



FREEBORN & PETERS LLP

ANN M. ZWICK
Senior Counsel

Freeborn & Peters LLP
Attorneys at Law
311 South Wacker Drive
Suite 3000
Chicago, IL 60606

(312) 360-6254 direct
(312) 360-6520 fax

azwick@freeborn.com

www.freeborn.com

August 23, 2018

VIA EMAIL olson.erik@epa.gov

Erik Olson
U.S. Environmental Protection Agency
Associate Regional Counsel
77 West Jackson Blvd.
Mailcode C-14J
Chicago, IL 60604

Re: *Response to Notice and Finding of Violation - General Iron Industries, Inc.*

Dear Erik,

This letter is written on behalf of General Iron Industries, Inc. (“General Iron”) and responds to the EPA’s Notice and Finding of Violation dated July 18, 2018 (“NOV”). We would like to schedule a meeting to discuss and finalize the terms of an Administrative Consent Order (ACO) to resolve the allegations in the NOV. We hope this response to the NOV can help create a set of fair and accurate terms for the ACO, and make our meeting as productive as possible.

I. BACKGROUND

General Iron conducted emissions testing on its shredder for total volatile organic compounds (VOC), particulate matter (PM) and metals on May 24 and 25 and for PM and metals again on June 13 and 14, pursuant to an EPA Request to Provide Information, issued on or about November 16, 2017 (“Information Request”). General Iron has fully complied with the requirements of the Information Request and has been engaged in open and ongoing discussions with you and others at EPA in an effort for fairness, transparency and an accurate reporting of the facts. This letter embraces the results of the valid testing and seeks an ACO that reflects those results.

We believe that the results of the independent emissions testing demonstrate that no emissions of metals or filterable PM violated any permitted levels or applicable requirements. General Iron is one of only a few metal shredding facilities, and the only one in the Chicago area, that has installed a high-efficiency air filter to control PM and metals emissions and the test results support the filter’s effectiveness. The PM and metals testing required by EPA, including for 17 specific metals, as well as the additional impact assessment that General Iron voluntarily performed, demonstrate that General Iron’s PM and metals emissions were far below relevant limits.

General Iron acknowledges that the emissions testing showed that its VOC emissions triggered the state regulation requiring installation of control equipment to reduce uncontrolled VOM emissions by 81 percent, as alleged in Paragraph 50. General Iron intends to spend approximately \$1.5-2.0 million to install a regenerative thermal oxidizer (RTO) on an expedited basis that will exceed this requirement. The installation of the RTO will set an example for our industry and make General Iron one of the first metal shredding facilities in the country to utilize this highly effective technology to control VOC emissions.

As we discussed at our meeting on July 24, there are certain findings and allegations in the NOV that General Iron disputes and believes are incorrect. Those being: (1) the findings and allegations regarding fugitive particulate matter, in Paragraphs 36 and 49; and (2) the allegations in Paragraph 51 pertaining to the invalid PM and metals emissions testing that was conducted on May 24. As discussed more fully below, General Iron firmly believes that the emissions observed were permissible stack emissions, not fugitives. General Iron also firmly believes that the invalid PM and metals emissions testing was *not* responsive to the Information Request and, therefore, a formal test report was not required to be submitted. With the submission of the May 24 PM and metals emissions test report, we assume this later issue has been put to rest.

II. RESPONSE TO SPECIFIC ALLEGATIONS

A. VOC Emissions – Paragraph 50

With regard to the allegations in Paragraph 50, General Iron intends to install a RTO that will exceed the required 81 percent overall reduction of uncontrolled VOC emissions. General Iron has already had discussions with the Illinois Environmental Protection Agency (“IEPA”) regarding the permitting of the RTO and has spoken to several possible vendors. We expect to have a construction permit application submitted to the IEPA for expedited permitting shortly and, as you requested, will discuss the design of the RTO with Scott Connolly.

It is important to note that VOC emissions associated with a metal shredder have never previously been raised as an issue in Illinois. In fact, *all* of the IEPA shredder permits, including General Iron’s, are based on the assumption of *negligible* VOC emissions. General Iron has had a Federally Enforceable State Operating Permit (“FESOP”) application on file with the IEPA for over 10 years and the issue of VOCs has never been raised by the IEPA. Over the past year, General Iron has been having discussions with the IEPA about obtaining a lifetime operating permit from the IEPA, instead of a FESOP, given its low PM emissions. Again, the issue of VOCs has not been raised by the IEPA.

General Iron has been inspected regularly by the City of Chicago, IEPA and EPA and, until the receipt of the Information Request in November 2017, the issue of VOC emissions has never arisen. The first time an inspector even utilized a FLIR infrared camera to look for hydrocarbons exiting

General Iron's shredder was by Scott Connolly on June 13, 2017 and, by Mr. Connolly's own admission, the FLIR did *not* detect any VOCs or particulates.

Based on our previous discussions, it is our understanding that the Information Request, with the required emissions testing for VOCs, resulted from a Region 5 initiative to address the potential for VOC emissions from metal shredders. General Iron was one of the first facilities, if not the first, that EPA requested to perform the VOC testing. General Iron fully cooperated and complied with the testing requirements in the Information Request, in order to ensure that its emissions met or exceeded applicable state and federal regulations to protect public health and air quality.

General Iron acknowledges that the testing showed that VOC controls are needed and intends to install the RTO expeditiously. With the installation of the RTO, General Iron will become the first metal shredding facility in Illinois and the Midwest to utilize this technology. We expect that EPA is requiring other metal shredding facilities in the Region, as well as throughout the country, to likewise perform VOC emission testing or apply the recent VOC emission factors to shredder throughput and, if necessary to meet applicable standards, install this type of control technology. General Iron will do its part to control VOC emissions. It is imperative that other metal shredders also do theirs, so there is an even playing field in the industry.

B. CAAPP/Title V Permitting – Paragraphs 47 and 48

General Iron acknowledges that the emissions testing showed that its *potential to emit* VOCs exceeds the Title V major source threshold. It is important to note that (1) *actual* VOC emissions from the shredder over the past 5 years were less than 89 tons per year, which is below the current major source threshold of 100 tons per year and (2) General Iron has never operated anywhere close to its permitted levels. With the installation of the RTO, General Iron's potential VOC emissions will be significantly below the Title V major source threshold and will qualify General Iron for a FESOP. General Iron intends to modify its existing FESOP application to include the RTO, thereby limiting its potential VOC emissions to below major source thresholds, which in turn will resolve the alleged violations in both Paragraphs 47 and 48.

General Iron is aware that EPA issued a NOV to SIMS Metal Management on August 10, 2017. That NOV, like the one issued to General Iron, alleges that the shredder's VOC emissions triggered the 81% VOC control requirement. Yet, EPA did not include any alleged CAAPP or Title V permitting violations in the SIMS NOV, which appear to likewise apply to SIMS. SIMS is the only other major metal shredder in the Chicago area. SIMS has no PM filter system or RTO, and no stated plans to install either. It is not fair or transparent for EPA to selectively enforce major source permitting violations among competitors in the same industry.

C. Particulate Emissions – Paragraphs 36 and 49

EPA has alleged in Paragraphs 36 and 49 of the NOV that fugitive particulate matter from the metal shredder was observed on June 13 crossing the property boundary, in violation of 35 IAC §212.301. That provision states as follows:

“No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.”

35 IAC §212.301.

General Iron disputes those allegations on the simple basis that *captured* emissions are not fugitive emissions. The emissions observed were permissible captured (or stack) emissions, which are not subject to that provision. Instead, the captured emissions from the shredder are subject to a 30% opacity standard, under 35 IAC §212.123. There is no allegation that the opacity standard was violated. In fact, Kevin Mattison, the IEPA emissions testing expert who attended the emissions testing on behalf of EPA and who is a certified opacity reader and instructor for IEPA’s Evaluation of Visible Emissions Course (Smoke School), characterized those same emissions at the time as being approximately 10-15% opacity, which is well below the standard. After the NOV was submitted, Mr. Mattison confirmed that there is no way for anyone to conclude that the emissions at issue were fugitive particulate matter.

As you have described EPA’s position to me, EPA is relying on the definitions of “fugitive particulate matter” and “stack” in Part 211 to support its argument. “Fugitive particulate matter” is defined as “any particulate matter emitted into the atmosphere other than through a stack.” 35 IAC §211.2490. A “stack” is defined as “a flue or conduit, free-standing or with exhaust port above the roof of the building on which it is mounted, by which air contaminants are emitted into the atmosphere.” 35 IAC §211.6230. EPA’s argument follows that, because General Iron’s “stack” is not pointing up above a “roof” of a “building on which it is mounted,” it is not actually a stack under this definition.¹ This argument contradicts the more current federal guidelines and disregards the basic nature of fugitives versus captured emissions.

¹ The definitions of “fugitive particulate matter” and “stack” were initially promulgated back in 1972 and have not been revised.

First, EPA's interpretation of the rules on fugitive emissions is contrary to the most current federal operating permit regulations at 40 CFR Parts 70.2 and 71.2 (which IEPA administers), the federal NESHAP regulations at 40 CFR 63.2, the federal new source review (NSR) regulations at 40 CFR Part 51.165(a)(1)(ix) and IEPA's approved NSR rules at 35 IAC §203.123. Each of those federal and state provisions states that "fugitive emissions" are "those emissions which could not reasonably pass through a stack, chimney, vent or **other functionally equivalent opening.**" (emphasis added). This definition of "fugitive emissions" is identical for the Title V operating permit program, NESHAP program and NSR program.

Moreover, EPA has issued the attached guidance document on the definition of fugitive emissions. *Memorandum to Judith M. Katz from Thomas C. Curran, Interpretation of the Definition of Fugitive Emissions in Parts 70 and 71, February 10, 1999.* (Exhibit A). In that guidance document, EPA states that, again and again, it has made clear that "emissions which *are actually collected* are not fugitive emissions." *Id.* at 2.

In this case, emissions from the shredder are collected by an emissions capture hood that is suspended over the top of the shredder. The hood is equipped with rubber curtains that extend downward to the top of the shredder to minimize the open area. It was the opinion of Mr. Mattison and Scott Connolly during the emissions testing that the capture efficiency of the hood was greater than 95%. An induced draft fan draws the captured emissions from the shredder through the exhaust hood, a cyclone and roll media filter for control of particulate matter before being discharged through a filter discharge duct (stack) to the atmosphere. On the day the subject emissions were observed, the measured discharge flow rate from this duct was over 60,000 acfm.

The filter discharge stack enters the shredder enclosure approximately 20 feet below the top of the enclosure. The filter discharge stack is then angled to direct emissions upward, toward the expanded metal grating (or vent) at the top of the enclosure. This is the location from which the observed emissions were emitted.

These emissions were "actually collected" and discharged to the atmosphere, as provided in the EPA guidance memorandum. The filter discharge stack is certainly a "functionally equivalent opening," as referenced in the Title V, NESHAP and NSR regulations. Therefore, the observed emissions are *not* fugitive emissions under the federal regulations and guidelines.

Second, despite the antiquated definition of "stack" at 35 IAC § 211.6230, the filter discharge stack both meets that definition of a "stack" and functions as a "stack" under that definition. The shredder and ancillary equipment are contained within an enclosure with rubber curtains. This enclosure is not a "building." The top of the enclosure is expanded metal grating or venting that was installed to safely relieve the overpressure from potential deflagrations in the shredder. The grating is not a "roof." The filter discharge stack is located approximately 20 feet below the top of the enclosure and is angled upward. The filtered emissions from the shredder are discharged to the atmosphere from the filter discharge stack through the expanded metal grating. The filter discharge stack is

primarily supported by multiple free-standing steel columns. It is also partially supported by the steel skeleton of the enclosure at the point it enters the enclosure. It was positioned on the inside of the enclosure merely for aesthetic reasons. That positioning does not mean the filter discharge stack is not a “stack” or does not function in all respects as a “stack.”²

You have also made the argument that, because the stack is not above the so-called roofline, that opacity readings cannot be properly read. We disagree with that statement, which is inconsistent with EPA’s own actions with respect to General Iron. A trained observer can technically read opacity from almost any source. There is no requirement that there must be a stack in order to make an opacity reading. Opacity readings of the top of the enclosure can be read with the assumption that any visible emissions are coming from the stack. Based on our conversations with Kevin Mattison, we believe that he would agree with our assessment. Indeed, Mr. Mattison characterized the emissions at the time as being well below the standard.

Moreover, EPA has also agreed that it can, and in fact has, been done. The high-efficiency media filter system was designed and installed pursuant to an ACO that was entered into with EPA on June 29, 2012. General Iron worked extensively with EPA for over a year in developing this system, following a lengthy feasibility study. Paragraph 32 of the ACO required General Iron to perform 12 months of opacity readings on the shredder while it was operating and to submit those results to EPA quarterly. Jim Kallas, a certified opacity reader and Environmental Manager for General Iron, performed those opacity readings on the shredder, as required, and submitted the results to EPA quarterly, with accompanying pictures. *No one* at EPA questioned or raised any issues about the readings or the stack then or in the 5 years since the filter system was installed. Nothing about the filter system or stack has changed. It is inappropriate for EPA now to try to justify an erroneous finding about fugitive emissions by claiming no one can perform required opacity readings. Indeed, EPA has already accepted such readings in the past.

Third, EPA’s alleged finding ignores the basic characteristics of a fugitive emission. Fugitive emissions are non-stack emissions that escape during material transfer, from buildings that contain the process, or directly from process equipment. Examples of fugitive emissions include dust from unpaved roads or dry material loading or unloading, or dust from grinding, crushing and sandblasting operations. *See EPA Method 22 – Visual Determination of Fugitive Emissions (Q&A), Question 1.* (Exhibit B). Moreover, the nature of a fugitive is that they are typically fleeting in duration.

² Upon installation of the RTO, the filter discharge ductwork will be rerouted from the existing enclosure to the RTO and a scrubber, which will have a dedicated, free-standing exhaust stack.

The only potential sources of uncaptured emissions inside the shredder enclosure are the shredder feed conveyor, shredder capture hood and shredder discharge material handling equipment. There were no significant uncaptured emissions observed on June 13, or any other day of testing, from the feed conveyor or shredder capture hood. The vertical centerline of the shredder capture hood is 23 feet east of the centerline of the filter discharge duct where it enters the enclosure.

The shredder discharge material handling equipment is located near ground level, approximately 32 feet below the elevation at which the filter exhaust duct enters the enclosure. The enclosure is not sealed. There are openings between the curtains, at the bottom of the structure, and at the point the shredder discharge conveyor penetrates the west wall of the enclosure. If the source of the observed visible emissions was from the shredder discharge material handling equipment, fugitive emissions would have most certainly been simultaneously observed from the lower openings in the enclosure, as well as from the adjacent material handling equipment associated with the magnetic separators. They were not.

In this case, the emissions observed were coming from the top of the shredder enclosure. They were exiting the shredder enclosure *directly above* the location of the filter discharge stack at a strong velocity. Indeed, according to Scott Connolly in his June 20, 2018 inspection report, “the white smoke and particulate matter *exited the top of the shredder near the exhaust of the filter stack,*” and were lasting 1-3 minutes each. Attached are three (3) videos taken by John Pinion of RK & Associates on June 13, on or about the same time as the photos taken by Mr. Connolly, which we showed you at our July 24th meeting. (Exhibit C). These videos clearly support our position that the emissions could not have been from any other source than the filter discharge stack.

Moreover, from Mr. Connolly’s vantage point (as illustrated in his photos), it was not physically possible to definitively determine that the observed emissions were from the material handling equipment and not from the filter discharge stack. Mr. Mattison, who has told us that he remembers those emissions clearly, agrees with this assessment.

At our meeting on July 24, General Iron explained that the findings and allegations about fugitives were simply wrong. General Iron invited Mr. Connolly to come back out to the facility, with Mr. Mattison, and reassess his findings prior to EPA making the NOV public. At one point during our conversation, Mr. Connolly admitted that the emissions were stack emissions. It was clear from our meeting that the issue was not fully resolved.

That single fugitive matter finding, which was accompanied by boilerplate language in Paragraphs 52 and 55 about the harmful environmental impacts that the alleged emissions of particulate matter might have caused, together with statements in EPA’s press release, created unwarranted concern within the community and sensationalized reporting in the press. General Iron has now spent, and will continue to spend, significant resources explaining and defending to important stakeholders what appear to be premature and erroneous findings. As you can imagine, this is a difficult task and it should not have been necessary. General Iron has fairly acknowledged VOC-related violations

and is remedying those in the most rigorous way possible. It is only fair and appropriate that EPA give due consideration of our arguments and make a revised finding as part of the ACO.

D. Invalid PM/Metals Testing – Paragraph 51

EPA has alleged in Paragraph 51 that General Iron failed to submit the results of the initial PM and metals emissions testing that was conducted on May 24. The argument is based on the assumption that a report of the invalid emissions testing was responsive to the Information Request. General Iron disagrees.

Pursuant to Section 114(a) of the Clean Air Act, EPA is authorized to require any person who owns or operates an emission source to sample such emissions, in accordance with such procedures or methods that EPA shall prescribe, “[f]or the purpose ... (ii) of determining *whether any person is in violation*” of a standard or requirement of an implementation plan. 42 USC § 7414(a)(ii). (emphasis added). EPA has defined “emissions data” as “[i]nformation necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source.” 40 CFR §2.301(a)(2)(i).

Based on these provisions, emissions sampling under Section 114(a) is for purpose of determining *compliance*. Absolutely no information from invalid emissions testing can determine whether a company is in violation of any standard or requirement; nor can it be used to determine the identity, amount, frequency, concentration or any other characteristic of an emission. The data is simply meaningless.

Here is the sequence of events: Stack Test Group performed PM and metals emissions testing on May 24 from the shredder in response to the testing requirements specified in the Information Request and in accordance with the EPA approved test protocol dated May 23.

The May 24 PM and metals emissions test results were determined to be invalid and not representative of actual shredder emissions. General Iron reached this conclusion, in consultation with RK & Associates, Stack Test Group and the IEPA, because of an extreme bias in partitioning of metals between the front half and back half of the metals emissions sampling train. Invalidating the metals emissions test results required that the PM emissions test results also be considered invalid because a single sampling train was used to sample for both PM and metals emissions.

In addition, the approved protocol for Method 29 testing included a requirement to conduct a method performance audit in accordance with the requirements of the Stationary Source Audit Sample (SSAS) Program prior to testing. Due to an oversight by Stack Test Group, the required audit samples were not ordered for the May 24 PM and metals emissions testing. Stack Test Group’s failure to conduct a required performance audit prior to testing invalidated the test results, requiring the tests to be repeated.

General Iron promptly notified both EPA and IEPA when it learned that the test results were invalid and requested approval to retest. EPA and IEPA gave that approval and General Iron repeated the PM and metals emissions test on June 13 and 14. The results from this second PM and metals emissions test, which was also observed by Kevin Mattison, were timely submitted to EPA on June 25, with the testing report for total hydrocarbons, in response to the Information Request.

At no time did General Iron consider the May 24 PM and metals emissions test results to be responsive to the Information Request because the test results were invalid and did not represent actual emissions. General Iron had intended to provide EPA with information documenting the basis for concluding that the metals emissions test results were, in fact, invalid. However, a full test report was not necessary to make that determination.

General Iron submitted a full testing report for the May 24 PM and metals emissions test on July 23, after you made it clear that EPA considered the test report for the invalid testing to be responsive to the Information Request. That should put the issue to rest.

We would like to schedule a meeting to work out a final resolution of the issues raised in this letter. We appreciate your time and resources in considering our position and working toward a resolution. Please send me some dates that work for you.

Sincerely,



Ann M. Zwick *mk*

Encl.

cc: Ed Nam
Adam Labkon
Bharat Mathur
Jim Kallas
David Chizewer

4506995v7/08648-0022

EXHIBIT A

February 10, 1999

MEMORANDUM

SUBJECT: Interpretation of the Definition of Fugitive Emissions
in Parts 70 and 71

FROM: Thomas C. Curran, Director /s/
Information Transfer and Program
Integration Division (MD-12)

TO: Judith M. Katz, Director
Air Protection Division, Region III (3AT00)

This is in response to your memorandum of August 8, 1997 and subsequent discussions regarding the definition of "fugitive emissions." Specifically, you asked how this definition applies to the emissions of volatile organic compounds (VOC) from the printing industry, whiskey warehouses, paint manufacturing facilities, and other similar sources for purposes of title V. The delay in getting back to you was principally due to extensive consultation as needed among the various Headquarters and Regional Offices and has resulted in more technically and legally supportable policy.

When counting emissions to determine if a source exceeds the major source thresholds under title V (parts 70 and 71), nonfugitive VOC emissions are always counted. Fugitive VOC emissions, however, are counted only in certain circumstances. Because of this, the determination of whether emissions are fugitive or nonfugitive can be critically important for major source determinations under title V.

The EPA defines "fugitive emissions" in the regulations promulgated under title V as "those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening" (see title 40 of the Code of Federal Regulations, sections 70.2 and 71.2). This definition is identical to the definition of "fugitive emissions" adopted by EPA in the regulations implementing the new source review (NSR)

program. Given this, the precedents established in the NSR program should be relied on in interpreting the definition of "fugitive emissions" for purposes of title V.

In 1987 and again in 1994, EPA issued guidance regarding the classification of emissions from landfills for NSR applicability purposes.¹ In these guidance memorandums, EPA made clear that emissions which are *actually collected* are not fugitive emissions. Thus, for example, when a source is subject to a national standard requiring collection of emissions, these emissions cannot be considered fugitive. Whether or not a source is subject to such a national standard, emissions which pass through a stack, chimney, vent, or other functionally-equivalent opening are not fugitive.

Where emissions are not actually collected at a particular site, the question of whether the emissions are fugitive or nonfugitive should be based on a factual, case-by-case determination made by the permitting authority. As noted in EPA's 1994 guidance,

In determining whether emissions could reasonably be collected (or if any emissions source could reasonably pass through a stack, etc.), "reasonableness" should be construed broadly. The existence of collection technology in use by other sources in a source category creates a presumption that collection is reasonable. Furthermore, in certain circumstances, the collection of emissions from a specific pollutant emitting activity can create a presumption that collection is reasonable for a similar pollutant-emitting activity, even if that activity is located within a different source category.

Based on the above principles, EPA believes it appropriate to presume that VOC emissions from the printing industry and paint manufacturers could reasonably be collected and thus are

¹ See memorandums entitled "Classification of Emissions from Landfills for NSR Applicability Purposes" from John S. Seitz, Office of Air Quality Planning and Standards, to Air Division Directors, Regions I-X, dated October 21, 1994, and "Emissions from Landfills" from Gerald A. Emison, Director, Office of Air Quality Planning and Standards, to David P. Howekamp, Director, Air Management Division, Region IX, dated October 6, 1987.

not fugitive. In addition, unless this presumption is rebutted by the source, such emissions should be counted in major source determinations.

We have reached this conclusion for printers and paint manufacturers because certain printers are subject to national standards and State implementation plan (SIP) requirements (e.g., reasonably achievable control technology, best available control technology, or lowest achievable emissions rate) requiring collection. Moreover, sources in both of these source categories commonly employ collection devices. The common use of collection technology by other printing and paint manufacturing sources creates a presumption that collection of emissions is reasonable at other similar sources.

In the case of whiskey warehouses, the presumption that emissions could reasonably be collected is less compelling and may warrant further consideration by States in consultation with the EPA Regional Offices. For example, we are not aware of any national standards or SIP requirements for the collection of VOC emissions from whiskey warehouses, and we believe it is uncommon for them to have voluntarily installed collection devices. On the other hand, EPA is aware of warehouses in other source categories that collect emissions and thus a presumption is created that whiskey warehouse emissions could reasonably be collected. In addition, in a factual determination for a whiskey warehouse in the State of Indiana, EPA Region V found, after careful review, that the emissions of the warehouse were not fugitive.

In addition, you ask whether costs should be a factor used to determine if emissions can be reasonably collected. Obviously, when emissions are actually collected, cost considerations are irrelevant to determine whether emissions are fugitive. On the other hand, when a source does not actually collect its emissions, but there is a presumption that collection would be reasonable, a permitting authority could consider costs in determining whether this presumption is correct. However, when analyzing whether collection is reasonable for a particular source, the permitting authority should not focus solely on cost factors, nor should cost factors be given any more weight than other factors. Instead, the permitting authority should focus on determining whether a particular source is truly similar to the "similar sources" used to create the presumption. This determination can be made by looking at whether there are substantial differences in the technical or engineering characteristics of the sources. In this stage of the analysis, a comparison of the costs of collecting emissions could be relevant where it illustrates the underlying technical or engineering

differences. Moreover, keep in mind that title V does not impose any requirements on subject sources to collect (or control) their emissions and that collection is only assumed for the purpose of determining title V applicability. Thus, no source will ever be required to incur the costs of installing, operating, or maintaining collection devices (or control devices) because of a presumption that its emissions are not fugitive or subsequently because it is found to be subject to title V.

The approach for interpreting the definition of fugitive emissions outlined in this memorandum is consistent with the approach used historically by Headquarters, as well as the majority of EPA Regions and States. We believe, therefore, that the impact of this memorandum will be limited, both in the number of sources for which reclassification of emissions from fugitive to nonfugitive may be required, and to a greater extent, in the number of sources subject to reclassification from minor to major source.

We recognize that this interpretation may present enforcement issues for an unknown (but presumably small) number of sources whose initial title V applicability determinations were overly broad with respect to which emissions they have interpreted as being fugitive. Therefore, EPA recommends that the following steps be taken. If the policies of an EPA Region or State for interpreting the definition of fugitive emissions are consistent with the policies described in this memorandum, then the EPA Region or State should continue to enforce its policies as it has in the past. However, if the policies of an EPA Region or State have not been as inclusive as the policies described in this memorandum, then major sources that have not applied for operating permits on the basis of these less-inclusive policies should be instructed to immediately notify the State and EPA Region in writing of their obligation to obtain a title V permit. Such sources should be instructed to prepare and submit permit applications to the appropriate permitting authority as expeditiously as possible.

The EPA will use its enforcement discretion in deciding whether or not to seek an enforcement action against sources for failure to obtain an operating permit. However, factors that may be considered in deciding whether to seek enforcement action against sources may include whether the sources relied on less inclusive policies of a State or EPA Region and whether the sources expeditiously submit permit applications after they become aware of the national policy described in this memorandum.

If you have any questions, please contact Steve Hitte at 919-541-0886 or Jeff Herring at 919-541-3195 of the Operating Permits Group.

cc: Director, Office of Ecosystem Protection, Region I
Director, Division of Environmental Planning and Protection,
Region II
Director, Air, Pesticides, and Toxics Management Division,
Region IV
Director, Air and Radiation Division, Region V
Director, Multimedia Planning and Permitting Division,
Region VI
Director, Air, RCRA, and Toxics Division, Region VII
Assistant Regional Administrator, Office of Partnership and
Regulatory Assistance, Region VIII
Director, Air Division, Region IX
Director, Office of Air, Region X

bcc: L. Anderson, OGC
K. Blanchard, ITPID
D. Crumpler, ITPID
T. Curran, ITPID
R. Dresdner, OECA
G. Foote, OGC
J. Herring, ITPID
S. Hitte, ITPID
B. Hunt, EMAD
B. Jordan, OAQPS
R. McDonald, ESD
D. Salman, ESD
S. Shaver, ESD
J. Walke, OGC
L. Wegman, AQSSD

OAQPS/ITPID/OGC/JHerring:pfinch:MD-12:541-5281:12/4/98
Herring\katz-fug.def

EXHIBIT B

EPA Method 22 – Visual Determination of Fugitive Emissions¹

1. *What is Method 22 and what are fugitive emissions?*

- Method 22 is a simple procedure that uses the human eye to determine the total time an industrial activity causes visible emissions.
- Fugitive emissions are non-stack emissions that escape during material transfer, from buildings that contain the process, or directly from process equipment. Some examples include dust from unpaved roads; dust from grinding, crushing and sandblasting operations; and dry material loading or unloading.
- Some emission standards require that you minimize any visible emissions from your process. Method 22 is one method used to make sure the process and any emission control equipment are operating properly and are not generating excess emissions.
- Method 22 can also be used for visible emissions from stationary sources such as smoke stacks if there is such a requirement in the applicable emission standard.

2. *What training or certification is required for me to perform Method 22 observations?*

- No certification is required because it is a simple method that just requires you to record the amount of time you see emissions. You do not have to be certified to determine the opacity (or density) of the emissions so you do not need Method 9 certification.
- However, you must know and understand the effects of background contrast, ambient lighting, and where you should stand to make your observation (for example, with respect to lighting, wind, and the presence of condensing water vapor). EPA has some general references you can read to understand these general procedures for determining visible emissions. The basics are having the sun at your back, trying for a dark background, not looking into the sun and not counting steam plumes. You can also obtain additional training by attending the lecture portion of the Method 9 certification course.

3. *What equipment do I need?*

- You need two stopwatches. They must be the accumulative type and must measure to at least ½ of a second.
- If you make observations inside a building, you will need a light meter. The brightness of the lighting must read at least 100 lux or 10 foot candles on the light meter in order to perform Method 22 observations inside a building.

¹ This is only a summary and not the official Method 22. You can find Method 22 at <http://www.epa.gov/ttn/emc/promgate/m-22.pdf>

4. Where do I stand to look for visible emissions?

- First, find out what processes, stacks, or buildings you need to observe based on what the visible emission rule requires for your facility. In other words, what pieces of equipment or buildings at your plant does the rule say you must observe using Method 22?
- Walk around the facility, building, or structure that has the process you need to observe and find where potential emissions may occur.
- Choose a location with a clear view of the building or operation you are supposed to observe. Make sure it is safe - not in the way of moving equipment -- and does not pose any other safety hazard.
- The method recommends that you stand no closer than 15 feet and no farther away than ¼ mile from the source you want to observe.
- Pick a spot where the sunlight is not shining directly into your eyes.

6. What part of the form can I fill out before I start?

- Copies of the forms are attached. Fill in the company name, type of industry, the process unit (or building being observed), your name, your company's name, and the date.
- If you are outdoors, record the estimated wind speed, wind direction, and sky condition (for example, cloudy, sunny, partly cloudy, etc.). Sketch the emission source you are observing and mark your location on the sketch relative to the emission source and the sun. Show the actual and potential emission points on the sketch.
- If you are indoors, record the type, location, and intensity of the inside lighting. Sketch the process unit you are observing, and mark your location on the sketch relative to the unit you are observing. Show the actual and potential emission points on the sketch.

7. How long do I have to observe for fugitive emissions?

- Check the rule that applies to your plant and process and find out how long you must observe for fugitive emissions (15 minutes to one hour is typical).
- Check for what the rule allows for visible emissions. For example, if the rule says emissions must not be visible for more than 6 minutes in any hour, you may quit after observing 6 minutes of emissions before the hour elapses; otherwise, continue observing for one hour.
- In any case, no matter what the applicable rule lists as the visible emission requirement, the observation period must not be less than a total of 6 minutes.

8. How do I make the observations and measure and record the time?

- Record the clock time on the form when you begin.
- Use one stopwatch (SW1) to time the entire observation period. Stop it if you take a break (see #10 below) or the process stops operating. Restart it without resetting it when you begin your observations again. When this stopwatch indicates you have finished the observation period that the rule specifies, such as one hour, stop the stopwatch and record the accumulated time and the clock time.
- During the observation period, continuously watch the source, and if you see any emissions, start the second stopwatch (SW2) and then stop it when the emissions stop. Restart it without resetting it if emissions occur again, and stop it if the emissions stop. Continue doing this throughout the observation period.
- Remember that steam and other forms of condensed water vapor are not emissions and are not a reason to start the stopwatch.
- When the observation period is over, record the total time on the second stopwatch, which is the total time that emissions were visible.

9. What do I do if emissions from other sources interfere or mix with those from the operation I am supposed to be observing?

- Sometimes fugitive emissions from another source, such as dust blown by wind or from vehicle traffic, may keep you from getting a clear view or make it hard to see if fugitive emissions are occurring from the source.
- When other emissions interfere, stop making your observations and make a note of this on your form. Begin observing again when there is a clear view.

10. When should I take a break?

- You should not continuously observe emissions for more than 15 to 20 minutes without taking a rest break. If you have to observe for more than 20 consecutive minutes, you **must** take a break of 5 to 10 minutes. To do this, once you have been observing for fifteen minutes, finish timing any visible emissions currently in progress, stop both stopwatches, and note each of their times and the clock time. Then, take your break. Before resuming further observations, record the clock time and start the accumulative time stop watch. Continue to observe as before
- If the rule requires continuous observations for more than 20 minutes, you must get another observer to help you make the observations. However, this is not common.

11. How do I calculate emissions in percent if my rule requires that?

If your rule requires that the emission rate be expressed as an emission frequency in percent:

- Divide the accumulated emission time (in seconds) by the duration of the observation period (in seconds), and multiply this quotient by 100.
- For example, if a person observes a process for a total observation period of 20 minutes (1200 seconds), and sees fugitive dust for 5 minutes (300 seconds), then calculate the percentage as follows:

$$(300 \text{ seconds of fugitive emissions} / 1200 \text{ seconds of observation}) \times 100 = 25\%$$

12. Where can I find the general references mentioned earlier?

- A reference cited in Method 22 that is available online:

Wohlschlegel, P., and D.E. Wagoner. *Guideline for Development of a Quality Assurance Program: Volume IX—Visual Determination of Opacity Emissions from Stationary Sources*. EPA Publication No. EPA-650/4-74-005i. November 1975.

- Go to this website: <http://www.epa.gov/nscep/> and select “Document Number” under “Search the Collection.” Then select “600 Series” and scroll down until you see this document and select it: “650474005I Guidelines For Development Of A Quality Assurance Program, Volume IX Visual Determination Of Opacity Emissions From Stationary Source.”

**FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION**

Company	Observer
Location	Affiliation
Company Rep.	Date
Sky Conditions	Wind Direction
Precipitation	Wind Speed
Industry	Process Unit

Sketch process unit: indicate observer position relative to source; indicate potential emission points and/or actual emission points.

OBSERVATIONS

	Clock Time	Observation period duration, minutes:seconds	Accumulated emission time, minutes:seconds
Begin Observation	_____	_____	_____
To complete this form, record the following:	_____	_____	_____
• the initial clock time	_____	_____	_____
• the total time of the observation (from SW1)	_____	_____	_____
• the total time of emissions (from SW2), and	_____	_____	_____
• the final clock time.	_____	_____	_____
For more details on recording this data and taking breaks, see #7 and #10 above.	_____	_____	_____
	_____	_____	_____
End Observation	_____	_____	_____

FUGITIVE OR SMOKE EMISSION INSPECTION
INDOOR LOCATION

Company	Observer
Location	Affiliation
Company Rep.	Date
Precipitation	Wind Speed
Industry	Process Unit

Light type (fluorescent, incandescent, natural) _____

Light location (overhead, behind observer, etc.) _____

Illuminance (must be greater than or equal to 100 lux or 10 foot candles) _____

Sketch process unit: indicate observer position relative to source; indicate potential emission points and/or actual emission points.

OBSERVATIONS	Clock Time	Observation period duration, minutes:seconds	Accumulated emission time, minutes:seconds
Begin Observation	_____	_____	_____
To complete this form, record the following:	_____	_____	_____
• the initial clock time	_____	_____	_____
• the total time of the observation (from SW1)	_____	_____	_____
• the total time of emissions (from SW2), and	_____	_____	_____
• the final clock time.	_____	_____	_____
For more details on recording this data and taking breaks, see #7 and #10 above.	_____	_____	_____
End Observation	_____	_____	_____

EXHIBIT C

See Videos Attached to Email