



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

MAY 29 2015

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

David Brooks, General Manager
POET Biorefining - Cloverdale, LLC
D/b/a/ POET Biorefining - Cloverdale
2265 East County Road 800 South
Cloverdale, Indiana 46120

Re: Notice and Finding of Violation
POET Biorefining - Cloverdale
Cloverdale, Indiana

Dear Mr. Brooks:

The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to POET Biorefining - Cloverdale, LLC, d/b/a POET Biorefining - Cloverdale (POET-Cloverdale or you) under Section 113(a) of the Clean Air Act, 42 U.S.C. § 7413(a). We find that you are violating the Indiana State Implementation Plan at your Cloverdale, Indiana facility.

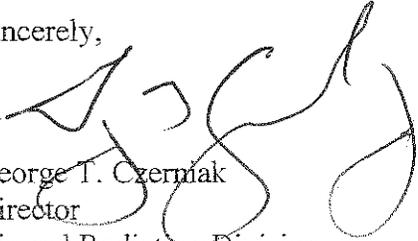
Section 113 of the Clean Air Act, 42 U.S.C. § 7413(a), gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/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 NOV/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.

The EPA contact in this matter is Manoj P. Patel. You may call him at (312) 353-3565 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. Czermiak
Director
Air and Radiation Division

Enclosure

cc: Phil Perry, Branch Chief
Office of Air Quality/Compliance & Enforcement Branch
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:)	
)	
POET Biorefining - Cloverdale, LLC)	NOTICE OF VIOLATION and
d/b/a/ POET Biorefining – Cloverdale)	FINDING OF VIOLATION
Cloverdale, Indiana)	
)	EPA-5-15-IN-07
Proceedings Pursuant to)	
the Clean Air Act)	
42 U.S.C. §§ 7401 et seq.)	

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation and Finding of Violation (NOV/FOV or Notice) under Section 113(a) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a). The authority to issue this NOV/FOV has been delegated to the Regional Administrator of EPA Region 5 and redelegated to the Director, Air and Radiation Division. EPA finds that POET-Cloverdale has violated the Indiana State Implementation Plan (SIP), as follows:

Statutory and Regulatory Background

Part 70 Operating Permit Program

1. Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to EPA an operating permit program (Title V Permit Program). On December 4, 2001, 66 Fed. Reg. 62969, EPA granted Indiana final approval of its Title V Permit Program, effective November 30, 2001.
2. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 70.7(b), provide that, after the effective date of any permit program approved or promulgated under Title V of the Act, no source subject to Title V may operate except in compliance with a Title V permit.
3. 40 C.F.R. § 70.3 provides that the requirements of Part 70 apply to any major source located in a state that has received whole or partial approval of its Title V program.
4. On March 29, 2007, 72 Fed. Reg. 14678, EPA approved 326 IAC 2-6-4, Emission Reporting requirements, to be consistent with the emission statement program requirements for stationary sources in Section 182 (a)(3)(B) of the Act, 42 U.S.C. § 7511a(a)(3)(B), as a revision to the Indiana SIP at 40 C.F.R. § 52.770(c)(178).

5. 326 IAC 2-6-4 states that source shall report estimated actual emissions in the emission statement. The emission statement must contain a certification by a responsible official that the information in the emission statement is accurate based on reasonable estimates using data available to preparers and on a reasonable inquiry into records and person responsible for the operation of the source, and is true, accurate, and complete. Source must include emissions information for each process and actual emissions estimates must include upsets, downtime, fugitive emissions, and follow an emission estimation method. Emissions of volatile organic compounds (VOC) shall be reported as total VOC.
6. On February 20, 2008, 73 Fed. Reg. 9201-9203, EPA approved 326 IAC 8-5-6, fuel grade ethanol production at dry mills, to its VOC rules as a revision to the Indiana SIP at 40 C.F.R. § 52.770(c)(182).
7. 326 IAC 8-5-6(c)(1) states that the owner or operator of a fuel grade dry mill ethanol production plant shall install and operate a thermal oxidizer with an overall control efficiency of not less than 98% percent or resulting in a VOC concentration of not more than 10 parts per million (ppm).
8. 326 IAC 8-5-6(e)(1) provides that the owner or operator of a fuel grade ethanol dry mill production plant that was constructed or modified after April 1, 2007, that installs and operates a thermal oxidizer as its VOC control device, shall measure the three (3) hour average operating temperature of the oxidizer using a continuous temperature monitor. The 3-hour average temperature must be greater than or equal to the minimum operating temperature established during the plant's most recent compliance demonstration.
9. On June 26, 2012, the Indiana Department of Environmental Management (IDEM) issued POET-Cloverdale Title V Operating Permit No. T133-31145-00003. From November 5, 2010 thru June 26, 2012, POET-Cloverdale operated under the Federally Enforceable State Operating Permit (FESOP) with conditions, F133-28725-00003, and its subsequent revisions and amendments.
10. Part D.2.1(b)(1) of the Title V Permit limits fermentation process VOC emissions to 30.80 lbs/hr from scrubber CE012.
11. Part D.2.1(b)(2)-(3) of the Title V Permit limits fermentation process acetaldehyde emissions to 0.70 lb/hr and combined HAP emissions to 0.99 lb/hr from scrubber CE012.
12. Part D.3.2 (b) of the Title V Permit states that the overall efficiency for the regenerative thermal oxidizers (RTOs) CE015 and CE016 (including the capture and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.
13. Part D.3.1(a) of the Title V Permit limits carbon monoxide (CO) emissions from RTOs CE015 and CE016 to 24.40 lbs/hour.
14. Part D.3.10(c) of the Title V Permit requires POET-Cloverdale to operate both RTOs CE015 and CE016 at or above the 3-hour average temperature as observed during the latest compliant stack test.

15. Part B.24 of the Title V permit and 40 C.F.R. § 52.12 provide that, for the purpose of establishing whether or not a person has violated or in violation of any provision or condition of a permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test procedures or methods had been performed.
16. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), authorizes the Administrator to initiate an enforcement action whenever, among other things, the Administrator finds that any person has violated or is in violation of a requirement or prohibition of Title V of the Act, or any rule promulgated, issued or approved under Title V of the Act.

Factual Background

17. POET Biorefining-Cloverdale, LLC, d/b/a/ POET Biorefining–Cloverdale (POET-Cloverdale) owns and operates a fuel grade ethanol production dry mill facility at 2265 East County Road 800 South, Cloverdale, Indiana (the facility).
18. The facility includes: two (2) natural gas fired dried distillers grains with solubles dryers, identified as EU034 and EU035, with emissions venting to RTOs (CE015 and CE016) exhausting to stack SV014; one (1) DDGS fluid bed cooler, identified as EU038, with emissions vented to and controlled by RTOs (CE015 and CE016), one (1) fermentation process containing six (6) fermenters, identified as EU019 through EU024 and two (2) beer wells, identified as EU025 and EU026, with emissions controlled by a wet scrubber CE012; one mass preparation process consisting of one slurry tank EU017 and one yeast propagation tank EU018, with emissions controlled by a wet scrubber CE011; two (2) natural gas fired boilers, identified as EU036 and EU037, each with a rated heat input capacity of 145.30 million British thermal units (mmBtu) per hour with emissions vented to stacks SV015 and SV016, respectively.
19. On May 1, 2014, EPA issued a Request for Information under Section 114 of the Act, 42 U.S.C. § 7414, to the POET-Cloverdale facility.
20. On June 9 and July 9, 2014, POET-Cloverdale responded to EPA’s Request for Information.
21. Emissions from the fermentation processes are controlled by a packed-bed wet scrubber (CE012). Periods of downtime at the scrubber result in VOC emissions from fermentation being vented to the atmosphere.
22. The following table summarizes scrubber downtime when emissions from fermentations were directly vented to the atmosphere.

Date	Scrubber Downtime (Hours)
6/17/2011	72 hours
6/26-27/2011	15 hours
6/28-7/1/2011	108 hours
9/1/2011	11.50 hours

23. On August 30, 2011, POET-Cloverdale performed compliance emissions testing at the outlet of the scrubber CE012. The testing identified an emission rate of 6.10 pounds of VOC per hour, and 0.37 pounds of acetaldehyde per hour. Based on scrubber CE012's actual control efficiency of 99.42%, the uncontrolled emissions from fermentation processes are at least 1058.22 pounds of VOC per hour and 63.79 pounds of acetaldehyde per hour.
24. On August 17, 2011, and from November 15 through November 17, 2011, POET-Cloverdale performed several stack tests on RTOs CE015 and CE016.
25. The August 17, 2011 stack test results indicated that at RTOs CE015 and CE016, the facility had an overall VOC control efficiency of 96.28%, and a VOC concentration of 36.0 ppmv.
26. The November 15, 2011 test results indicated that at RTOs CE015 and CE016, the facility had an overall VOC control efficiency of 96.64%, and a VOC concentration of 26.30 ppmv.
27. The November 16, 2011 test results indicated that at RTOs CE015 and CE016, the facility had an overall VOC control efficiency of 97.40%, and a VOC concentration of 35.60 ppmv.
28. The November 17, 2011 test results indicated that at RTOs CE015 and CE016, the facility had an overall VOC control efficiency of 95.60%, and a VOC concentration of 42.90 ppmv.
29. The November 16, 2011 test results indicated that at RTOs CE015 and CE016, the facility emitted CO emissions of 26.50 lbs/hr.
30. The November 17, 2011 test results indicated that at RTOs CE015 and CE016, the facility emitted CO emissions of 105.00 lbs/hr.
31. The information provided by POET-Cloverdale demonstrated that on October 25, 2012, RTOs CE015 and CE016 achieved the 3-hour average temperature of 1675⁰ F during a compliance stack test.

32. POET-Cloverdale submitted combustion chamber temperature records for RTOs CE015 and CE016 which showed that 3-hour average temperature from June 27, 2013 through April 30, 2014 were below 1675⁰ F.

Violations

33. From June 17 through September 1, 2011, POET-Cloverdale operated fermentation operations during scrubber downtime and emitted VOC emissions in excess of the permitted limit of 25.64 lbs/hr as required by Title V Permit No. T133-31145-00003, Emission Limit D.2.1(b), which constitutes a violation of the Indiana SIP, Section 502(a) of the Act, 42 U.S.C. § 7661(a), and 40 C.F.R. § 70.7(b).
34. From June 17 through September 1, 2011, POET-Cloverdale operated fermentation operations during scrubber downtime and emitted acetaldehyde and total HAP emissions in excess of the permitted limit of 0.70 and 0.99 lb/hr, respectively, as required by Title V Permit No. T133-31145-00003, Emission Limit D.2.1(b), which constitutes a violation of the Indiana SIP, Section 502(a) of the Act, 42 U.S.C. § 7661(a), and 40 C.F.R. § 70.7(b).
35. The August 17, 2011, November 15, 2011, November 16, 2011, and November 17, 2011, stack test results demonstrate that at RTOs CE015 and CE016, the facility did not achieve a VOC control efficiency of 98%, as required by Title V Permit No. T133-31145-00003, Emission Limit D.3.2(b), which constitutes violation of the Indiana SIP, Section 502(a) of the Act, 42 U.S.C. § 7661(a), and 40 C.F.R. § 70.7(b).
36. The November 16 and November 17, 2011, stack test results demonstrate that at RTOs CE015 and CE016, the facility emitted CO in excess of the permitted limit of 24.40 lbs/hr as required by Title V Permit No. T133-31145-00003, Emission Limit D.3.1(a), which constitutes a violation of the Indiana SIP, Section 502(a) of the Act, 42 U.S.C. § 7661(a), and 40 C.F.R. § 70.7(b).
37. From June 27, 2013 through April 30, 2014, POET-Cloverdale operated RTOs CE015 and CE016 below the required 3-hour average temperature as specified in Title V Permit No. T133-31145-00003, Emission Limit of D.3.10(c), which constitutes a violation of the Indiana SIP, Section 502(a) of the Act, 42 U.S.C. § 7661(a), and 40 C.F.R. § 70.7(b).

Environmental Impact of Violations

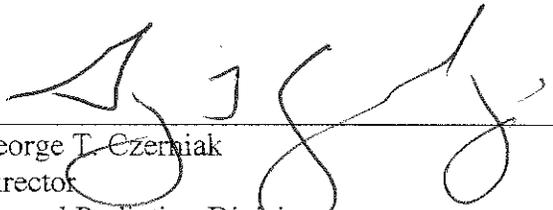
38. VOC pollution causes a variety of health and environmental impacts, such as acid rain, global warming, water quality deterioration, and visual impairment. VOC plays a major role in the atmospheric reactions that produce ozone. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.
39. The violations cited above resulted in increased emissions of hazardous air pollutants, particularly acetaldehyde. Acute expose to acetaldehyde results in irritation of the eyes, skin, and respiratory tract, as well as erythema, coughing, pulmonary edema, and

necrosis. Chronic exposure to high levels of acetaldehyde has been linked to effects similar to alcoholism, slight anemia, as well as nasal, trachea, and kidney pathology. EPA lists acetaldehyde as a probable human carcinogen.

- 40. CO can cause harmful health effects by reducing oxygen delivery to the body's organs and tissues. The health threat from lower levels of CO is most serious for those who suffer from heart disease, like angina, clogged arteries, or congestive heart failure. High levels of CO can affect even healthy people. People who can breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

5/29/15

Date



George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

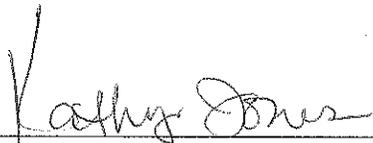
I, Loretta Shaffer, certify that I sent a Notice and Finding of Violation, No. EPA-5-15-IN-07, by Certified Mail, Return Receipt Requested, to:

David Brooks, General Manager
POET Biorefining-Cloverdale, LLC
d/b/a/ POET Biorefining-Cloverdale
2265 East County Road 800 South
Cloverdale, Indiana 46120

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

Phil Perry, Chief
Compliance and Enforcement Branch
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, Room IGCN 1003
Indianapolis, Indiana 46206-6015

On the 1st day of June, 2015.



for Loretta Shaffer
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7014 2870 0001 9580 4930