate and monitor compliance with the carbon monoxide and hydrocarbon emission standard, the HWC MACT requires an affected source to conduct performance tests and to install and operate a continuous emission monitor (CEM). *See* 40 C.F.R. §§ 63.1207(b)(1) and 63.1209(a).

13. 40 C.F.R. § 63.1207(b) requires an affected source to conduct comprehensive performance tests (CPT) to: (1) demonstrate compliance with the emission standards in the HWC MACT; (2) establish operating parameter limits (OPL) provided by 40 C.F.R. § 63.1209, and (3) demonstrate compliance with the performance specifications for continuous monitoring systems (CMS).

14. 40 C.F.R. § 63.1209(b) requires that an affected source must use CMS to demonstrate compliance with the applicable OPLs in 40 C.F.R. § 63.1209.

15. The owner or operator of a hazardous waste incinerator must, among other things, retain information required to document and maintain compliance with the HWC MACT, including data recorded by its CMS. *See* 40 C.F.R. § 63.1211(b).

Compliance Date

16. The HWC MACT established an initial compliance date of September 30, 2002 for "existing sources." *See* 40 C.F.R. § 63.1206(a)(1) (1999). EPA subsequently revised the initial compliance date for "existing sources" to September 30, 2003. *See Fed. Reg.* 63,317 (December 3, 2001).

17. By the compliance date, the owner or operator of a hazardous waste combustor must have developed and included in its operating record a document referred to as a Documentation of Compliance (DOC), which identified: (1) the applicable emission standards; and (2) the corresponding OPLs under 40 C.F.R. § 63.1209 that will ensure compliance with those emissions standards. *See* 40 C.F.R. §§ 63.1206(a)(1) and 63.1211(c).

18. The owner or operator of a hazardous waste combustor must then operate in compliance with the OPLs and other requirements set forth in the DOC. *See* 40 C.F.R. §§ 63.1206(c)(1) and 63.1211(c).

19. When EPA revised the HWC MACT on October 12, 2005, EPA established the replacement emission standards set forth at 40 C.F.R. § 63.1219, and required owners or operators of hazardous waste combustors to submit a revised Notification of Compliance (NOC) reflecting its compliance with the revised HWC MACT.

20. The HWC MACT required the owner or operator of a hazardous waste incinerator to commence the initial comprehensive performance test (CPT) no later than 12 months after the compliance date (October 14, 2008) for the revised HWC MACT replacement

standards in 40 C.F.R. § 63.1219. The owner or operator must commence subsequent testing no later than 61 months after the date of commencing the previous CPT.

21. Within 90 days after it completes the CPT, the owner or operator of a hazardous waste combustor must prepare and submit an NOC to EPA, documenting the facility's compliance with the emission standards and continuous monitoring system requirements, and identifying OPLs under 40 C.F.R. § 63.1209. *See* 40 C.F.R. § 63.1207(j).

22. Following submittal of an NOC, the hazardous waste combustor must operate in compliance with the OPLs and other requirements set forth in the NOC in lieu of those in the DOC or previous NOC. *See* 40 C.F.R. § 63.1207(j)(1)(ii) and 40 C.F.R. § 63.1210(d)(2).

23. In order to comply with the destruction and removal efficiency and emission standards set forth in the HWC MACT, owners and operators must comply with the OPLs specified in its NOC. *See* 40 C.F.R. § 63.1209(j)-(o).

24. Failure to comply with the operating requirements set forth in the applicable DOC or NOC is failure to ensure compliance with the emission standards of the HWC MACT. *See* 40 C.F.R. § 63.1206(c)(1)(iii).

TITLE V REQUIREMENTS

25. Title V of the CAA, 42 U.S.C. §§ 7661-7661f, and its implementing regulations at 40 C.F.R. Part 70, establish an operating permit program for certain sources, including certain sources subject to standards under Section 112 of the CAA. The purpose of Title V is to ensure that all "applicable requirements" for compliance with the CAA are included in the Title V operating permit for the source.

26. 40 C.F.R. § 70.1(b) requires all sources subject to the Title V operating permit program, including certain sources subject to standards under Section 112 of the CAA, to have a permit to operate which includes enforceable emission limitations and such other conditions as are necessary to assure compliance with all "applicable requirements" of the CAA and the requirements of the applicable SIP.

27. Pursuant to 40 C.F.R. § 70.2, an "applicable requirement" includes any standard or other requirement under Section 112 of the CAA, which includes all applicable NESHAP requirements.

28. Pursuant to 40 C.F.R. § 63.1206(c)(1)(iv) and (v), operating requirements in the NOC are "applicable requirements" for purposes of 40 C.F.R. Part 70 and shall be incorporated into the Title V permit.

29. 40 C.F.R. § 70.7(b) requires that the owner or operator of a Title V source shall not operate such source after the date that a timely and complete Title V permit application is required to be submitted, except in compliance with a permit issued under a Part 70 program.

ENFORCEMENT AUTHORITY

30. Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3), provides in part that if the Administrator finds that a person has violated, or is in violation of any requirement or prohibition of any rule promulgated under Title V of the CAA, the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

31. Sections 113(a)(3) and (b) of the CAA, 42 U.S.C. § 7413(a)(3) and (b), prohibit violations of any NESHAP regulation. Thus, a violation of a NESHAP regulation is a violation of the CAA.

FACTUAL BACKGROUND

Heritage and the Facility

32. Heritage's Facility treats hazardous waste by thermal oxidation in a rotary kiln-based incineration system. Heritage's incineration system includes a primary combustion chamber (a rotary kiln) followed by a secondary combustion chamber (SCC). The incineration system also includes heat recovery and flue gas treatment units.

33. Heritage was and is a "person," as that term is defined in Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

34. Heritage was and is an "owner" and an "operator" as those terms are defined in Section 112 of the CAA, 42 U.S.C. § 7412, and 40 C.F.R. § 63.2, of a "hazardous waste incinerator," as that term is defined in 40 C.F.R. §§ 260.10 and 63.1201, located at 1250 St. George Street, East Liverpool, Ohio.

35. Heritage's incinerator was and is an "existing source" within the meaning of the HWC MACT at 40 C.F.R. §§ 63.1201(a) and 63.1206(a)(1)(ii)(B), because construction of the hazardous waste incinerator commenced prior to April 20, 2004.

36. Heritage was and is subject to the HWC MACT at all times relevant to this FOV because it burns hazardous waste in the incinerator it owns and operates.

37. On December 22, 2008, Ohio EPA issued Heritage its Title V permit, effective January 12, 2009, including requirements that Heritage establish and comply with various OPLs.

38. On March 30 and 31, April 1 and 2, May 11 and 12, September 15 and 16, 2010, Heritage conducted a CPT for the incinerator to demonstrate compliance with the HWC MACT, as required by 40 C.F.R. § 63.1207.

39. On November 18, 2010, Heritage submitted an NOC (the 2010 NOC) and the results of the CPT conducted during 2010 at the facility. The 2010 NOC contained OPLs that Heritage established during its CPT. The OPLs identified in the 2010 NOC became effective on November 18, 2010, and remain in effect through the present.

Clinker Fall Events

40. Heritage experienced "routine clinker fall" events at the Facility on 39 days between November 18, 2010 and December 31, 2014. "Clinker" is the name for hardened combustion remains (fly ash or particulate matter) entrained in flue gas that build up on the ceiling and sidewalls of the SCC at the Facility. These "clinker fall events" occurred when the weight of the clinker in the SCC became such that it could no longer support itself and the clinker dislodged and fell into the quench tank at the bottom of the SCC, generating steam and increasing pressure in the incineration system.

Energetic Ash Pressurization Events

41. Heritage experienced a series of "clinker events" at the Facility involving "energetic ash" on the following dates: (1) January 16, 2011; (2) April/May 2011; (3) June 9, 2011; (4) December 17, 2011; (5) January 31, 2012; (6) March 13, 2013; and (7) July 13, 2013. These "energetic ash pressurization events" involved clinker of such an energized nature that falling into the quench tank at the bottom of the SCC caused more rapid generation of steam than a "routine clinker fall," along with a corresponding increase in pressure in the incineration system.

42. The April 12, 2011 event caused extensive damage to the heat recovery boiler outlet expansion joint and displaced the ductwork.

43. The July 13, 2013 event caused extensive damage to the heat recovery boiler and a rupture at the expansion joint for the ducting joining the heat recovery boiler to the spray dryer.

44. The July 13, 2013 event caused the release of gas and boiler ash containing heavy metals and other HAPs from the failed duct connection onto the surrounding equipment, the concrete below, and into the surrounding community.

Operator Error Events

45. Heritage experienced numerous OPL or emission exceedances at the Facility caused by "operator error" between November 18, 2010 and December 31, 2014.

HERITAGE'S HWC MACT VIOLATIONS

40 C.F.R. § 63.1219(a)(5)- THC Emission Rate Exceedances

46. 40 C.F.R. § 63.1219(a)(5) prohibits the owner or operator of an existing hazardous waste incinerator from discharging or causing combustion gases to be emitted into the atmosphere that contain total hydrocarbons (THC) in excess of 10 parts per million (ppm) by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

47. On the following days, Heritage discharged or caused combustion gases to be emitted into the atmosphere from the Facility containing THC in excess of the 10 ppm by volume standard:

a. 11/24/10, 11/25/10 (two times), 11/30/10,
b. 12/31/10
c. 1/3/11, 1/4/11, 1/9/11, 1/15/11, 1/16/11, 1/17/11, 1/19/11, 1/31/11
d. 2/11/11, 2/12/11 (two times), 2/28/11
e. 3/2/11, 3/6/11, 3/22/11, 3/24/11, 3/29/11
f. 4/1/11, 4/2/11, 4/5/11, 4/9/11, 4/12/11
g. 5/6/11, 5/10/11, 5/11/11, 5/20/11
h. 6/7/11, 6/24/11
i. 7/1/11, 7/14/11, 7/25/11
j. 8/1/11, 8/10/11 (three times), 8/11/11, 8/12/11, 8/17/11 (two times), 8/21/11, 8/22/11 (two times)
k. 9/5/11 (two times)
l. 10/7/11, 10/8/11, 10/16/11, 10/31/11
m. 11/6/11, 11/22/11
n. 12/1/11, 12/13/11
o. 1/1/12, 1/4/12, 1/25/12
p. 3/25/12
q. 4/2/12, 4/17/12, 4/18/12 (four times), 4/30/12 (two times)
r. 5/3/12, 5/11/12, 5/13/12, 5/14/12, 5/16/12, 5/24/12, 5/29/12
s. 6/1/12, 6/12/12, 6/19/12, 6/22/12, 6/26/12, 6/27/12
t. 7/14/12, 7/16/12, 7/31/12
u. 8/3/12, 8/13/12, 8/27/12, 8/29/12, 8/31/12
v. 9/7/12, 9/21/12 (two times)
w. 10/22/12
x. 11/6/12, 11/14/12, 11/20/12 (two times)
y. 12/4/12, 12/7/12, 2/19/12
z. 1/19/13, 1/23/13
aa. 2/5/13, 2/14/13, 2/17/13, 2/19/13, 2/20/13, 2/24/13
bb. 3/4/13, 3/22/13
cc. 4/3/13, 4/4/13, 4/11/13, 4/13/13, 4/25/13
dd. 5/21/13, 5/22/13, 5/26/13

ee. 6/2/13, 6/5/13, 6/15/13, 6/22/13, 6/26/13
ff. 7/1/13, 7/5/13, 7/6/13, 7/12/13, 7/13/13 (two times)
gg. 8/16/13, 8/21/13, 8/31/13
hh. 9/5/13, 9/10/13, 9/17/13, 9/23/13, 9/29/13, 9/30/13
ii. 10/14/13 (two times), 10/24/13
jj. 11/15/13, 11/22/13, 11/26/13
kk. 12/4/13, 12/14/13
ll. 1/6/14, 1/16/14, 1/28/14,
mm. 2/22/14, 2/26/14
nn. 4/11/14, 4/14/14, 4/19/14, 4/24/14, 4/27/14
oo. 5/17/14 5/28/14, 5/29/14 (two times)
pp. 6/29/14
qq. 7/4/14 (two times), 7/6/14, 7/8/14, 7/1714, 7/20/14
rr. 8/12/14, 8/16/14, 8/19/14, 8/29/14, 8/30/14 (three times)
ss. 9/5/14, 9/5/14, 9/22/14, 9/25/14, 9/26/14, 9/29/14, 9/29/14
tt. 10/1/14 (two times), 10/3/14, 10/8/14, 10/11/14, 10/14/14, 10/22/14
uu. 11/5/14, 11/6/14, 11/26/14, 11/29/14
vv. 12/8/14, 12/17/14

48. By exceeding the 10 ppm THC standard, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1219(a)(5), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedance: Maximum Flue Gas Flowrate

49. In order to comply with the DRE standard, the dioxin/furan standard, the particulate matter standard, the semivolatile and low volatile metals standards, and the hydrogen chloride and chlorine gas standards, the owner or operator of a hazardous waste combustor must establish and maintain a maximum flue gas flowrate OPL. *See* 40 C.F.R. §§ 63.1209(j)(2), (k)(3), (m)(2), (n)(5), and (o)(2).

50. Heritage established the applicable maximum flue gas flowrate OPL for the Facility in the 2010 NOC as 67,505 standard cubic feet per minute (scfm) as a 1-hour rolling average.

51. On the following dates, the flue gas flow rate for the Facility exceeded the applicable maximum flue gas flowrate OPL:

a. 4/12/11
b. 4/13/11
c. 7/13/13
d. 10/9/14

52. By exceeding the maximum flue gas flowrate, Heritage violated the HWC MACT at 40 C.F.R. § 63.1209(j)(2), (k)(3), (m)(2), (n)(5), and (o)(2) and 40 C.F.R. § 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedance: Minimum Combustion Chamber Temperature

53. In order to comply with the DRE standard and the dioxin/furan standard, the owner or operator of a hazardous waste combustor must establish and maintain a minimum combustion chamber temperature OPL for each combustion chamber. *See* 40 C.F.R. §§ 63.1209(j)(1) and (k)(2).

54. Heritage separately established this OPL for the Facility in the 2010 NOC for the rotary kiln and the SCC.

OPL Exceedance: Minimum Rotary Kiln Temperature

55. The applicable minimum rotary kiln temperature OPL for the Facility is 1718 degrees Fahrenheit as a 1-hour rolling average.

56. On the following dates, the temperature inside the rotary kiln at the Facility fell below the applicable minimum rotary kiln temperature OPL:

    a. 1/16/11
    b. 4/12/11
    c. 4/13/11
    d. 1/31/12
    e. 7/13/13

57. By failing to maintain the rotary kiln temperature at or above the required minimum level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(j)(1) and (k)(2), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedance: Minimum SCC Temperature

58. The applicable minimum SCC temperature OPL for the Facility is 1747 degrees Fahrenheit as a 1-hour rolling average.

59. On the following dates, the temperature inside the SCC fell below the applicable Minimum SCC Temperature OPL:

    a. 1/16/11
    b. 4/12/11
    c. 4/13/11
    d. 1/31/12
    e. 10/5/12 (two times)
    f. 10/17/12
    g. 11/23/12
    h. 12/27/12
    i. 3/3/13
    j. 7/13/13

k. 10/24/13
l. 4/28/14

60. By failing to maintain the SCC temperature at or above the required minimum level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(j)(1) and (k)(2), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedance: SCC Pressure

61. 40 C.F.R. § 63.1206(c)(5)(i) requires the owner or operator to control combustion leaks of HAPs from its hazardous waste combustor. The owner or operator can select one of two means of compliance; either by keeping the combustion zone sealed to prevent combustion system leaks pursuant to 40 C.F.R. § 63.1206(c)(5)(i)(A), or by complying with and maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor pursuant to 40 C.F.R. § 63.1206(c)(5)(i)(B). The owner or operator may also request prior written approval from EPA for it to utilize "an alternative means of control to provide control of combustion system leaks equivalent to maintenance of combustion zone pressure lower than ambient pressure." 40 C.F.R. § 63.1206(c)(5)(i)(C).

62. On September 4, 2003, EPA approved a request by Von Roll America, Inc. (Heritage's predecessor in interest) that the Facility control combustion system leaks by maintaining the maximum combustion zone pressure lower than ambient pressure pursuant to 40 C.F.R. § 63.1206(c)(5)(i)(B), and by using an alternative means of controlling combustion system leaks under 40 C.F.R. § 63.1206(c)(5)(i)(C) that is equivalent to maintaining maximum combustion zone pressure lower than ambient pressure. The alternative means of controlling system leaks involves the use of pressurized shrouds around the inlet and outlet ends of the primary combustion chamber to control combustion system leaks during pressure spikes. Heritage is required under both compliance methods to utilize instantaneous monitoring of the pressure in the SCC and the inlet and outlet shrouds.

63. Heritage's alternative means to control and monitor combustion system leaks requires that Heritage:

a. Pressurize the inlet and outlet end shrouds to approximately 0.2 inches of water column;
b. Monitor the pressure in the inlet and outlet end shrouds and in the SCC;
c. Comply with the following OPLs:
   i. The pressure in the SCC must be greater than zero inches of water column for more than 10 seconds; or
   ii. The pressure in the SCC must be greater than the pressure in the inlet or outlet end shroud at any time; or
   iii. The pressure in the SCC must be greater than the ambient pressure for more than 2 seconds during operating time when the pressurizing equipment for either shroud has failed.

d. If Heritage exceeds any of these OPLs, the automatic feed cut-off (AWFCO), system will engage.

64. On the following dates, Heritage failed to comply with the SCC pressure OPL by failing to maintain SCC pressure: (1) greater than zero inches of water column for more than 10 seconds; (2) greater than the pressure in the inlet or outlet end shroud at any time; or (3) greater than the ambient pressure for more than 2 seconds during operating time when the pressurizing equipment for either shroud had failed:

a. 12/12/10, 12/22/10
b. 1/4/11 (three separate exceedances), 1/10/11, 1/11/11, 1/16/11(ten separate exceedances), 1/17/11 (five separate exceedances), 1/18/11 (two separate exceedances), 1/31/11 (two separate exceedances)
c. 2/6/11, 2/16/11
d. 3/26/11, 3/27/11 (two separate exceedances), 3/29/11 (two separate exceedances), 3/30/11 (four separate exceedances), 3/31/11
e. 4/1/11, 4/4/11 (six separate exceedances), 4/6/11 (two separate exceedances), 4/12/11 (three separate exceedances)
f. 5/4/11, 5/5/11 (two separate exceedances), 5/10/11 (three separate exceedances), 5/11/11
g. 6/7/11 (two separate exceedances), 6/9/11 (two separate exceedances), 6/26/11 (two separate exceedances)
h. 8/30/11
i. 10/14/11
j. 11/5/11, 11/6/11, 11/28/11
k. 12/1/11 (two separate exceedances), 12/17/11 (two separate exceedances), 12/27/11 (two separate exceedances)
l. 1/31/12 (two separate exceedances)
m. 3/5/12 (two separate exceedances)
n. 9/18/12, 9/22/12
o. 11/3/12, 11/4/12
p. 12/7/12, 12/19/12
q. 1/20/13
r. 2/1/13
s. 3/3/13
t. 4/9/13, 4/28/13, 4/30/13
u. 6/2/13
v. 7/9/13, 7/13/13
w. 10/13/13
x. 11/19/13
y. 12/4/13
z. 6/2/14

65. By failing to maintain the SCC pressure at the required level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1206(c)(5)(i)(B) and (C), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedances: Minimum Carbon Feed Pressure or Minimum Enhanced Carbon Injection System Pressure

66. In order to comply with the dioxin/furan standard and the mercury standard, the owner or operator of a hazardous waste incinerator must establish and comply with a limit on the minimum carbon feed pressure or minimum enhanced carbon injection system (ECIS) pressure, and the minimum carrier fluid (gas or liquid) flowrate or pressure drop as an hourly rolling average based on the manufacturer's specifications. *See* 40 C.F.R. §§ 63.1209(k)(6)(ii) and 63.1209(l)(3).

67. Heritage separately established this OPL in its 2010 NOC for each of the two locations where carbon is injected (the Spray Dryer Adsorber (SDA) and the Scrubber locations).

68. The November 2010 NOC, the applicable minimum carbon feed pressure is 3.0 psig as a 1-hour rolling average at each location.

69. On the following dates, the carbon feed pressure fell below the minimum carbon feed pressure at the SDA location:

SDA ECIS Pressure

a. 4/12/11
b. 4/13/11
c. 5/11/11

70. On the following dates, the carbon feed pressure fell below the minimum carbon feed pressure at the SDA location:

Scrubber ECIS Pressure

a. 4/13/11
b. 5/11/11
c. 7/13/13

71. By failing to maintain the carbon feed pressure at the SDA location and the scrubber location at or above the required minimum levels, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(k)(6)(ii) and (l)(3), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedances: Minimum Carbon Feed Rate

72. In order to comply with the dioxin/furan standard and the mercury standard, the owner or operator of a hazardous waste incinerator must establish and comply with a limit on the minimum carbon feed rate, and the minimum carbon injection rate on an hourly rolling average calculated as the average of the test averages. *See* 40 C.F.R. §§ 63.1209(k)(6)(i) and (l)(3).

73. Heritage separately established this OPL in its 2010 NOC for each of the two locations where carbon is injected at the Facility (the SDA and Scrubber locations).

74. Heritage claimed in its 2010 NOC that the applicable minimum carbon feed rate for the SDA location at the Facility is Confidential Business Information.

75. On the following days the carbon feed rate fell below the minimum carbon feed rate for the Facility at the SDA Location:

a. 6/21/12
b. 2/18/14

76. By failing to maintain the carbon feed rate at the SDA location at the Facility at or above the required minimum level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(k)(6)(i) and (l)(3), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedances: Minimum Scrubber Ring Jet Blowdown Flowrate

77. In order to comply with the hydrogen chloride and chlorine gas standard, the mercury standard, and the particulate matter standard, the owner or operator of a hazardous waste incinerator must establish and comply with a limit on the minimum scrubber ring jet blowdown flowrate on an hourly rolling average as the average of the test run averages. *See* 40 C.F.R. §§ 63.1209(o)(3)(v), 63.1209(m)(1)(i)(B), and 63.1209(l)(2).

78. Heritage established in the 2010 NOC the applicable minimum scrubber ring jet blowdown flowrate for the Facility as 19.5 gallons per minute (gpm) as a 1-hour rolling average.

79. On the following days, Heritage operated the incinerator in such a manner that the scrubber ring jet blowdown flow rate for the Facility fell below the minimum scrubber ring jet blowdown flowrate OPL:

a. 4/13/11 (two times)
b. 3/25/12
c. 12/4/13

80. By failing to maintain the scrubber ring jet flowrate for the Facility at or above the required minimum level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(o)(3)(v), 63.1209(m)(1)(i)(B), and 63.1209(l)(2), § 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedances: Minimum Ring Jet Pressure Drop

81. In order to comply with the hydrogen chloride and chlorine gas standard, the mercury standard, and the particulate matter standard, the owner or operator of a hazardous waste incinerator must establish and comply with a limit on the minimum pressure drop across the scrubber on an hourly rolling average as the average of the test run averages. *See* 40 C.F.R. §§ 63.1209(o)(3)(i), 63.1209(m)(1)(i)(A), and 63.1209(l)(2).

82. Heritage established in the 2010 NOC the applicable minimum ring jet pressure drop for the Facility as 28.0 inches of water column as a 1-hour rolling average.

83. On the following days, the ring jet pressure drop at the Facility fell below the minimum ring jet pressure drop OPL:

    a. 1/30/11
    b. 4/18/12
    c. 11/3/12
    d. 4/13/13
    e. 3/26/14

84. By failing to maintain the ring jet pressure drop for the Facility at or above the required minimum level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(o)(3)(i), (m)(1)(i)(A), and (l)(2), 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedance: Minimum Ring Jet Sump Level

85. In order to comply with the particulate matter standard in the HWC MACT, an owner or operator of a hazardous waste incinerator must, among other things, establish and comply with an OPL for the minimum scrubber tank volume or liquid level using a CMS. *See* 40 C.F.R. §§ 63.1209(m)(1)(i)(B).

86. Heritage established the applicable minimum scrubber ring jet sump level for the Facility in the 2010 NOC as 1.7 feet as a 1-hour rolling average.

87. On December 6, 2011, the scrubber ring jet sump level at the Facility fell below the minimum scrubber ring jet sump level OPL.

88. By failing to maintain the scrubber ring jet sump level at or above the required minimum level, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(m)(1)(i)(B) and 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

OPL Exceedance: Minimum Scrubber pH

89. In order to comply with the hydrogen chloride and chlorine gas standard of the HWC MACT, the owner or operator of a hazardous waste incinerator must establish and comply with an OPL for the minimum wet scrubber pH on an hourly rolling average as the average of the performance test run averages. *See* 40 C.F.R. § 63.1209(o)(3)(iv).

90. Heritage established the applicable Minimum Scrubber pH for the Facility in the 2010 NOC as 7.6 as a 1-hour rolling average.

91. On May 18, 2014, the scrubber pH at the Facility fell below the Minimum Scrubber pH OPL.

92. By failing to maintain the scrubber pH at or above the required minimum level for the Facility, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1209(o)(3)(iv) and 63.1206(b)(1) and (c)(1); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

40 C.F.R. § 63.1206(c)(3)(ii)
Failure to Duct Emissions to Air Pollution Control Equipment

93. 40 C.F.R. § 63.1206(c)(3)(ii) requires that, during an AWFCO, the owner or operator of a hazardous waste incinerator must continue to duct combustion gases to the air pollution control system while hazardous waste remains in the combustion chamber (i.e. the hazardous waste residence time had not transpired since the hazardous waste feed cutoff system was activated).

94. On April 12, 2011 and July 13, 2013, Heritage failed to continue to duct combustion gases to the air pollution control system while hazardous waste remained in the combustion chamber (i.e. the hazardous waste residence time had not transpired since the hazardous waste feed cutoff system was activated).

95. By failing to duct combustion gases to the air pollution control system during an AWFCO while hazardous waste remained in the combustion chamber at the Facility, Heritage violated the HWC MACT at 40 C.F.R. §§ 63.1206(c)(3)(ii); Title V at 40 C.F.R. § 70.7(b); and the Facility's Title V permit.

40 C.F.R. §§ 63.1211
Recordkeeping and Reporting Violations

Combustion System Pressure

96. The HWC MACT at 40 C.F.R. § 63.1211(b) requires affected sources to retain, among other things, "information required to document and maintain compliance with the [HWC MACT], including data recorded by [CMS] and copies of all notifications, reports, plans, and other documents submitted to [EPA or Ohio EPA]."

97. Heritage is required to demonstrate compliance with the MACT Provision for combustion system leaks using an instantaneous monitor to monitor the pressure in: (1) the SCC, and (2) the inlet and outlet shrouds.

98. "Instantaneous monitoring" for combustion system leak control means detecting and recording pressure, without use of an averaging period, at a frequency adequate to detect combustion system leak events from hazardous waste combustion. *See* 40 C.F.R. § 63.1201(a).

99. Heritage does not record the instantaneous pressure of the SCC or the inlet and outlet shrouds. Heritage records one-minute averages of the SCC pressure and inlet and outlet shroud pressure.

100. Since at least September 11, 2013, Heritage has failed to record the instantaneous pressure of the SCC and the instantaneous pressures of the inlet and outlet shrouds.

101. Heritage violated 40 C.F.R. § 63.1211(b) by failing to maintain records of the instantaneous pressure of the SCC and the inlet and outlet shrouds which are measurements required to document and maintain compliance with the regulations of Subpart EEE.

ENVIRONMENTAL IMPACT OF VIOLATIONS

Heritage's violations have caused or can cause excess emissions of organic HAPs, dioxins/furans, PM, PM metals (such as antimony, cobalt, manganese, nickel, and selenium), mercury, semivolatile (lead and cadmium) metals, low volatile (arsenic, beryllium, and total chromium) metals, hydrogen chloride and chlorine.

Organic HAPs: Organic HAPs include halogenated and nonhalogenated organic classes of compounds such as polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). Both PAHs and PCBs are classified as potential human carcinogens, and are considered toxic, persistent and bioaccumulative. Organic HAP also include compounds such as benzene, methane, propane, chlorinated alkanes and alkenes, phenols and chlorinated aromatics. Adverse health effects of HAPs include damage to the immune system, as well as neurological, reproductive, developmental, respiratory and other health problems.

Dioxin/Furans: Dioxins and furans can cause a number of health effects. The most well-known member of the dioxins/furans family is 2,3,7,8 TCDD. EPA has said that it is likely to be a cancer causing substance to humans. In addition, people exposed to dioxins and furans have experienced changes in hormone levels. High doses of dioxin have caused a skin disease called chloracne. Animal studies show that animals exposed to dioxins and furans experienced changes in their hormone systems, changes in the development of the fetus, decreased ability to reproduce and suppressed immune system.

PM: Exposure to particles can lead to a variety of serious health effects. Fine particles pose the greatest problems. Scientific studies show links between these small particles and numerous adverse health effects. Epidemiological studies have shown a significant correlation between elevated PM levels and premature mortality. Other effects associated with PM exposure include aggravation of respiratory and cardiovascular disease, lung disease, decrease lung function, asthma attacks, and certain cardiovascular problems.

PM Metals (antimony, cobalt, manganese, nickel and selenium): Studies have shown that antimony accumulates in the lung and is retained for a long time. Antimony has been associated with lung damage and myocardial effects. Cobalt has been reported to cause respiratory effects in humans including irritation, wheezing, asthma and pneumonia and may cause lung cancer. Chronic exposure to high levels of manganese by inhalation in humans results primarily in central nervous system effects. Respiratory effects have been reported in humans from inhalation of nickel. EPA has classified nickel refinery subsulfide as a human carcinogen and nickel carbonyl as a probable human carcinogen. Studies of humans chronically exposed to high levels of selenium in food and water have reported discoloration of the skin, pathological deformation and loss of nails, loss of hair, excessive tooth decay, lack of mental alertness and listlessness.

Mercury: Chronic exposure to elemental mercury in humans affects the central nervous system with effects such as increased excitability, irritability, excessive shyness, and tremors. The major effect from chronic exposure to inorganic mercury is kidney damage. EPA has classified mercuric chloride (an inorganic mercury compound) as a Group C possible human carcinogen.

Semivolatile metals (lead and cadmium): Chronic exposure to high levels of lead in humans results in effects on the blood, central nervous system, blood pressure, and kidneys. Reproductive effects, such as decreased sperm count in men and spontaneous abortions in women have been associated with lead exposure. Chronic inhalation or oral exposure to cadmium leads to a build-up of cadmium leads to a build-up of cadmium in the kidneys that can cause kidney disease. Cadmium has also been shown to be a developmental toxicant in animals, resulting in fetal malformations.

Low volatile metals (arsenic, beryllium, and total chromium): Chronic inhalation exposure to inorganic arsenic in humans is associated with irritation of the skin and mucous membranes. Inorganic arsenic exposure in humans by the inhalation route has been shown to be strongly associated with lung cancer. Chronic inhalation exposure of humans to high levels of beryllium has been reported to cause chronic beryllium disease in which noncancerous lesions develop in the lung. Inhalation exposure to high levels of beryllium has been demonstrated to cause lung cancer in rats and monkeys. Chromium may be emitted tin two forms, trivalent chromium or hexavalent chromium. The respiratory tract is the major target organ for hexavalent chromium toxicity for inhalation exposures. Human and animal studies have clearly established that inhaled hexavalent chromium is a carcinogen. The respiratory tract is also the major target organ for trivalent chromium, although trivalent chromium is less toxic than hexavalent chromium.

Hydrogen chloride: Hydrogen chloride is corrosive to the eyes, skin, and mucous membranes. Chronic occupational exposure to hydrogen chloride has been reported to cause gastritis, bronchitis, and dermatitis in workers. Prolonged exposure to low concentrations may also cause dental discoloration and erosion. In rats exposed to hydrogen chloride by inhalation, altered estrus cycles have been reported in females and increased fetal mortality and decreased fetal weight have been reported in offspring.

Chlorine gas: Chlorine is an irritant to the eyes, the upper respiratory track, and lungs. Chronic exposure to chlorine gas in workers has resulted in respiratory effects including eye and throat irritation and airflow obstruction.

3/23/15

Date

George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Finding of Violation, No. EPA-5-15-OH-12, by Certified Mail, Return Receipt Requested, to:

Stewart Fletcher
Vice President – General Manager
Heritage Thermal Services, Inc.
d/b/a Heritage Thermal Services
1250 Saint George Street
East Liverpool, Ohio 43920

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Ed Fasko
Air Pollution Control Manager
Northeast District Office
Ohio Environmental Protection Agency
2110 East Aurora Road
Twinsburg, Ohio 44087

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43266-1049

On the 24th day of March 2015

Kathy Jones
for Loretta Shaffer, Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7011 2970 0001 9580 5203