BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC

In re Final RCRA Permit for Vickery Environmental, Inc. 3956 State Route 412 Vickery, Ohio 43464 EPA RCRA ID No. OHD 020 273 819	)	RCRA Appeal No._____

VICKERY ENVIRONMENTAL, INC.
PETITION FOR REVIEW

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I. INTRODUCTION

Per 40 C.F.R. § 124.19(a), Petitioner, Vickery Environmental, Inc. ("Vickery"), hereby petitions the U.S. Environmental Protection Agency's ("EPA") Environmental Appeals Board ("EAB") to review and remand or, in the alternative, modify EPA's Resource Conservation and Recovery Act ("RCRA") Permit No. OHD020273819 (the "2019 Permit") issued to Vickery. The 2019 Permit was issued by EPA Region 5 on September 6, 2019 and covers the existing hazardous waste storage, treatment, and deep well injection disposal facility located at 3956 State Route 412, Vickery, Ohio 43464 ("the Facility").[1] Specifically, this appeal challenges the 2019 Permit conditions which address air emission standards for equipment leaks, tanks, containers, and miscellaneous units (*i.e.*, the Subpart CC regulations contained in 40 C.F.R. §§264.1080 through 264.1091).[2]

Vickery contends that certain conditions are based on clearly erroneous findings of fact and conclusions of law. Specifically, Vickery challenges the following 2019 Permit conditions:

(1) **III.C.8, III.C.8.a and III.C.8.b**[3]**-** you must control air emissions from the tanks (T-1, T-2, T-5, T-6, T-9, and T-10), in accordance with 40 C.F.R. §264.1084(c)(2)(iii)(B) by venting the tanks through closed vent systems to scrubber unit designed and operated to remove the organic vapors vented to them with an efficiency of 95 percent or greater by weight.

(2) **III.C.9 and III.C.9.a through III.C.9.i**[4]**-** air emissions from tanks (T-1, T-2, T-5, T-6, T-9, and T-10), must be controlled as required by 40 C.F.R. §264.1084(g).

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[1] See Admin. R.14, Final RCRA Federal Permit. (Attachment A) The Final RCRA Federal Permit was e-mailed to Vickery on September 9, 2019.

[2] The RCRA permit consists of both the 2019 Permit, which contains the effective federal RCRA permit conditions, and the effective state RCRA permit conditions issued by the State of Ohio's RCRA program authorized under title 40 of the Code of Federal Regulations Part 271.

[3] Vickery filed comments for the draft RCRA permit on November 21, 2018 during the public comment period. ("Vickery's Comments"), Admin. R. 9, (Attachment B). Vickery included comments specifically addressing Sections III.C.8, III.C.8.a, and III.C.8.b of the Draft Permit. *See*, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, pp. 18-19 (comment on Draft Permit condition III.c.8), p.19 (comments on Draft Permit conditions III.C.8.a & III.C.8.b).

[4] Vickery's Comments specifically addressed Sections III.C.9 and III.C.9.a through III.C.9.i. See, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, p.19 (comment on Draft Permit condition III.C.9), p.20 (comments on Draft Permit conditions III.C.9.a, III.C.9.b, and III.C.9.c), p.21 (comments on Draft Permit conditions III.C.9.d

The emission control must consist of: (1) a closed vent system, including and exhaust fan with a capacity to maintain a negative pressure inside the closed system and (2) a scrubber unit functioning as the control device.

(3) **III.C.10**[5]**-** closed vent systems and control devices used to comply with this permit must be operated at all times when emissions may be vented to them.

(4) **III.C.11**[6]**-** you must process a Class 2 modification if you plan to operate or to modify tanks (T-1, T-2, T-5, T-6, T-9, and T-10) in accordance with 40 C.F.R. §264.1084(c)(iii)(A) with no closed-vent system connected to a control device.

(5) **III.D.3 and III.D.3.a, III.D.3.b, III.D.3.c and III.D.3.e**[7]**-** you must operate the Filter Press (FP) to comply with the following specifications: **(a)** You must operate the FP unit in accordance with the requirements specified in Section III.D.1, above. **(b)** You must equip workers manually removing solid cakes from the FP unit with Personal Protection Equipment (PPE), including Self-Contained Breathing Apparatus (SCBA), for their use during this work. Separate Occupational Safety and Health Administration (OSHA) regulations set forth applicable respirator equipment requirements for worker safety. **(c)** You must conduct air purging process (i.e. blow-down process) in the FP unit, before opening the FP unit for each removal activity of the solid cakes, using an air compressor. The purging process must be conducted at least 20 minutes for each blow-down in order to remove potential volatile organic compounds contained in the solid cakes in the FP unit. The blow-down process must utilize an air compressor which has a design capacity of minimum 215 actual cubic feet per minute (ACFM). The purged volatile organic compounds from the solid cakes in the FP must be routed through the closed-vent system and to the scrubber for control in accordance with Section III.C.9. You must record the purging power (such as purging time and compressor capacity) data during each purging process and retain such recorded data at the facility. **(e)** You must install a vapor and gas monitoring device (such as a photoionization detector (PID), a flame ionization detector (FID), or other similar unit) in the FP area to continuously monitor volatile organic compounds in the air emitted from the FP during cake removal activities. You must set the alarm on the monitoring device to the appropriate level to protect worker safety and to record the volatile organic emissions from the FP unit.

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and III.C.e), pp.21-22 (comment on Draft Permit condition III.C.9.f), p.22 (comments on Draft Permit conditions III.C.g, III.C.9.h, III.C.9.i).

[5]Vickery's Comments specifically addressed Section III.C.10. *See*, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, pp. 22-23 (comment on Draft Permit condition III.C.10).

[6]Vickery's comments to the Draft Permit specifically addressed Section III.C.11. *See*, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, pp.19-23, regarding EPA's determination that the T-Tanks do not comply with 40 C.F.R. §264.1084(c)(iii)(A).

[7]Vickery's Comments specifically addressed Sections III.D.3 and III.D.3.a, III.D.3.b, III.D.3.c and III.D.3.e. *See*, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, p.24 (comment on III.D.3.a), p.25 (comments on Draft Permit conditions III.D.3.b and III.D.3.c), pp. 25-26 (comments on Draft Permit condition III.D.3.e).

(6) **III.E.2**[8]- you must prepare and maintain records for miscellaneous units in the same manner as required for tanks under 40 C.F.R. §264.1089(b)(2)(iv) and (e).

(7) **III.E.3**[9]- you must comply with all reporting requirements for the scrubber under 40 C.F.R. §264.1090(c) and (d).

II. THRESHOLD PROCEDURAL REQUIREMENTS

As set forth herein, the threshold procedural requirements for EAB review under 40 C.F.R. Part 124 are satisfied. Vickery filed comments on the draft permit on November 21, 2018 well within the public comment period.[10] Thus, Vickery has standing to seek review of the 2019 Permit per 40 C.F.R. §124.19(a)(2). As demonstrated in Section I above, per 40 C.F.R. § 124.19(a)(4)(ii), the issues raised in this petition were previously raised in Vickery's Comments on the draft 2019 Permit and, therefore, were preserved for review.

In Section V below, Vickery provides specific citations to each relevant comment on the draft permit and each corresponding response in EPA's response to comments and explains why EPA's response to the comment was clearly erroneous or otherwise warrants review, in compliance with 40 C.F.R. § 124.19(a)(4)(i)-(ii).

III. FACTUAL AND STATUTORY BACKGROUND

Vickery owns and operates the Facility which is a regulated hazardous waste treatment, storage and deep well injection disposal facility located in Vickery, Ohio. The Facility receives liquid industrial wastes and liquid hazardous wastes for treatment, storage and disposal. The aqueous wastes are filtered, blended, and then disposed of through Class I hazardous underground

[8]Vickery's Comments specifically addressed Section III.E.2. *See*, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, p.26 (comment on Draft Permit condition III.E.2).

[9]Vickery's Comments specifically addressed Section III.E.3. *See*, Admin. R. 9, Vickery's Comments for Draft RCRA Permit, p.26 (comment on Draft Permit condition Section III.E.3).

[10]*See*, Admin. R., 9, Vickery's Comments. *See*, Attachment B. Vickery was the only entity to submit comments during the public comment period.

injection wells. The Facility includes the following structures and equipment: (1) Truck unloading facility (four V-Tanks); (2) Six Treatment and Storage Tanks (T-1, T-2, T-5, T-6, T-9, and T-10) referred to as the T-Tanks; (3) Five filtered acid tanks; (4) Filtration Units/Miscellaneous Units; and (5) Yard piping.

Pursuant to Section 3004(n) of RCRA, U.S. EPA has promulgated regulations to control air emissions from hazardous waste treatment, storage, and disposal facilities. EPA has promulgated a series of regulations to implement these requirements. These regulations control air emissions from certain process vents and equipment leaks (Parts 264, Subparts AA and BB), as well as air emissions from certain tanks, containers, and surface impoundments (Subpart CC).[11]

Since it began its operations at the Facility, Vickery has received three RCRA permits: October 1994, April 2005,[12] and the current 2019 Permit. The Subpart CC standards became effective December 6, 1996. Since the Subpart CC regulations became effective, there have been no operational or design changes at the Facility regarding the issues raised in this appeal.

The Final RCRA State Permit was issued by the Ohio Environmental Protection Agency ("Ohio EPA") in March 2012.[13] Vickery submitted the Part B Permit Renewal Application on September 12, 2014.[14] Vickery submitted the additional Subparts AA, BB and CC portions of its renewal application on May 22, 2015.[15] EPA issued its Fact Sheet of the Draft RCRA Permit and

[11]On June 30, 1989, the State of Ohio received final authorization according to Section 3006 of RCRA, 42 U.S.C. §6926, and 40 C.F.R. Part 271, to administer the pre-Hazardous and Solid Waste Amendments of 1984 ("HSWA") RCRA program. The State of Ohio has also received final authorization to administer certain additional RCRA requirements on several occasions since then. EPA has not yet authorized the State of Ohio to administer certain HSWA regulations, including the air emission standards for equipment leaks (40 C.F.R. Part 264, Subpart BB) and tanks and miscellaneous units (40 C.F.R. Part 264, Subpart CC). *See*, 2019 Permit (Attachment A).

[12]The EPA RCRA 2005 Permit issued to Vickery. (*See*, Attachment C).

[13]*See*, Admin. R., 1, Final RCRA State Permit.

[14]*See*, Admin. R., 2, Part B Renewal Application.

[15]*See*, Admin. R., 3, Additional Subparts AA, BB and CC.

the draft RCRA Permit in October 2018 ("Draft Permit").[16] Vickery timely submitted written comments on the Draft Permit on November 21, 2018.[17] On November 30, 2018, Vickery submitted a permit modification request.[18] On December 7, 2018, Ohio EPA issued its Acknowledgement of the Permit Modification.[19] On September 6, 2019, EPA issued its "Response to Comments."[20] Also, on September 6, 2019, EPA issued the Final Federal RCRA Permit to Vickery.[21]

VI. ISSUES PRESENTED FOR REVIEW

This petition presents the following issues with the 2019 Permit for review:

1. **EPA has impermissibly determined that the T-Tanks do not comply with 40 C.F.R. §264.1084(c)(2)(iii)(A).** This issue concerns permit conditions III.C.8, III.C.8.a, III.C.8.b, III.C.9, III.C.9.a through III.C.9.i, III.C.10, III.C.11., III.E.2 and III.E.3

2. **EPA erroneously imposed performance standards for the air purging process (blow down) associated with the filter press.** This issue concerns permit conditions III.D.3 and III.D.3.a, III.D.3.b, III.D.3.c and III.D.3.e

3. **EPA erroneously imposed conditions for compliance with OSHA requirements in the 2019 Permit.** This issue concerns permit conditions III.D.3 and III.D.3.a, III.D.3.b, III.D.3.c and III.D.3.e

[16] *See*, Admin. R., 7, (Fact Sheet of Draft RCRA Permit) and 8 (Draft RCRA Federal Permit).
[17] *See*, Admin. R, 9, Vickery's comments for draft RCRA Permit (Attachment B).
[18] *See*, Admin. R., 11, Permit Modification Request.
[19] *See*, Admin. R., 12, Acknowledgment of the Permit Modification.
[20] *See*, Admin. R., 13, Response Summary (Attachment D).
[21] *See*, Admin. R., 14, 2019 Permit (Attachment A).

V. ARGUMENT

A. EPA's Determination that the Treatment Tanks Do Not Comply with 40 C.F.R. § 264.1084(c)(2)(iii)(A) is Clearly Erroneous

The Facility's waste storage and treatment tank farm system consists of six tanks, a total of two 100,000 gallon tanks and a total of four 200,000 gallon tanks (*i.e.*, the "T-Tanks").[22] Each of the T-Tanks has a fixed roof.[23] Each of the T-Tanks are equipped with a Level 1 pressure-vacuum relief valve conservation vent ("Conservation Vent") that vents to the atmosphere. Conservation Vents Number 1-6 are designed to ensure the protection of the integrity of the physical tank.[24]

Each T-Tank is connected to a head gas manifold system. The head gas manifold system is a gas distribution system with piping that serves to bring many junctions into one place. The piping associated with the head gas manifold system collects and distributes the head gas in the T-Tanks. The head gas manifold system allows vapor from tanks being filled to move to tanks that are being emptied (referred to a vapor balance system). The head gas manifold system transitions into a single line (*i.e.*, pipe). On that single line is Conservation Vent Number 7. Gases only vent out of the T-Tank farm head gas manifold system when the combined head gas pressure is sufficient to open Conservation Vent Number 7.[25]

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[22] *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F) The Affidavits of Stephen Lonneman and Mohammed Ali are offered to correct factual errors by EPA in evaluating the operation and design of the T-Tanks. Vickery raised concerns regarding EPA's determination that the T-Tanks were not in compliance with 40 C.F.R. §264.1084(c)(2)(iii)(A) in comments to the Draft Permit. However, EPA's factual errors and misunderstanding of the T-Tank design only became apparent when EPA issued its Response to Vickery's Comments on September 6, 2019, the same day it issued the Final 2019 Permit (which was ten months after Vickery submitted it's Comments).

[23] *Id.*

[24] *See*, Affidavit of Mohammed Ali and the T-Tank Diagram which shows the locations of Conservation Vents 1-7. (Attachment F)

[25] *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F)

Gases that vent out of the T-Tank farm head gas manifold system through Conservation Vent Number 7 are vented through an acid vapor scrubber system.[26] The acid vapor scrubber system is used for removal of acid vapors, not for removal of organic vapors.[27]

The T-Tanks use Level 1 controls for controlling air pollutant emissions. Under the Subpart CC regulations, there are two ways owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls can be in compliance:

> "Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either" (40 CFR §264.1084(c)(2)(iii):
>
> **Option A (Closed System)-** "Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps or other open spaces in the closure devices or between the perimeter of the opening and the closure device"[28]
>
> Or
>
> **Option B (Closed Vent System Vented to Control Device)- "**Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous waste is managed in the tank…" (except during periods of inspection or maintenance)[29]

Since the inception of the Subpart CC regulations, the T-Tanks located at the Facility have had the same design and have been operated in the same manner.[30] Through issuance of the 2005 RCRA permit, EPA agreed that the tanks were fully compliant with Option A. Through issuance of the 2019 Permit, EPA changed course, and for the first time since the Subpart CC regulations became effective, determined the T-Tanks did not comply with Option A (closed system), but were

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[26] *Id.*
[27] *Id.*
[28] *See*, 40 CFR §264.1084(c)(2)(iii)(A)
[29] *See*, 40 CFR §264.1084(c)(2)(iii)(B)
[30] *See*, Affidavit of Stephen Lonneman (Attachment E)

in fact designed to comply with Option B (closed vent system vented to a control device for organic vapors).

1. Vickery's 2005 RCRA Permit and the Acid Vapor Scrubber System

Vickery's 2005 RCRA permit does include the following condition:

> "The T-tanks and the V-tanks shall be covered by a fixed roof and vented directly through the closed-vent system to the caustic scrubber in accordance with the following requirements in 40 CFR §264.1084(g)"[31]

The purpose of this condition was to ensure that any vapors emitted from the vapor mass balance system, which is discussed in detail below, received the added benefit of being directed through the acid vapor scrubber system for additional air pollution control. EPA recognized in issuing the 2005 RCRA Permit that the acid vapor scrubber system was not designed to destroy organics. Notably, in Condition IV.A in Vickery's 2005 RCRA Permit, EPA selectively imposed the following requirements in 40 CFR §§264.1084(g): (g)(1)(i), (g)(1)(ii), (g)(1)(iii) and (g)(2).[32] EPA did not impose condition (g)(1)(iv) which requires that the control device be designed and operated in accordance with the requirements of 40 CFR §264.1087 which mandates, among other requirements, reduction of total organic content by at least 95 percent by weight.[33] In 2005, EPA recognized the purpose of directing vapor emissions from the T-Tanks to the acid vapor scrubber system was not for reduction of volatile organic compounds, but rather to provide additional control of acid gases.

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[31] *See*, Condition IV.A in the Vickery 2005 RCRA Permit (Attachment C) Note: the term "caustic scrubber" refers to the acid vapor scrubber system.

[32] *See*, Condition IV.A.1 through IV.A.4 in the Vickery 2005 RCRA Permit (Attachment C).

[33] *See*, 40 C.F.R. §264.1087(c).

2. The T-Tank Design and Operation is Fully Compliant with Option A

Not only are the T-Tanks fully compliant with Option A (closed system), the T-Tank design exceeds the minimum requirements of Option A by incorporating a mass balance system which results in less organic emissions. Not only did EPA through issuance of the 2019 Permit erroneously conclude the T-Tanks were designed to comply with Option B (closed vent system vented to a control device for organic compounds), EPA imposed permit conditions that it suggested in its response to comments would allow the T-Tanks to comply with Option A.[34] As discussed below, EPA's suggestion and corresponding condition in the 2019 Permit would actually result in greater organic emissions than maintaining the T-Tanks' current mass balance system.

In compliance with 40 C.F.R. §264.1084(c)(2)(ii), each T-Tank is equipped with a fixed roof and there are no visible cracks, holes, or other open spaces between the roof section joints or between the interface of the roof edge and the tank wall.[35] In addition, in full compliance with 40 C.F.R. §264.1084(c)(2)(iii)(A)(*i.e.*, Level 1 Option A), each T-Tank is equipped with a closure device designed to operate such that when the closure devices are secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure devices or between the perimeter of the opening and the closure device.[36]

EPA's confusion appears to lie with the design of the head gas manifold system associated with the T-Tanks mass balance system. EPA states in response to Comment 11 the following:

> "In other words, the tanks are currently configured to comply with the option set forth in 40 C.F.R. §264.1084(c)(2)(iii)(B). These tanks are currently operating with a closed-vent system that connects to a control device…Since the net exhaust of head gas from these tanks (T-1, T-2, T-5, T-6, T-9, and T-10) will only be vented to the atmosphere through the scrubber, as specified in Section D.2.2.5 of the Part B Application, EPA must regulate the closed-vent system and control device (scrubber) to control the vapor emissions from

[34] *See*, Condition III.C.11 in the 2019 Permit.

[35] *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F).

[36] *Id.*

> the tanks. Without complying with the requirements of the closed-vent and control device, there is no guarantee that vapors vented from these tanks are properly controlled. Unless the vent connections are sealed off (discussed below), Level 1 tanks that are built with Level 2 controls must comply with the requirements associated with the installed controls…However, EPA acknowledges that Vickery has an option of closing the shut-off valve in the closed-vent or dismantling the closed-vent and control device and complying with the first option set forth in 40 C.F.R. §264.1084(c)(2)(iii)(A).” (emphasis added)[37]

EPA’s Comment 11 response demonstrates a lack of understanding of the design and operation of the T-Tanks. Contrary to EPA’s characterization in its response to Comment 11 that “there is no guarantee that vapors vented from these tanks are properly controlled,” gases only vent out of the T-Tank farm head gas manifold system when the combined head gas pressure is sufficient to open Conservation Vent Number 7 located inline on the manifold system.[38] Therefore, vapors are only released from the T-Tanks if pressure causes Conservation Vent 7 to open. As a result, vapor emissions are, in fact, properly controlled.

40 CFR §264.1084(c)(2)(iii) specifically states that “each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either” (emphasis added) in compliance with Option A (closed system) or Option B (closed vent system vented to a control device for organic vapors). The Facility’s head gas manifold system is compliant with Option A, as Conservation Vent 7 ensures that the T-Tanks are equipped with “a closure devices designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps or other open spaces in the closure devices or between the perimeter of the opening and the closure device.”[39]

The Facility’s T-Tank head gas manifold system results in significantly less organic vapor emissions than if each individual tank was equipped with its own individual conservation vent

[37] *See*, Admin. R. 13, EPA Response Summary, p. 5-6 (EPA Response to Comment 11).
[38] *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F).
[39] *See*, 40 CFR §264.1084(c)(2)(iii)(A).

pressure relief valve and there was no head gas manifold system (*i.e.*, there was no mass balance system on the T-Tanks). The head gas manifold system reduces the total T-Tank farm emissions by allowing vapors from tanks being filled to move to tanks that are being emptied which is referred to as a vapor balance system.[40] By design of the head gas manifold system, gases in the T-Tanks only vent when Conservation Vent 7 is activated at which time gases are vented through the acid vapor scrubber.[41] During normal operations, the only time Conservation Vent Number 7 is activated is when waste is being unloaded from trucks at a rate greater than the rate at which waste is being removed from the tank farm system.[42]

The T-Tank design by which the mass balance system is controlled by Conservation Vent Number 7 is fully compliant with Option A (closed system). EPA specifically addressed the use of conservation vents in the preamble to the Subpart CC rules stating the following:

> "In response to commenters' concerns that the subpart 1994 rules (inadvertently) required that a conservation vent must discharge through a closed-vent system to a control device, the revised rule states that a pressure relief device, such as a conservation vent which vents to the atmosphere, is allowed for the purpose of maintaining the tank internal pressure in accordance with tank design specifications. Normal operating conditions that might require a pressure relief device to open include internal pressure buildup as a result of loading operations or diurnal ambient temperature fluctuations."[43]

As EPA's comments in the preamble make clear, use of a conservation vent to control emissions is acceptable. Consistent with EPA's statements in the preamble, gases only vent out of the T-Tank farm head gas manifold system when the combined head gas pressure is sufficient to open Conservation Vent Number 7 located inline on the manifold system. As detailed above, during normal operations, the only time Conservation Vent Number 7 is activated is when waste is being

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[40] *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F)
[41] *Id.*
[42] *Id.*
[43] *See*, 61 Fed. Reg. at 59944, November 25, 1996

unloaded from trucks at a rate greater than the rate at which waste is being removed from the T-Tank farm system which is consistent with EPA's statements in the preamble.

3. The T-Tank's Mass Balance System Exceeds Option A Control Requirements

The T-Tank's vapor balance system is a more environmentally beneficial design than a tank design that simply has conservation vents on each individual tank with no head gas manifold system.[44] The head gas manifold system results in less volatile organic compound emissions to the atmosphere than if there was no vapor balance system and each T-Tank directly vented to the atmosphere through its individual Conservation Vent.[45]

EPA's response to Comment 11 also states that "Vickery has an option of closing the shut-off valve in the closed-vent or dismantling the closed-vent and control device and complying with the first option set forth in 40 C.F.R. §264.1084(c)(2)(iii)(A)."[46] EPA included a modification to Condition III.C.11 of Vickery's 2019 Permit that allowed Vickery to remove the head gas manifold system (*i.e.*, "dismantling the closed-vent and control device") to comply with Option A. By dismantling the head gas manifold system, the T-Tank farm vapor emissions would no longer be controlled using the vapor balance system which would result in greater vapor emissions to the atmosphere.

If Conservation Vent Number 7 opens due to pressure caused when the unloading rate of waste from trucks exceeds the rate of waste removal from the tank farm system, vapors are vented through the acid scrubber which provides additional control of acid gases compared to allowing

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44 A tank design without a vapor balance head gas manifold system can be fully compliant with Option A (closed system). Under the Subpart CC regulations, Level 1 systems equipped with pressure-vacuum relief valves, conservation vents, or a similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. *See*, 40 C.F.R. §264.1084(c)(3)(ii)

45 *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F).

46 *See*, EPA response to Comment 11.

the individual tanks to directly vent to the atmosphere.[47] The Facility's acid vapor scrubber is designed to remove acid gases from tank head space by contact with alkaline water.[48] The alkaline water has a pH ranging from 8 to 12.[49] The acid vapor scrubber is designed for removal of acid gases, not for removal of organic vapors.[50]

By directing the vapors that are released when the combined head gas pressure in the T-Tanks is sufficient to open Conservation Vent Number 7 to the acid vapor scrubber, Vickery provides additional control of acid gas emissions that could otherwise be directly vented to the atmosphere in compliance with Option A (closed system). Dismantling the head gas manifold system on the T-Tanks, as suggested by EPA in Comment 11, would not only eliminate the vapor balance system, it would also eliminate the additional pollution control provided by the acid vapor scrubber. EPA recognized the added benefit of the acid vapor scrubber system when issuing the 2005 RCRA Permit which is why it included a condition requiring vapors from the T-Tank mass balance system to be directed through the acid vapor scrubber system.

For the reasons discussed above, Vickery submits that its T-Tank head gas manifold system, which controls vapor emissions from the T-Tanks using the mass balance system, is in full compliance with 40 CFR §264.1084(c)(2)(iii)(A). Contrary to EPA's conclusion, the head gas manifold system does prevent vapor emission except when the combined head gas pressure is sufficient to open Conservation Vent Number 7. In fact, the mass balance system to control vapor results in less vapor emissions than if each individual tank solely relied on its own Conservation Vent (which would still be compliant with 40 CFR §264.1084(c)(2)(iii)(A)). Finally, the

[47] *See*, Affidavits of Stephen Lonneman and Mohammed Ali (Attachments E and F).
[48] *Id.*
[49] *Id.*
[50] *Id.*

additional treatment the acid vapor scrubber provides further enhances the pollution controls on the T-Tanks that otherwise could be directly vented to the atmosphere in full compliance with 40 CFR §264.1084(c)(2)(iii)(A).

B. EPA Erroneously Imposed Performance Standards for the Air Purging Process (Blow Down) Associated with the Filter Press in the 2019 Permit

EPA misconstrues the purpose of the "blow down" process as intended to remove volatile organic compounds contained in the solid filter cakes in the filter press. In fact, as discussed in detail below, the purpose of the blow down process it to displace clean water in the filter cake in order to facilitate cleaning of the filter press.

Condition III. D.3(c) in the 2019 Permit requires Vickery to perform an air purging process (*i.e.*, blow-down process) in the filter press unit, before opening the filter press unit for each removal activity of the solid cakes, using an air compressor. Condition III. D.3(c) imposes performance condition that the blow-down process must be conducted for at least 20 minutes "in order to remove potential volatile organic compounds contained in the solid cakes" in the filter press unit. Condition III.D.3(c) states that Vickery must use an air compressor which has a design capacity of a minimum of 215 actual cubic feet per minute (ACFM). Finally, Condition III.D.3(c) states that the removal of volatile organic compounds from the solid cakes in the filter press must be routed to tanks with Option B (closed vent system vented to a control device).

The blow-down process has been conducted since the inception of the Subpart CC regulations. EPA did not impose any conditions regarding blow down in the 2005 RCRA permit.[51] For the first time since the inception of the Subpart CC regulations, EPA imposed Condition III.D.3(c) mandating the blow-down process to control volatile organic compounds.

[51] *See*, Vickery's 2005 RCRA Permit Section IV – Air Emissions Standards (40 CFR Part 264, Subpart CC). (Attachment C)

In Vickery's Comment on Condition III.D.3(c) ("Comment 29"), EPA does not cite to any specific provisions in the Subpart CC regulations as the basis for imposing the conditions set forth in Condition III.D.3(c), including mandating the blow down occur to control volatile organic compounds in the filter cake.[52] In fact, there is no regulatory basis in the Subpart CC regulations to justify Condition III.D.3(c).

In addition to lacking authority under the Subpart CC regulations, EPA's imposition of Condition III.D.(3)(c) shows a factual misunderstanding of the purpose of the blow-down process. Contrary to EPA's determination that the blow-down process is to control emission of volatile organic compounds, the true purpose of blow-down is to displace clean water in the filter cake in the filter press using air.

Prior to injection in the deep wells at Vickery, some liquid hazardous waste is sent to a recessed plate filter press.[53] The filter press is 70 ft3 constructed of polypropylene plates, covered with polypropylene filter cloth, mounted on a steel frame with a horizontal compression system.[54] Liquid hazardous waste is fed into the center of the plates and filtrate exists the press through four drain eyes.[55]

The filter press removes most of the precipitates and other suspended solids from the wastes prior to deep well injection.[56] As liquid waste passes through the filter press, precipitates and other suspended solids are retained on a cloth located inside the filter press unit.[57] The solids retained on the cloth inside the filter press are collectively referred to as filter cake.

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[52] *See*, Admin. R. 13, EPA's Response Summary, pp. 17-18 (EPA's Response to Comment 29).
[53] *See*, Affidavit of Stephen Lonneman. (Attachment E)
[54] *Id.*
[55] *Id.*
[56] *Id.*
[57] *Id.*

The filter press is a closed unit while in operation. When closed, the sealed filter press has no gaps or openings.[58] To minimize emissions of volatile organic compounds, the filter press is kept closed at all times except when filter cake is being removed from the unit during maintenance or during inspection.[59]

As filter cake accumulates, the filter press needs to be cleaned by removing the filter cake retained on the cloth.[60] As part of the cleaning process, in order to reduce volatile organic compound emissions, prior to opening the filter press to remove the filter cake, clean water is flushed through the filter cake to displace the free liquid waste which has been retained in the filter cake.[61] Once the clean water has been flushed through the filter cake, Vickery typically injects air using an air compressor for twenty (20) minutes to displace the clean water in the filter cake.[62] The process by which Vickery uses an air compressor to displace the clean water in the filter cake is referred to as "blow down."

Contrary to EPA's conclusion that Condition III.D.3(c), which mandates blow-down as needed to control emissions of volatile organic compounds, the purpose of blow down is to displace clean water in the filter cake prior to cleaning.[63] Due to the fact blow-down is used to displace clean water and not to control volatile organic compounds, EPA erroneously imposed Condition III.D.3(c) on the Facility.

Furthermore, Condition III.D.3(c) also mandates the blow down must occur every time prior to opening the filter press unit to remove filter cake. However, there are times when blow

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[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *Id.*
[62] *Id.*
[63] *Id.*

down cannot physically happen due to the nature of the filter cake.[64] Therefore, EPA acted unreasonably in mandating through Condition III.D.3(c) that blow down must occur every time filter cake is removed.

C. EPA Erroneously Imposed Requirements for Compliance with OSHA Requirements in the 2019 Permit

For the first time since the inception of the Subpart CC regulations, EPA imposed OSHA standards in the 2019 Permit. Specifically, Condition III.D.3(b) and (e) state the following:

> "(b) You must prepare and equip the necessary Personal Protection Equipment (PPE), including Self-Contained Breathing Apparatus (SCBA), for the workers who station in the FP, to manually remove the solid cakes from the FP unit, to comply with the appropriate Occupational Health Administration (OSHA) regulations.
>
> (e) You must install a vapor and gas monitoring device (such as a photoionization detector (PID), a flame ionization detector (FID, or other similar unit) in the FP area to continuously monitor volatile organic compounds in the air emitted from the FP during cake removal activities. You must set the alarm on the monitoring device to the appropriate level to protect worker safety and to record the volatile organic emissions from the FP unit."

In EPA's response to Vickery's Comments on Permit Conditions III.D.3(b) and III.D.3(e) ("Comment 28" and "Comment 30"), by which Vickery challenged EPA's legal authority to impose compliance obligations with OSHA regulations, EPA states that the Subpart CC regulations "may not capture all aspects of the operation of a unit subject to RCRA."[65] In its response to Comment 28, EPA cites to its "omnibus authority" to protect human health and the environment under Section 3005(c)(3) of RCRA (codified in 40 C.F.R. §270.32(b)(2)) as the legal basis to support inclusion of Condition III.D.3 imposing compliance obligations with the OSHA regulations.[66]

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[64] *Id.*

[65] *See*, Admin. R. 13, EPA's Response Summary, p.15 (EPA Response to Comment 28), p.19 (EPA Response to Comment 30).

[66] *Id.*

EPA has clearly exceeded its omnibus authority by imposing a condition mandating compliance with a regulation of another federal agency: OSHA. Congress described EPA's omnibus authority as the following:

> "[the omnibus authority] can also be used to incorporate new or better technologies or other new requirements in permits, where EPA intends to add such technologies or requirements to the regulations but has not yet issued a final regulatory amendment."[67]

As articulated by Congress, the scope of EPA's omnibus authority is to be limited to situations where EPA anticipates adoption of new technologies or requirements into new rulemaking but has not yet issued the final regulatory amendment. The use of the authority to reach outside of RCRA statutory and regulatory authority altogether and impose OSHA regulatory conditions in the 2019 Permit exceeds EPA's omnibus authority.

EPA also lacks any technical basis to support its conclusion that Conditions III.D.3(b) and (e) are necessary to protect worker safety. EPA "must articulate with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions."[68] In its Response to Comment 28, EPA cites to vapor level data from Vickery as its justification for "imposing requirements to mitigate inhalation exposure to vapors from volatile organic compounds (VOCs) such as benzene when workers manually remove solid cakes from the FP unit."

In fact, EPA has no data specifically measuring benzene air emissions in the enclosure room where the filter press is located. Rather, EPA relies on a one time reading from a hand held photoionization detector ("PID") which only measures total VOCs, not specifically benzene.[69]

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[67] *See,* legislative history at S.Rep No. 284, 98th Cong., 1st Sess. 31 (1983) referenced in EPA memorandum "*Use of Omnibus Authority to Control Emissions of Metal, HCL, and PICs from Hazardous Waste Incinerators*" from Sylvia Lowrance to Hazardous Waste Division Directors, Regions I-X dated February 27, 1989. (Attachment G)

[68] *See, In re Austin Powder Co.*, 6 E.A.D. 713, 720 (EAB 1997)(citing *In re GSX Services of South Carolina, Inc.*, 4 E.A.D. 451, 454 (EAB 1992).

[69] *See,* Admin. R. 13, EPA's Response Summary, p.15 (EPA Response to Comment 28).

EPA admits that it "cannot verify the quality-control prospect of this one-time monitoring data set using a rented PID device."[70] Furthermore, EPA admits it "cannot determine which compounds constituted the total VOC amount measured by the PID."[71]

Furthermore, EPA arbitrarily discounts the more reliable monitoring data which specifically measured benzene levels. Vickery provided personal industrial hygiene monitoring data collected with sampling pumps located on an employee over an 8-hour working time period.[72] The data recorded concentrations of benzene of 0.44 ppm are in full compliance with the OSHA Permissible Exposure Limit ("PEL") of 1 ppm.[73]

In an attempt to minimize the employee monitoring data showing compliance with OSHA's PEL for benzene, EPA cites to the National Institute for Occupational Safety and Health ("NIOSH") Recommended Exposure Limitation ("REL") of 0.1 ppm for benzene. However, NIOSH RELs are not regulatory standards. Rather, a REL, as the acronym states, are recommendations, with no legal effect.[74]

In its Response to Comment 28, EPA also cites to the "OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, US EPA, June 2015"[75] ("OSWER Vapor Intrusion Guidance") to justify Condition III.D.3(b).

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[70] *Id.*

[71] *Id.*

[72] *See*, Admin. R, 6, E-Mail Correspondence Letter 0- "April 30, 2018, E-mail from Vickery to EPA, Subject: Vickery additional information request." (Attachment I)

[73] *See*, Admin. R. 13, EPA's Response Summary, p.15 (EPA Response to Comment 28)

[74] *See*, 29 U.S.C. §671(C)(1) and NIOSH Pocket Guide to Chemical Hazards, DHHS (NIOSH) Publication No. 2005-149, September 2007. The introductory section titled "NIOSH Recommendations" states that "these recommendations are then published and transmitted to OSHA and the Mine Safety and Health Administration (MSHA) for use in promulgating legal standards." See, pg. vii. (Admin. R., 10) A copy of the NISOH Pocket Guide can be found at https://www.cdc.gov/niosh/npg/default.html

[75] *See*, Admin. R. 4, (OSWER Vapor Intrusion Guidance), a copy of the OSWER guidance can be found at https://www.epa.gov/vaporintrusion/technical-guide-assessing-and-mitigating-vapor-intrusion-pathway-subsurface-vapor

EPA recognizes that "OSHA's PELs are enforceable occupational exposure standards to protect workers from adverse effects of occupational exposure to airborne chemicals."[76] However, EPA goes on to state that the OSWER Vapor Intrusion Guidance notes that PELs are not intended to protect sensitive workers. EPA references this statement in the OSWER Vapor Intrusion Guidance to support the new conditions in the 2019 Permit pertaining to protecting workers from organic vapor emissions when the filter press is opened.[77] The following disclaimer in EPA's OSWER Vapor Intrusion Guidance clearly demonstrates that the guidance cannot be used to justify EPA's exercise of its omnibus authority:

> "This guidance document does not impose any requirements or obligations on the EPA, the states or tribal governments, or the regulated community. Rather, the sources of authority and requirements for addressing subsurface vapor intrusion are the relevant statutes and regulations. Decisions regarding a particular situation should be made based upon statutory and regulatory authority."[78]

Despite this clear disclaimer on the OSWER Vapor Intrusion Guidance, EPA attempts to use the guidance to justify its exercise of its omnibus authority. As the guidance document makes clear, requirements pertaining to vapor intrusion are to be based upon the actual regulations, not this guidance document.

Furthermore, EPA takes the OSWER Vapor Intrusion Guidance document completely out of context. The information contained in the guidance document is intended to cover vapor intrusion scenarios, not employee exposure when operating equipment.[79]

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[76] *See*, Admin. R. 13, EPA's Response Summary, p.15 (EPA Response to Comment 28).

[77] *Id.*

[78] *See*, Admin. R. 4,OSWER Vapor Intrusion Guidance, p.i (OSWER Vapor Intrusion Guidance Disclaimer).

[79] *See*, Admin. R. 4,OSWER Vapor Intrusion Guidance, p.xi "vapor intrusion is the general term given to migration of hazardous vapors from any subsurface vapor source, such as contaminated soil or groundwater, through the soil and into an overlying building or structure."

EPA's use of omnibus authority should not be used to turn guidance documents into regulations except in very rare circumstances, such as when guidance documents identify current EPA regulations that may need to be supplemented.[80] Clearly, EPA's omnibus authority is not meant to turn guidance documents intended for separate federal agencies, such as the NIOSH recommendations, into enforceable conditions in an EPA RCRA permit.

Overall, EPA does not cite to any data that indicates that workers at the Facility who clean filter cake from the filter press are exposed to unsafe levels of volatile organic compounds. In fact, the most reliable data indicates full compliance with the OSHA PEL applicable to benzene. In an attempt to circumvent the actual data, EPA cites to guidance documents that have no force of law: NIOSH REL and the OSWER Vapor Intrusion Guidance. For the reasons set forth above, Conditions III.D.3(b) and (e) should be removed from the 2019 Permit.

[80] *See*, EPA memorandum titled "*Ecolotec Permit Remand Order and Use of the Omnibus Provision*" from Joseph S. Cara, Director Permits and State Programs Division to B.G. Constantelos, Director of Waste Management Division, Region V dated March 2, 1989. (Attachment H) In the memorandum EPA states "The most obvious use of omnibus authority is to impose additional permit conditions reflecting standards that have been proposed but are not yet in effect. Another use of the omnibus might be to impose permit conditions not required by the regulations but detailed in guidance documents issued by the Agency. This later example is not, however, a broad directive to turn guidance into regulatory requirements. Rather, it would be most appropriate when guidance specifically identifies particular situations where current generic regulations might need to be supplemented. In any case, while there will be other circumstances in which the omnibus authority can and should be used to impose permit conditions or deny permits, such situations should be uncommon."

VI. CONCLUSION AND REQUEST FOR ORAL ARGUMENT

For the foregoing reasons, Vickery Environmental, Inc. respectfully requests that the EAB review and remand or, in the alternative, modify the EPA's final Permit decision. Pursuant to 40 C.F.R. §124.16, Vickery Environmental, Inc. respectfully requests the automatic stay of all contested permit conditions identified in Section I.

In addition, based on the complexities of the issues raised herein, Vickery requests an opportunity for oral argument in front of the EAB.

Respectfully Submitted,

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Date: October 7, 2019.

VII. STATEMENT OF COMPLIANCE WITH WORD LIMITATION

Undersigned counsel for Vickery Environmental, Inc. hereby certifies that this petition complies with the word limit of 40 C.F.R. § 124.19(d)(3) because, excluding the parts of the petition exempted by 40 C.F.R § 124.19(d)(3), this petition contains approximately 7,868 words which is less than 14,000 words.

/s/ Joseph P. Koncelik

VIII. LIST OF ATTACHMENTS

Attachment A- Final RCRA Federal Permit issued September 6, 2019 (Admin. R., 14)

Attachment B- Vickery's comments for draft RCRA Permit dated November 21, 2018 (Admin. R., 9)

Attachment C- Vickery 2005 Final RCRA Federal Permit issued April 14, 2005

Attachment D- EPA's Response Summary to Vickery's Comments on the Draft Permit dated September 6, 2019 (Admin. R., 13)

Attachment E- Affidavit of Stephen Lonneman

Attachment F- Affidavit of Mohammed Ali (P.E.)

Attachment G- EPA memorandum "*Use of Omnibus Authority to Control Emissions of Metal, HCL, and PICs from Hazardous Waste Incinerators*" from Sylvia Lowrance to Hazardous Waste Division Directors, Regions I-X dated February 27, 1989

Attachment H- EPA memorandum titled "*Ecolotec Permit Remand Order and Use of the Omnibus Provision*" from Joseph S. Cara, Director Permits and State Programs Division to B.G. Constantelos, Director of Waste Management Division, Region V dated March 2, 1989

Attachment I- July 2016-April 2019 E-mail Correspondence (Admin. R., 6)

CERTIFICATE OF SERVICE

I hereby certify, pursuant to the rules of the Environmental Appeals Board of the U.S. Environmental Protection Agency, that on October 7, 2019, the forgoing was filed electronically with the Clerk of the Environmental Appeals Board using the EAB eFiling System. The foregoing is also being served by next day Federal Express in hard copy form on the following:

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