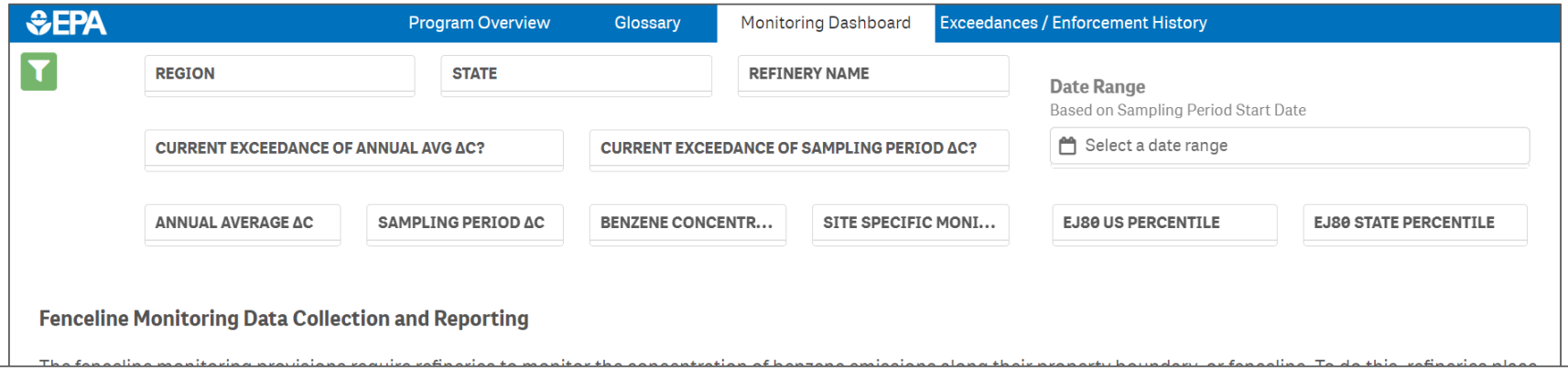
Fenceline Monitoring

Cristina Azcoitia

Dec. 6, 2023

King & Spalding

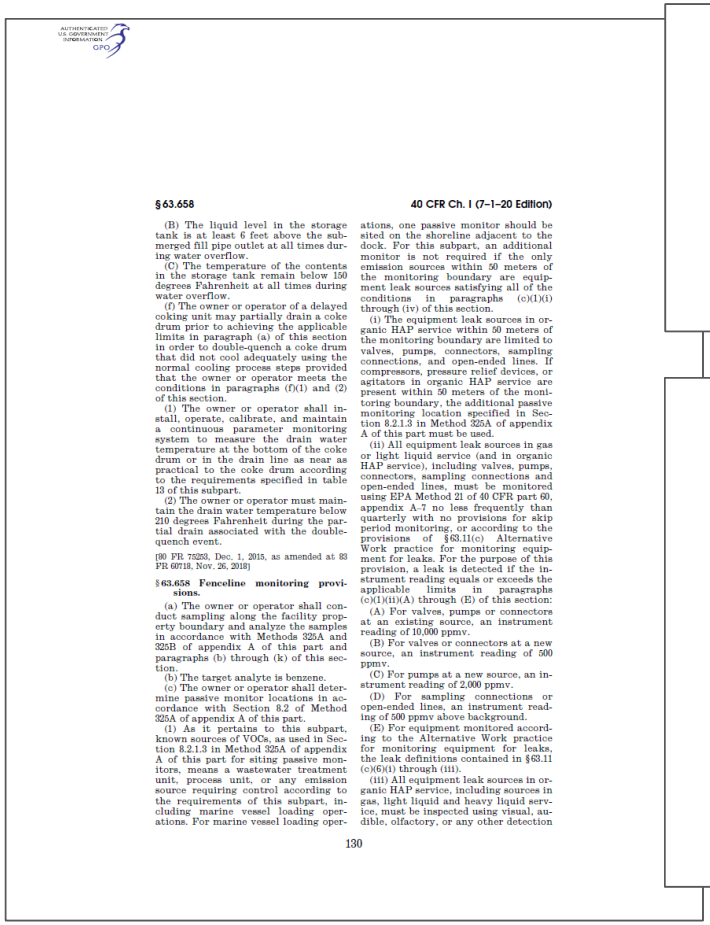
What is Fenceline Monitoring?



Fenceline Monitoring Data Collection and Reporting

The fenceline monitoring provisions require refineries to monitor the concentration of benzene emissions along their property boundary, or fenceline. To do this, refineries place passive diffusion tubes along their boundary, each tube collecting a continuous 2-week sample. Refineries use the measurements to calculate a **benzene concentration difference (Δc)** for each sampling period by subtracting the lowest individual monitor reading from the highest individual monitor reading. Refineries then calculate a rolling **annual average Δc**, meaning an average Δc that is updated every 2-week sampling period. Refineries report monitoring results to EPA on a quarterly basis. Quarterly reports must be submitted no later than 45 calendar days following the end of the reporting period, after which there is a 30-day period for data quality review before the results are made public.

What is the Law?



§ 63.658 40 CFR Ch. I (7–1–20 Edition)

(B) The liquid level in the storage tank is at least 6 feet above the submerged fill pipe outlet at all times during water overflow.

(C) The temperature of the contents in the storage tank remain below 150 degrees Fahrenheit at all times during water overflow.

(f) The owner or operator of a delayed coking unit may partially drain a coke drum prior to achieving the applicable limits in paragraph (a) of this section in order to double-quench a coke drum that did not cool adequately using the normal cooling process steps provided that the owner or operator meets the conditions in paragraphs (f)(1) and (2) of this section.

(1) The owner or operator shall install, operate, calibrate, and maintain a continuous parameter monitoring system to measure the drain water temperature at the bottom of the coke drum or in the drain line as near as practical to the coke drum according to the requirements specified in table 13 of this subpart.

(2) The owner or operator must maintain the drain water temperature below 210 degrees Fahrenheit during the partial drain associated with the double-quench event.

[80 FR 75253, Dec. 1, 2015, as amended at 83 FR 60718, Nov. 26, 2018]

§ 63.658 Fenceline monitoring provisions.

(a) The owner or operator shall conduct sampling along the facility property boundary and analyze the samples in accordance with Methods 325A and 325B of appendix A of this part and paragraphs (b) through (k) of this section.

(b) The target analyte is benzene.

(c) The owner or operator shall determine passive monitor locations in accordance with Section 8.2 of Method 325A of appendix A of this part.

(1) As it pertains to this subpart, known sources of VOCs, as used in Section 8.2.1.3 in Method 325A of appendix A of this part for siting passive monitors, means a wastewater treatment unit, process unit, or any emission source requiring control according to the requirements of this subpart, including marine vessel loading operations. For marine vessel loading operations, one passive monitor should be sited on the shoreline adjacent to the dock. For this subpart, an additional monitor is not required if the only emission sources within 50 meters of the monitoring boundary are equipment leak sources satisfying all of the conditions in paragraphs (c)(1)(i) through (iv) of this section.

(i) The equipment leak sources in organic HAP service within 50 meters of the monitoring boundary are limited to valves, pumps, connectors, sampling connections, and open-ended lines. If compressors, pressure relief devices, or agitators in organic HAP service are present within 50 meters of the monitoring boundary, the additional passive monitoring location specified in Section 8.2.1.3 in Method 325A of appendix A of this part must be used.

(ii) All equipment leak sources in gas or light liquid service (and in organic HAP service), including valves, pumps, connectors, sampling connections and open-ended lines, must be monitored using EPA Method 21 of 40 CFR part 60, appendix A–7 no less frequently than quarterly with no provisions for skip period monitoring, or according to the provisions of §63.11(c) Alternative Work practice for monitoring equipment for leaks. For the purpose of this provision, a leak is detected if the instrument reading equals or exceeds the applicable limits in paragraphs (c)(1)(ii)(A) through (E) of this section:

(A) For valves, pumps or connectors at an existing source, an instrument reading of 10,000 ppmv.

(B) For valves or connectors at a new source, an instrument reading of 500 ppmv.

(C) For pumps at a new source, an instrument reading of 2,000 ppmv.

(D) For sampling connections or open-ended lines, an instrument reading of 500 ppmv above background.

(E) For equipment monitored according to the Alternative Work practice for monitoring equipment for leaks, the leak definitions contained in §63.11 (c)(6)(i) through (iii).

(iii) All equipment leak sources in organic HAP service, including sources in gas, light liquid and heavy liquid service, must be inspected using visual, audible, olfactory, or any other detection

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Subpart CC—National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries

SOURCE: 60 FR 43260, Aug. 18, 1995, unless otherwise noted.

§ 63.658 Fenceline monitoring provisions.

(a) The owner or operator shall conduct sampling along the facility property boundary and analyze the samples in accordance with Methods 325A and 325B of appendix A of this part and paragraphs (b) through (k) of this section.

(b) The target analyte is benzene.

(c) The owner or operator shall determine passive monitor locations in accordance with Section 8.2 of Method 325A of appendix A of this part.

Consent Orders and Settlements

a. **By January 13, 2020, BD shall submit a monitoring plan and schedule to EPD detailing the indoor air monitoring and outdoor fence line monitoring it will conduct at the GDC, using the procedures described in the "Estimation of Fugitive Ethylene Oxide Emissions Report." At a minimum, indoor air and outdoor fence line monitoring shall be conducted weekly. The monitoring plan shall include the date, time, and specific location of the indoor and outdoor fence line monitoring. In the event the date, time, or specific location of the indoor or outdoor fence line monitoring at the GDC are expected to change, BD shall provide 24-hour notice of such change and the basis for such change to EPD, and any such change will be reflected in the air quality sampling results provided to EPD.**

1. FENCELINE MONITORING.

A. The Appellants alleged in their August 3, 2015 Appeal of Shell's Plan Approval, among other things, that the Plan Approval does not include requirements to control fugitive emissions that comply with the federal Clean Air Act regulatory standard known as the "Lowest Achievable Emission Rate" or "LAER" because it did not include more stringent leak detection and repair work practices to minimize emissions from sources, including fenceline monitoring. While Shell does not agree that such additional work practices are required by law, are required by "LAER," or are otherwise necessary, Shell agrees to implement a fenceline monitoring program ("FLM program") in accordance with this Paragraph 1 and the criteria, terms, and procedures in Appendix A, which are incorporated herein by reference.

II. **Fence line monitoring:**

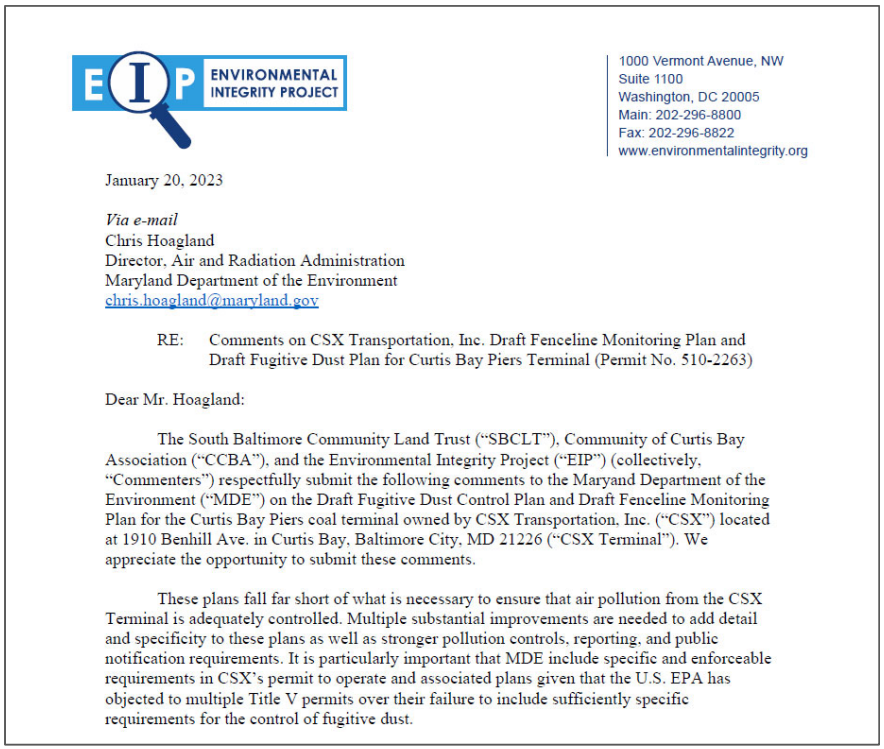
a. By the Effective Date, Defendant shall maintain and operate continuous hydrogen sulfide fence-line monitors at the three locations identified in Appendix B (Fence Line Monitor Locations) in accordance with the June 25, 2021 EPA-approved Quality Assurance Project Plan, and any subsequent EPA-approved versions. The monitors shall have a minimum detection limit of 10 parts per billion (ppb) by volume (ppbV) or lower, shall have a span range up to 1,000 ppbV or higher, and shall be operated in accordance with the manufacturer's recommendations. The monitors shall also be equipped with wind speed and wind direction monitors.

Fenceline Monitoring

1. PM_{10} Monitors.

a. Within 45 Days of the Date of Lodging, Defendant shall submit a Fenceline Monitoring Plan to EPA for review and approval that includes proposed site locations at the Facility for Federal Reference Method filter-based PM_{10} monitors ("East Liverpool Facility Monitors" or "ELF Monitors") and for a meteorological station. The ELF Monitors shall consist of either:

EJ Community Requests and Litigation



ENVIRONMENTAL INTEGRITY PROJECT

1000 Vermont Avenue, NW
Suite 1100
Washington, DC 20005
Main: 202-296-8800
Fax: 202-296-8822
www.environmentalintegrity.org

January 20, 2023

Via e-mail
Chris Hoagland
Director, Air and Radiation Administration
Maryland Department of the Environment
chris.hoagland@maryland.gov

RE: Comments on CSX Transportation, Inc. Draft Fenceline Monitoring Plan and Draft Fugitive Dust Plan for Curtis Bay Piers Terminal (Permit No. 510-2263)

Dear Mr. Hoagland:

The South Baltimore Community Land Trust ("SBCLT"), Community of Curtis Bay Association ("CCBA"), and the Environmental Integrity Project ("EIP") (collectively, "Commenters") respectfully submit the following comments to the Maryand Department of the Environment ("MDE") on the Draft Fugitive Dust Control Plan and Draft Fenceline Monitoring Plan for the Curtis Bay Piers coal terminal owned by CSX Transportation, Inc. ("CSX") located at 1910 Benhill Ave. in Curtis Bay, Baltimore City, MD 21226 ("CSX Terminal"). We appreciate the opportunity to submit these comments.

These plans fall far short of what is necessary to ensure that air pollution from the CSX Terminal is adequately controlled. Multiple substantial improvements are needed to add detail and specificity to these plans as well as stronger pollution controls, reporting, and public notification requirements. It is particularly important that MDE include specific and enforceable requirements in CSX's permit to operate and associated plans given that the U.S. EPA has objected to multiple Title V permits over their failure to include sufficiently specific requirements for the control of fugitive dust.

EARTHJUSTICE
BECAUSE THE EARTH NEEDS A GOOD LAWYER

ABOUT US ⌄ OUR WORK ⌄ TAKE ACTION ⌄

← PRESS ROOM

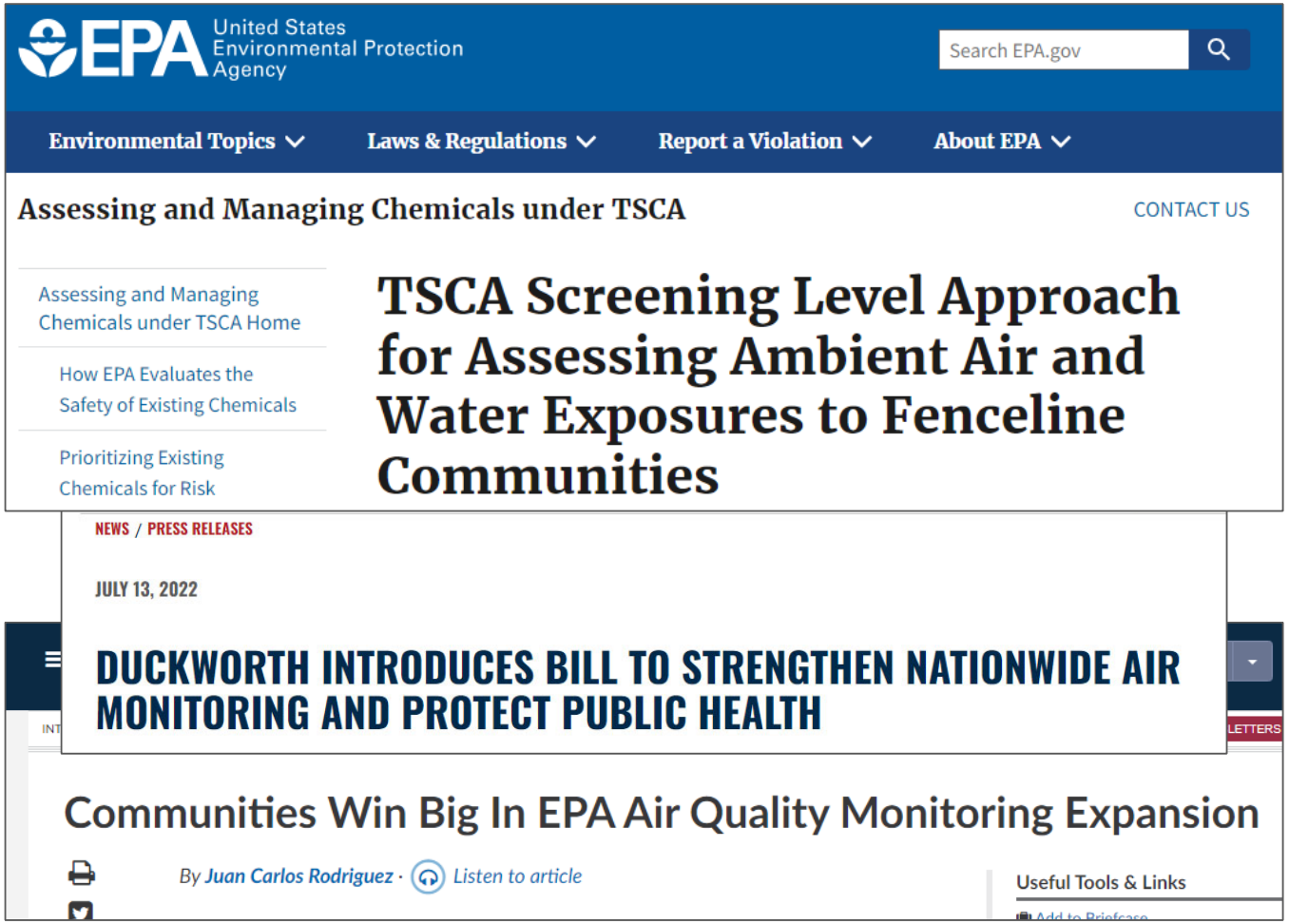
Select language: English

November 1, 2022

Groups Intervene To Maintain Fenceline Monitoring Requirements for Suncor Refinery

Intervention seeks to protect Suncor's strengthened monitoring plan and Fenceline Monitoring Law itself

Where is the Law Going?



55858 Federal Register / Vol. 88, No. 157 / Wednesday, August 16, 2023 / Proposed Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2002–0085, EPA–HQ–OAR–2003–0051; FRL–8471–01–OAR]

RIN 2060–AV19

National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Residual Risk and Technology Review, and Periodic Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing amendments to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Coke Ovens: Pushing, Quenching, and Battery Stacks (PQBS) source category, and the NESHAP for the Coke Oven Batteries (COB) source category. This proposal presents the results of the residual risk and technology review (RTR) conducted as required under the Clean Air Act (CAA) for the PQBS source category, and the periodic technology review for the COB source category, also required under the CAA. The EPA is proposing that risks due to emissions of hazardous air pollutants (HAP) from the PQBS source category are acceptable and that the current NESHAP provides an ample margin of safety to protect public health. Under the technology review for PQBS NESHAP, we are proposing there are no developments in practices, processes or control technologies that necessitate revision of standards for this source category. Under the technology review for the COB source category, the EPA is proposing amendments to the NESHAP to lower the limits for leaks from doors, lids, and offtakes to reflect improvements in technology to minimize emissions. We also are proposing a requirement for fenceline monitoring for benzene (as a surrogate for coke oven emissions) and a requirement to conduct root cause analysis and corrective action upon exceeding an action level. In addition, we are proposing: (1) new standards for several unregulated HAP or sources of HAP at facilities subject to PQBS NESHAP; (2) the removal of exemptions for periods of startup, shutdown, and malfunction consistent with a 2008 court decision, and clarifying that the standards apply at all times for both source categories; and (3) the addition of electronic reporting for performance test results and compliance reports. We solicit comments on all aspects of this proposed action.

DATES:

Comments. Comments must be received on or before October 2, 2023. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before September 15, 2023.

Public hearing: If anyone contacts us requesting a public hearing on or before August 21, 2023, we will hold a virtual public hearing. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

ADDRESSES: You may send comments, identified by Docket ID Nos. EPA–HQ–OAR–2002–0085 (Coke Ovens: Pushing, Quenching, and Battery Stacks source category) and EPA–HQ–OAR–2003–0051 (Coke Oven Batteries source category) by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov/* (our preferred method). Follow the online instructions for submitting comments.
- *Email: a-and-r-docket@epa.gov.* Include Docket ID Nos. EPA–HQ–OAR–2002–0085 or EPA–HQ–OAR–2003–0051 in the subject line of the message.
- *Fax:* (202) 566–9744. Attention Docket ID Nos. EPA–HQ–OAR–2002–0085 or EPA–HQ–OAR–2003–0051.
- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, Docket ID Nos. EPA–HQ–OAR–2002–0085 or EPA–HQ–OAR–2003–0051, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- *Hand/Courier Delivery:* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m.–4:30 p.m., Monday–Friday (except federal holidays).

Instructions: All submissions received must include the Docket ID Nos. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov/*, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Donna Lee Jones, Sector Policies and Programs Division (MD–243–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–5251; email address: *jones.donnalee@epa.gov.* For specific information regarding the risk modeling methodology, contact Michael Moeller, Health and Environmental Impacts Division (C539–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–2766; email address: *moeller.michael@epa.gov.*

SUPPLEMENTARY INFORMATION:

Participation in virtual public hearing. To request a virtual public hearing, contact the public hearing team at (888) 372–8699 or by email at *SPPDpublichearing@epa.gov.* If requested, the hearing will be held via virtual platform on August 31, 2023. The hearing will convene at 11:00 a.m. Eastern Time (ET) and will conclude at 3:00 p.m. ET. The EPA may close a session 15 minutes after the last pre-registered speaker has testified if there are no additional speakers. The EPA will announce further details at *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-pushing-quenching-and-battery-stacks-national-emission* or *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-batteries-national-emissions-standards-hazardous-air.*

If a public hearing is requested, the EPA will begin pre-registering speakers for the hearing no later than 1 business day after a request has been received. To register to speak at the virtual hearing, please use the online registration form available at *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-pushing-quenching-and-battery-stacks-national-emission* or *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-batteries-national-emissions-standards-hazardous-air,* or contact the public hearing team at (888) 372–8699 or by email at *SPPDpublichearing@epa.gov.* The last day to pre-register to speak at the hearing will be August 28, 2023. Prior to the hearing, the EPA will post a general agenda that will list pre-registered speakers in approximate order at: *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-pushing-quenching-and-battery-stacks-national-emission,* or *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-batteries-national-emissions-standards-hazardous-air.*

The EPA will make every effort to follow the schedule as closely as

Monitoring Technology

What is FTIR? We'll explain.

August 9, 2021

By: Michael Denomme

MONTROSE ENVIRONMENTAL

The quick answer:

Extractive Fourier Transform Infrared Spectroscopy, often referred to as extractive FTIR, is an instrumental technology we use to identify and quantify gas compounds in stack emissions and industrial process streams. FTIR technology uses the principle of infrared light absorption for gas analysis. It can be set up to monitor several gases at once and on a continuous real-time basis. The "extractive" prefix implies that a sample is continuously extracted from the parent gas stream and transported via a heated transfer line to a remotely stationed FTIR analyzer.

PICARRO

Continuous Emissions Monitoring System (CEMS) **Workplace Monitoring System (WMS)** **Fenceline Monitoring System (FMS)**

The Picarro Fenceline Monitoring System is a robust, field-deployable system designed to continuously measure low levels of Ethylene Oxide with defensible results.

The on-board Data Acquisition System (DAS) combines fast, highly sensitive concentration data with high-frequency meteorological data for accurate source attributions.

A modular sampling design allows for the collection of real-time data (seconds), as well as canister samples (minutes to hours). With a mobile form factor, robust environmental control, automated calibration and QA/QC steps, and cellular connectivity, the system is designed to operate continuously for months in the field.

Challenges

1. What monitoring methods should be used?
2. What do you compare the results against?
3. What relevance do the monitoring results have?
4. Who collects this data? What data are collected?

Takeaways

1. More fenceline monitoring requirements are coming down the pipeline at the federal and state level.
2. Fenceline monitoring is a point of increased focus for communities and advocacy groups alike.
3. Fenceline monitoring is technologically complex and, depending on the chemicals at issue, will require significant engineering effort to properly implement.

Questions?