

BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:	)	
WHEELABRATOR BALTIMORE, L.P.	)	
BALTIMORE, MARYLAND	)	
	)	ORDER RESPONDING TO
	)	PETITIONERS' REQUEST THAT
Permit Number 24-510-01886	)	THE ADMINISTRATOR OBJECT
	)	TO THE ISSUANCE OF A
ISSUED BY MARYLAND DEPARTMENT OF	)	TITLE V OPERATING PERMIT
THE ENVIRONMENT	)	
<u>JUNE 1, 2009</u>	)	

ORDER PARTIALLY GRANTING AND PARTIALLY DENYING  
THE PETITION FOR OBJECTION TO PERMIT

**I. INTRODUCTION**

On May 29, 2009, the United States Environmental Protection Agency (EPA) received a petition from Environmental Integrity Project (EIP), the Baltimore Harbor Waterkeeper, Inc., and Clean Water Action (Petitioners) pursuant to section 505(b)(2) of the Clean Air Act (CAA or Act), 42 U.S.C. § 7661d(b)(2). The petition requests that EPA object to the CAA title V operating permit (the title V permit) issued by the Maryland Department of the Environment (MDE) on June 1, 2009, to Wheelabrator Baltimore, L.P. (Wheelabrator) for the operation of a municipal solid waste incinerator located at 1801 Annapolis Road, Baltimore, Maryland 21230.

As discussed in greater detail below, the Petitioners allege that (1) the title V permit illegally weakens the PSD pounds per hour limits for CO and NO<sub>2</sub><sup>1</sup> by allowing Wheelabrator to demonstrate compliance with a 24-hour rolling average and (2) the title V permit fails to include monitoring sufficient to assure compliance with short-term emission limits because (a) it does not specify the methodology for demonstrating compliance with the PSD pounds per hour limits for sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and nitrogen dioxide (NO<sub>2</sub>) and (b) it fails to include adequate monitoring for short-term emissions limits for particulate matter (PM), mercury, cadmium, lead, hydrogen chloride, and dioxins/furans.

---

<sup>1</sup> Throughout this Order, Petitioners' claims make reference to PSD limits for NO<sub>2</sub> while the state responses as well as our discussions use the term NO<sub>x</sub>. Although the limits in the PSD permit are indeed expressed as NO<sub>2</sub> limits, the limits in the title V permit are written as NO<sub>x</sub> limits resulting in the difference in terminology. As a practical matter, we presume that there is no difference in the intent or substance of these two terms in this context. The term NO<sub>x</sub> refers to NO<sub>2</sub> and other oxides of nitrogen (see, e.g., section 60.2, definitions). Further, the measuring techniques used to demonstrate compliance with NO<sub>x</sub> limits for source emissions rules (e.g., NSPS) report data as NO<sub>2</sub> for the calculation of mass emissions rates (e.g., lb/MMBtu). We interpret the Petitioners' reference to NO<sub>2</sub> in this context as having the same meaning as NO<sub>x</sub>.

In considering the allegations made by the Petitioners, EPA reviewed several documents, including the petition (and related appendices A-D), title V permit and Part 70 Operating Permit Fact Sheet/statement of basis, referenced PSD permit, MDE Response to Comments dated May 11, 2009 (RTC), and Petitioners' comments to MDE dated February 7, 2008, and March 9, 2009. Based on a review of all of the information before me, and for reasons detailed in this order, I grant in part and deny in part the issues raised by Petitioners.

## II. STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a (d)(1), calls upon each state to develop and submit to EPA an operating permit program intended to meet the requirements of CAA title V. EPA published a final rule on January 15, 2003 (68 FR 1974) granting full approval to the state of Maryland for the title V (part 70) operating program.

All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and such other conditions as are necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable State Implementation Plan (SIP). *See* CAA §§ 502(a) and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a). The title V operating permit program does not generally impose new substantive air quality control requirements (referred to as “applicable requirements”), but does require permits to contain monitoring, recordkeeping, reporting, and other requirements to assure compliance by sources with applicable emission control requirements. 57 Fed. Reg. 32250, 32251 (July 21, 1992) (EPA final action promulgating Part 70 rule). One purpose of the title V program is to “enable the source, states, EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements.” 57 Fed. Reg. 32250, 32251 (July 21, 1992). Thus, the title V operating permits program is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and that compliance with these requirements is assured.

Under section 505(a), 42 U.S.C. § 7661d(a), of the CAA and the relevant implementing regulations (40 C.F.R. § 70.8(a)), states are required to submit each proposed title V operating permit to EPA for review. Upon receipt of a proposed permit, EPA has 45 days to object to final issuance of the permit if it is determined not to be in compliance with applicable requirements or the requirements under title V. 40 C.F.R. § 70.8(c). If EPA does not object to a permit on its own initiative, section 505(b)(2) of the Act provides that any person may petition the Administrator, within 60 days of expiration of EPA's 45-day review period, to object to the permit. 42 U.S.C. § 7661d(b)(2), *see also* 40 C.F.R. § 70.8(d). The petition must “be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period).” Section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2). In response to such a petition, the CAA requires the Administrator to

issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the CAA. 42 U.S.C. § 7661d(b)(2). See also 40 C.F.R. § 70.8(c)(1); *New York Public Interest Research Group (NYPiRG) v. Whitman*, 321 F.3d 316, 333 n.11 (2<sup>nd</sup> Cir. 2003). Under section 505(b)(2), the burden is on the petitioner to make the required demonstration to EPA. *Sierra Club v. Johnson*, 541 F.3d 1257, 1266-1267 (11<sup>th</sup> Cir. 2008); *Citizens Against Ruining the Environment v. EPA*, 535 F.3d 670, 677-678 (7<sup>th</sup> Cir. 2008); *Sierra Club v. EPA*, 557 F.3d 401, 406 (6<sup>th</sup> Cir. 2009) (discussing the burden of proof in title V petitions); see also *NYPiRG*, 321 F.3d at 333 n.11. If, in responding to a petition, EPA objects to a permit that has already been issued, EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 C.F.R. §§ 70.7(g)(4) and (5)(i) – (ii), and 40 C.F.R. § 70.8(d).

### **III. BACKGROUND**

#### **A. The Facility**

Wheelabrator owns and operates a municipal solid waste incinerator located in Baltimore, Maryland (the “Facility”). Wheelabrator is permitted to burn over 820,000 tons per year (or 2,250 tons per day) of solid waste in three large mass burn waterfall municipal waste combustors. The Wheelabrator incinerator is a major stationary source of numerous air pollutants, including sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), and hazardous air pollutants (HAPs).

#### **B. The Permit**

Wheelabrator submitted an application to renew its existing title V permit to MDE on March 1, 2006. MDE issued an initial draft title V permit for the Wheelabrator Facility on January 14, 2008, for public comment. Petitioners submitted timely comments on the initial draft title V permit on February 7, 2008. MDE issued a revised draft title V permit for the Wheelabrator Facility on January 30, 2009. During the public comment period for the revised draft Wheelabrator Permit, Petitioners again submitted timely written comments to MDE on March 9, 2009. Petitioners raised all issues in the subject Petition in their comments to MDE. MDE responded to these comments on May 11, 2009. MDE submitted the proposed title V permit for the Facility to EPA on March 25, 2009. The EPA review period ended on May 8, 2009; EPA did not object to the title V permit. On June 1, 2009, MDE issued the title V permit (Number 24-510-01886) to Wheelabrator pursuant to state regulatory provisions implementing the Act.

The title V permit incorporates certain provisions from PSD Permit No. 83-01 issued by MDE to Wheelabrator on February 21, 1986 (PSD permit). Specifically, the title V permit incorporates numeric hourly and annual emissions limitations for SO<sub>2</sub>, CO and NO<sub>x</sub> that were established in the PSD permit. Permit No. 24-510-01886 at 34-35. The title V permit also incorporates the requirements of the Code of Maryland Regulations (COMAR) 26.11.08.08. Permit No. 24-510-01886 at 44 - 46. These regulations have been approved by EPA as

satisfying the state's obligation to have a section 111(d) plan under the requirements of the CAA. 42 U.S.C. § 7441(d)(1). The requirements of state 111(d) plans for large municipal waste combustors constructed on or before September 20, 1994, are established in 40 CFR 60 Subpart Cb. Both the state 111(d) plan and the PSD permit establish numeric limits for SO<sub>2</sub>, NO<sub>x</sub> and CO.

#### IV. THRESHOLD REQUIREMENTS

Section 505(b)(2) of the Act provides that a person may petition the Administrator of EPA, within sixty days after expiration of EPA's 45-day review period, to object to the issuance of a proposed permit. The State issued the revised permit on May 11, 2009, effective June 1, 2009. 42 U.S.C. § 7661(b)(2). EPA's 45-day review period for the Wheelabrator title V permit expired on May 8, 2009. Thus, the sixty-day petition period ended on July 7, 2009. The subject Petition is dated May 21, 2009, and was received by EPA on May 29, 2009. EPA finds that Petitioner timely filed its petition.

Section 505(b)(2) provides that the "petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates . . . that it was impracticable to raise such objections within such time period or unless the grounds for such objection arose after such period.)" 42 U.S.C. § 7661(b)(2). EPA finds that Petitioners' objections to the title V permit were raised with reasonable specificity during the public comment period provided by MDE.

#### V. ISSUES RAISED BY THE PETITIONER

##### A. Illegal weakening of the title V permit conditions (Claim I.A-C.)

Petitioners request that the Administrator object to the Wheelabrator permit because Petitioners allege that the permit does not comply with the CAA and implementing regulations at 40 C.F.R. § 70 in that the title V permit "illegally weakens the PSD pounds per hour limits for CO and NO<sub>2</sub> by allowing Wheelabrator to demonstrate compliance with a 24-hour rolling average." Petition at 4. This expansion of the time period for demonstrating compliance "from a three-hour average to a 24 hour average," according to Petitioners, "effectively authorizes an emissions increase and weakens existing emission limits in violation of section 116 and Title V of the Clean Air Act." Petition at 4-5. Petitioners consider the compliance averaging period in the title V permit to constitute a change to the PSD permit and argue that "MDE must follow procedures to modify the PSD permit." Petition at 5.

In support of this claim that changing the compliance averaging period for CO and NO<sub>2</sub> in the title V permit illegally weakens the PSD permit limit, Petitioners make several arguments. First, Petitioners claim that "Wheelabrator must comply with PSD limits for CO and NO<sub>2</sub> *every hour*" yet the title V permit allows Wheelabrator to demonstrate compliance using a 24-hour rolling average. Petition at 5. "By expanding the compliance average period," Petitioners argue, "MDE has turned the hourly PSD limit into a daily limit." Petition at 7.

However, Petitioners concede that the title V permit could authorize a compliance averaging period between three and nine hours based on their interpretation of the PSD permit condition which states that “[c]ompliance shall be determined by the average of not less than 3 test runs nor more than 9 test runs.” Petition at 5. At the same time, Petitioners assert that each test run “should be approximately one hour,” based on the fact that, although this is not a New Source Performance Standard (NSPS), the regulations governing NSPS regulations are instructive as to the duration of the test run. Petition at 6.

Petitioners’ remaining arguments related to the compliance averaging period are premised on their first argument – that the title V permit’s compliance averaging period for CO and NOx constitutes a change in the PSD permit. Such a change, Petitioners argue, cannot be made through the title V permitting process. Petitioners cite for support previous EPA statements that the requirements of a construction permit cannot be omitted or modified without going through the procedures for modifying the construction permit (either separately or concurrently with the title V permit). Petition at 7-8. Further, noting that PSD permits are issued pursuant to requirements established in Maryland’s SIP, Petitioners claim that section 116 of the CAA prohibits states from enforcing standards or limits that are less stringent than its SIP unless EPA approves a SIP amendment. Petition at 7-8.

Petitioners made these arguments in comments submitted to MDE during the comment periods on the initial draft permit and the revised draft permit. Petition at Appendix B. In response to these comments, MDE disagreed, stating that:

Compliance with the emissions standards established in the 1983 PSD approval was to be based on the results of averaging from 3 up to 9 test runs using EPA Reference method tests. The allowance of up to 9 test runs is a direct acknowledgment that in order to obtain a representative test result for a heterogeneous MSW waste stream, more than the typical three test runs may be necessary to demonstrate compliance. Although test runs are many times one hour in duration, the EPA Reference Methods does not specify a specific test duration. Rather, the goal of testing is to collect a representative sample of stack gases that reflects the emissions from a source, and in the case of an incinerator, a 24 hour period for NOx is a reasonable time period.

The BACT emissions limit for NOx in the 1983 PSD Approval were based on incinerator design combined available emissions data. The BACT analysis determined that no additional post-NOx emission control devices were warranted. . . . Wheelabrator has routinely demonstrated compliance with the NOx pounds/hour emissions limitation by following the annual stack testing requirement established in the PSD Approval.

Because NOx emissions from incinerators are affected by the nitrogen content of the trash, there is a technical justification for establishing a 24 hour averaging period. For example yard waste, especially grass clippings, are high in nitrogen content. Air pollution controls are needed to comply with NSPS/EG limits. It has been demonstrated

that attempts to achieve the NOx limit with use of the NOx control system on a 3-hour average will result in increased levels of ammonia slip that will contribute to visible emissions in violation of Maryland's opacity regulations. The ammonia slip is caused because uncontrolled NOx emissions are constantly changing due to the composition of the municipal waste. The reaction time of NOx control system is not instantaneous, so periods of excess urea may occur, resulting in increased ammonia slip. Wheelabrator became subject to NSPS/EG limits effective in 1997. The NOx limitations were set for a 24 hour basis to be measured with continuous emission monitoring systems.

As mentioned above, Wheelabrator demonstrated compliance with the PSD Approval as required by the Approval by performing stack tests. When the Company performs stack tests, there is a certain amount of control on the composition of the waste stream to be burned during the test period. With the use of continuous emission monitors, NOx concentrations are measured at all times. As a consequence, compliance with a short term averaging time is problematic when the nitrogen content in the trash stream is varying in a manner for which the NOx control system cannot adequately respond, resulting in higher ammonia emission. This inability to make rapid adjustments is the primary contributor to violations of the visible emissions standards.

Another issue that prevents the setting of hourly emissions standards for CO and to a lesser degree NOx, is not allowing the exclusion of periods of start-up, shutdown, and malfunction [SSM]. Such exclusion is particularly relevant for municipal incinerators because of the inherent variability of the waste stream. Thus, it would be deemed unreasonable to expect an incinerator to achieve a one hour CO limit that includes SSM periods. Furthermore, the 1983 PSD Approval stated that compliance would be based on the average of 3 up to 9 test runs. Obviously, stack tests are not performed during periods of startup, shutdown, or malfunction so compliance with the PSD Approval limits were never intended to be demonstrated during periods of SSM.

RTC at 2-3.

In their title V petition to EPA, Petitioners counter MDE's Response to Comments by arguing that:

However, the duration of the stack test must bear some relationship to the underlying emission standard. ... The PSD permit establishes hourly limits for CO and NO<sub>2</sub>. Thus, the compliance averaging period should not be greater than nine hours.

Petition at 6 (citing 40 C.F.R. § 60.8(f)). In support of their argument, Petitioners provide an example, which in their view, shows how the same emissions could exceed the PSD permit but be in compliance with the title V permit. Petitioners conclude, therefore, that "[b]y expanding the compliance averaging period, MDE has turned the hourly PSD limit into a daily limit. Petition at 6.

Petitioners also address MDE's argument that it may expand the compliance averaging period to a reasonable time period because of Wheelabrator's use of a CEM system as opposed to annual stack tests and MDE's argument that it does not exempt SSM events. First, Petitioners argue that "MDE is free to modify the terms of Wheelabrator's PSD permit to address these concerns by following its procedures for modifying a PSD permit." Petition at 9. Petitioners argue further that "Wheelabrator may not escape compliance with the PSD emission limits simply because CEMs is more likely to detect a violation than an annual stack test." Petition at 9. Citing *Sierra Club v. Tenn. Valley Auth.*, 430 F.3d 1337, 1346-50 (11<sup>th</sup> Cir. 2005), the Petitioners argue that "MDE's expansion of the averaging period for the CO and NO<sub>2</sub> PSD emission limits through the Title V process effectively modifies the emission limits of a PSD permit without the rigors of, and the protections afforded by, the PSD permitting process." Petition at 10. Finally, in response to MDE's arguments about excess emissions produced during SSM events, Petitioners point out that "the PSD permit does not include an exception for SSM emissions" and in the absence of an express exemption, EPA's "long held policy" is that "PSD limits apply at all times—including during SSM events" as indicated by EPA memoranda from 1993 and 1999. Petition at 10-11.

*EPA's Response:* For the reasons described below, the petition is granted with respect to this claim.

The Petition is granted on this issue (Claim I.A-C) because MDE's response does not address and is thus substantively non-responsive to the specific objection(s) raised by Petitioners. EPA recognizes that MDE attempts to provide a "technical justification" for the use of a 24 hour averaging period for NO<sub>x</sub> and for CO. MDE believes that hourly emissions limits are not feasible because emissions during SSM periods are not excluded and it would be "unreasonable to expect an incinerator to achieve a one hour limit that includes SSM periods." RTC at 2-3. However, MDE's response fails to address Petitioners' claim that the averaging period established in the title V permit for NO<sub>x</sub> and CO weakens the hourly limits for CO and NO<sub>x</sub> established in the PSD permit and therefore effectively authorizes an emissions increase above the PSD permit limits. Indeed, there is nothing in the permit record to indicate that MDE evaluated Petitioner's claim.

Permitting authorities have a responsibility to respond to significant comments. *See, e.g., In the Matter of Onyx Environmental Services*, Petition V-2005-1 (February 1, 2006), cited in *In the Matter of Kerr-McGee, LLC. Frederick Gathering Station*, Petition-VIII-2007 at 4 (February 7, 2008) (*Kerr-McGee Order*) ("it is a general principle of administrative law that an inherent component of any meaningful notice and opportunity for comment is a response by the regulatory authority to significant comments"). The Petitioners' comment regarding the potential weakening of the NO<sub>x</sub> and CO limits is significant because it raises the issue of whether the limits in the PSD permit have been modified and weakened in the context of the title V action. EPA therefore concludes that MDE's technical and practical reasons for expanding the averaging times do not address the central issue, raised by Petitioners, of whether the permit illegally weakens the PSD pounds per hour limits for CO and NO<sub>x</sub>. For these reasons, I grant the petition on this issue.

EPA directs MDE to re-evaluate Petitioner's claim, respond to it and, if necessary, revise the title V permit. Any revised title V permit must comply with 40 C.F.R. § 70.6(a), which requires each permit to include certain elements, specifically, emissions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements.<sup>2</sup> Accordingly, the title V permit must contain provisions that assure compliance with the requirements from the 1986 PSD permit, including the hourly emissions limitations for NO<sub>x</sub> and CO and the condition at issue here – that “compliance shall be determined by the average of not less than 3 test runs nor more than 9 test runs.” In addition, the title V permit “shall specify and reference the origin of and authority for each term and condition, and identify any difference in form as compared to the applicable requirement upon which the term or condition is based.” 40 C.F.R. § 70.6(a)(1)(i).<sup>3</sup> Alternatively, if MDE believes that the NO<sub>x</sub> and CO limits established in the PSD permit are not feasible, then MDE may seek to revise the PSD permit through appropriate procedures, and reflect any revised PSD permit terms in the title V permit (MDE may seek to implement the PSD permit revisions concurrently with the revision of the title V permit). In any case, MDE must provide a statement that sets forth the legal and factual basis for the draft permit conditions in accordance with 40 C.F.R. § 70.7(a)(5), and a response to significant comments. See *In the Matter of CITGO Refinery and Chemicals Company L.P.*, Petition-VI-2007-01 at 7-8 (May 28, 2009) (*CITGO Order*).

#### **B. Inadequate Monitoring (Claims II.A and B)**

Petitioners claim that EPA must object to the permit because it does not include monitoring requirements adequate to assure compliance with applicable emission limits and standards. Petitioners note that in an August 2008 decision (*Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008)), the United States Court of Appeals for the District of Columbia vacated an EPA rule that would have prohibited Maryland and other states from including additional monitoring provisions in title V permits above and beyond the monitoring provisions that were already included in the underlying applicable requirements. In doing so, according to Petitioners, the Court “removed any doubt about MDE’s authority to supplement monitoring in title V permits when needed to ‘assure compliance’ with emission limits.” Petition at 13.

Explaining that “the Court noted that annual testing is unlikely to assure compliance with a daily emission limit,” Petitioners argue that “the frequency of monitoring must bear some relationship to the averaging time used to determine compliance” and “an annual stack test to ensure compliance with emission standards that must be met on a short term basis is clearly inadequate.” Petition at 12-13. Petitioners also assert that “[w]herever possible, the Permit

---

<sup>2</sup>40 C.F.R. 70.2 defines “applicable requirement” to include “Any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D, of the Act”.

<sup>3</sup> EPA also notes that the title V permit refers to the limit as both a 24 hour *block* average and a 24 hour *rolling* average for the CO and NO<sub>2</sub> pounds per hour emission limits. This inconsistency should also be addressed by MDE. Permit at 35 (Table IV-1).



should require CEMS to measure compliance based on the averaging period in the underlying standard;" for example, a daily emission limit "should be measured every day, not once a year." Petition at 13. On the other hand, Petitioners acknowledge the possibility that continuous monitoring may not be available, but argues that in that case, "the Permit should require alternative methods that more closely match monitoring frequency to the averaging time for compliance." Petition at 13-14. Based on their understanding of the *Sierra Club* case, Petitioners make two specific claims regarding the monitoring requirements in the Wheelabrator permit. (Claims II.A and B).

#### Claim II.A: Monitoring Methodology

First, Petitioners claim that the title V permit "does not include specific monitoring requirements to ensure compliance with PSD hourly limits for SO<sub>2</sub>, CO, and NO<sub>2</sub>" because "it does not include the specific methodology to convert the continuous emission monitoring (CEM) data (expressed as parts per million) into a mass limit to show that Wheelabrator meets the [applicable] PSD hourly limits." Petition at 14. Petitioners acknowledge that "the Permit states that Wheelabrator 'shall continuously monitor pollutants and other parameters necessary to calculate the pounds per hour PSD limits'" but note that the permit provides only that "the methodology for calculating the lbs/hr emission shall be approved by the Department." Petition at 14. Petitioners argue that title V requires the inclusion of the specific method Wheelabrator must use to convert the continuous emissions monitoring system (CEMS) data to an hourly mass emissions rate and that states are not allowed "to issue a permit without monitoring requirements, on the promise that monitoring methods will be specified at some future date." Petition at 14.

Petitioners go on to assert that "the solution is obvious: Wheelabrator must install and use a flow monitor to measure the volume of gas flow, so that the concentration of pollutants subject to mass limits can be converted to the mass measurement required to determine compliance." Petition at 14. Petitioners note that Wheelabrator is already using a flow monitoring device to measure mass emissions of NO<sub>x</sub>. Petition at 15.

Petitioners made similar arguments in comments submitted to MDE (*See* Petitioners' March 9, 2009 comment letter to MDE). In response, MDE stated that "the flexibility allowed by the permit condition to allow for a 'methodology for calculating the lbs/hr emissions shall be approved by the Department' still provides for a reasonable level of assurance of compliance with the pounds per hour PSD limits." This approach, according to MDE, "allows for changes in the methodology without requiring the Department to expend resources for revising Part 70 permits." MDE explained the facility's current monitoring methodology approach (measuring air flow at maximum capacity during compliance emissions stack test and using the flow rate to calculate pound per hour of the pollutants) and reasoned that because Wheelabrator routinely operates at full capacity, MDE "believes this is a reasonable approach." RTC at 2. MDE also noted that if there are significant changes in the operation of the incinerators, MDE "will reevaluate whether the current approach remains reasonable and consider other viable alternatives." RTC at 2. Additionally, MDE responded that the compliance assurance

monitoring (CAM) rule at 40 C.F.R. Part 64 does not require CEMS and, therefore, MDE “disagrees with the contention that a continuous flow monitor is necessary in order to have a reasonable level of assurance of compliance with the PSD pounds per hour emissions limits.” RTC at 3

*EPA’s Response:* EPA grants this claim in part and denies this claim in part. EPA agrees that MDE does not have the discretion to issue a permit without specifying the monitoring methodology needed to assure compliance with applicable requirements in the title V permit. As Petitioners note, *Sierra Club v. EPA* made it clear that section 504(c) of the CAA requires all title V permits to contain monitoring requirements to assure compliance with permit terms and conditions. EPA discussed this case and its implications at length in two title V orders issued on May 28, 2009 (four days before MDE issued the final Wheelabrator permit). *CITGO Order; the Matter of Premcor Refining Group Inc.*, Petition-VI-2007-2 (May 28, 2009) In the CITGO Order, EPA noted:

If an applicable requirement contains a periodic monitoring requirement that is inadequate to assure compliance with a term or condition of the title V permit, the Court concluded, title V of the Act requires that “somebody must fix these inadequate monitoring requirements.” *Id.* at 678. The Court overturned EPA’s interpretative rule, but found that EPA’s current regulation at 40 C.F.R. § 70.6(c)(1) – requiring that each permit contain monitoring requirements sufficient to assure compliance with permit terms and conditions – may, and must, be interpreted consistent with the Act. *Id.* at 680.

To summarize, EPA’s part 70 monitoring rules (40 C.F.R. §§ 70.6(a)(3)(i)(A) and (B) and 70.6(c)(1)) are designed to satisfy the statutory requirement that “[e]ach permit issued under [title V] shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions.” CAA § 504(c). As a general matter, permitting authorities must take three steps to satisfy the monitoring requirements in EPA’s part 70 regulations. First, under 40 C.F.R. § 70.6(a)(3)(i)(A), permitting authorities must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the title V permit. Second, if the applicable requirement contains no periodic monitoring, permitting authorities must add “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B). Third, if there is some periodic monitoring in the applicable requirement, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance. 40 C.F.R. § 70.6(c)(1).

*CITGO Order at 6-7.*

EPA also noted that “the rationale for the selected monitoring requirements must be clear and documented in the permit record” and that “the determination of whether monitoring is adequate in a particular circumstance generally will be a context specific determination.” *CITGO Order at 7.*

The permit condition<sup>4</sup> at issue in this matter requires Wheelabrator to develop a way to convert CEMS data, expressed in parts per million, into mass emissions data for demonstrating compliance with the short term PSD emission limits. According to MDE, this conversion is to be established and approved by MDE outside of the title V permitting process. This is inconsistent with the requirements of section 504(c) of the CAA to include -- *in the title V permit* -- monitoring to assure compliance with applicable requirements. The conversion method needed to demonstrate compliance with the PSD pounds per hour limits for SO<sub>2</sub>, CO, and NO<sub>x</sub> is an essential part of the monitoring requirements that must be in the title V permit to assure compliance with those PSD limits. MDE must revise the permit to include a conversion method for the CEMS data that assures compliance with the PSD pounds per hour emission limits for SO<sub>2</sub>, CO, and NO<sub>x</sub>.

Because EPA agrees that the title V permit must include the monitoring methodology for determining compliance with the applicable requirements for SO<sub>2</sub>, CO, and NO<sub>x</sub>, EPA grants Petitioners' claim in part. However, EPA denies Petitioners claim to the extent they argue that "Wheelabrator must install and use a flow monitor." While a flow monitor may be one appropriate monitoring methodology, EPA cannot conclude at this time that a flow monitor is the only monitoring methodology that can assure compliance with the PSD hourly limits for SO<sub>2</sub>, CO, and NO<sub>x</sub>. Instead, EPA directs MDE to issue a new draft title V permit for public review and comment that includes: (1) a monitoring methodology for the PSD hourly limits for SO<sub>2</sub>, CO, and NO<sub>x</sub>, and (2) a rationale that explains how the monitoring methodology assures compliance with the PSD hourly limits for SO<sub>2</sub>, CO, and NO<sub>x</sub>.

Claim II.B: Monitoring requirements for PM, mercury, lead, hydrogen chloride, and dioxins/furans

Petitioners claim that the title V permit fails to include monitoring sufficient to assure compliance with short-term emissions limits for PM, mercury, cadmium, lead, hydrogen chloride, and dioxins/furans because the permit requires only an annual stack test to determine compliance with these emission limits, which must be met continuously. Petitioners argue that an "annual stack test is clearly insufficient to ensure that Wheelabrator is complying with short term emission limits for toxic pollutants." Petition at 15. As an example, Petitioners claim that mercury emissions from the facility "swing sharply from year to year" citing reporting data provided by Wheelabrator for 2006 and 2007 that shows a release of 243 pounds of mercury in 2006 and 35 pounds of mercury in 2007. Petition at 15. This difference, in Petitioners' view, "underscores the need for continuous monitoring." Petition at 15. Based on this analysis, Petitioners conclude that the title V permit should require CEMS for mercury to assure compliance with mercury limits.

Petitioners also assert that "the Wheelabrator permit must require CEMS for particulate

---

<sup>4</sup> Title V permit condition Table IV-1.3C(2) requires that "[t]he Permittee shall continuously monitor pollutants and other parameters necessary to calculate the pounds per hour PSD limits. The methodology for calculating the lbs/hr emissions shall be approved by the Department."

matter and hydrogen chloride to assure that Wheelabrator meets short term PM and hydrogen chloride emission limits” and if continuous monitoring is not available, the permit should require alternative methods that more closely match monitoring frequency to averaging time for compliance. Petition at 15-16.<sup>5</sup>

Petitioners made these comments/claims in their March 9, 2009 comment letter to MDE. In response, MDE stated:

The Department disagrees with this comment. The [Emission Guideline] rules that apply to Wheelabrator specifically require an annual stack test as the method of demonstrating compliance. The rule does allow the source to use CEM systems as an approved alternative to testing. However, the use of CEM systems [is] still not a requirement.

As mentioned in our prior response, processing title V permits is not the appropriate mechanism for imposing enhanced monitoring such as CEMS on a source.

RTC at 3.

MDE goes on to explain that EPA’s CAM rule for enhanced monitoring includes an exemption for units subject to emission limits or standards proposed by EPA after November 15, 1990, pursuant to section 111 and 112 of the CAA and that there are limitations under section 112 for all of the pollutants mentioned by Petitioners (PM, mercury, cadmium, lead, hydrogen chloride, and dioxin/furans). MDE concludes that “[t]he NSPS/Emissions Guideline regulations for municipal incinerators have sufficient testing, monitoring, record keeping, and reporting requirements [TMRR] so no additional TMRR needs to be established under the authority of periodic monitoring.” RTC at 3.

*EPA’s Response:* EPA grants Petitioners’ claim. MDE failed to provide an adequate response to Petitioner’s comment.<sup>6</sup> In its Response to Comments, MDE did not explain how the monitoring

---

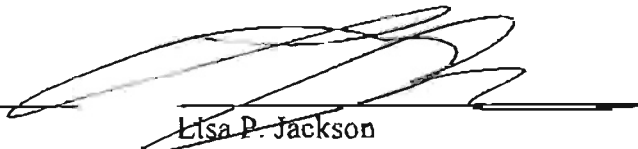
<sup>5</sup> Petitioners also assert that “to the extent that there are other emission limits in the . . . permit that do not have adequate monitoring, these provisions would also violate Title V of the Clean Air Act,” Petition at 16. With respect to this last assertion, 40 C.F.R. §70.8(d) provides that “[a]ny petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period.” This assertion by the Petitioner is not an objection to any identifiable provision in the permit and was not raised with reasonable specificity during the public comment period. Even if it had been raised with reasonable specificity, the claim would be denied because such a generalized statement does not meet Petitioners’ burden under section 505(b)(2) of the CAA to demonstrate to the Administrator that the permit is not in compliance with the CAA. *MacClarence v. EPA*, No. 07-72756 (9<sup>th</sup> Cir. March 4, 2010).

<sup>6</sup> The Agency notes that Petitioners’ characterization of the monitoring requirements for PM, mercury, cadmium, lead, hydrogen chloride and dioxins/furans as only relying on an annual stack test is not accurate. The Title V permit, in fact, includes additional monitoring requirements from the COMAR and the applicable requirement. It requires the facility to operate, among other things, a continuous opacity monitor and to measure the activated carbon feed rate on an hourly basis. However, MDE has not demonstrated or explained how these monitoring requirements are adequate to assure compliance with the short term emission limits for the pollutants at issue in this claim II.B.

in the title V permit assures compliance with short-term emissions limits for PM, mercury, cadmium, lead, hydrogen chloride, and dioxins/furans. Rather, MDE appears to have concluded that it could not include in the title V permit any additional monitoring requirements beyond those from the applicable requirement, and therefore MDE did not analyze whether the annual stack test and any other monitoring requirements for these pollutants are adequate. MDE's analysis and conclusion is inconsistent with the *Sierra Club* case discussed above, which held, among other things, that if the existing periodic monitoring requirement is not adequate to assure compliance with an applicable requirement, then the permitting authority must include supplemental monitoring requirements in the title V permit to assure compliance with the applicable requirements in the permit.<sup>7</sup> See *Sierra Club*, 536 F.3d at 678 and *CITGO Order* at 6. Therefore, EPA directs MDE to evaluate whether the title V permit includes adequate monitoring requirements for the short term emissions limits for PM, mercury, cadmium, lead, hydrogen chloride, and dioxins/furans and issue a new draft permit for public review and comment that satisfies the monitoring requirements of 40 C.F.R. §§ 70.6(a)(3)(i)(A) and (B) and 70.6(c)(1). Further, MDE must provide a statement, in accordance with 40 C.F.R. § 70.7(a)(5), that sets forth the legal and factual basis for concluding that the existing and/or additional monitoring requirements for these pollutants are adequate, and a response to significant comments. See *CITGO Order* at 7-8.

## VI. CONCLUSION

For the reasons set forth above, and pursuant to section 505(b) of the Act, 42 U.S.C. § 7661d (b), and 40 C.F.R. § 70.8(d), I partially deny and partially grant the petition and remand the permit to MDE for revisions consistent with this Order.

Dated: 4/14/10   
\_\_\_\_\_  
Lisa P. Jackson  
Administrator

---

<sup>7</sup> EPA recognizes that MDE's understanding of its obligation to include additional monitoring in title V permits could have benefited from EPA's title V orders in *CITGO* and *Premcor*, but those orders were not issued until May 28, 2009 – three days before MDE issued the final *Wheelabrator* permit on June 1, 2009.