



**Environmental  
Protection Agency**

John R. Kasich, **Governor**  
Mary Taylor, **Lt. Governor**  
Scott J. Nally, **Director**

June 5, 2012

Ms. Janet McCabe, Deputy Assistant Administrator  
U.S. EPA  
Office of Air and Radiation  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

Dear Ms. McCabe:

I am writing on behalf of multiple states ((Illinois, Indiana, Kentucky, Ohio, Virginia, West Virginia) (the states) with active underground coal mines that have been evaluating the need to request Title V permit applications from coal mine owner or operators as a result of greenhouse gas (GHG) emissions. As you know, the major greenhouse gas emission of concern is methane which occurs naturally in mines. Methane can present a serious explosion risk and therefore is vented in order to provide a safe working environment. Depending on the mine configuration and size, the active underground coal mines may have ventilations systems that push air in, pull air out, alternate between pushing and pulling, or do both simultaneously through elaborate ventilation systems. Under each ventilation scenario it is essential to have multiple outlets for the methane/air mixture to go that is independent of the ventilation air mechanism. These additional ventilation points are usually through "boreholes" which are sometimes used for conveyors, ingress and egress of workers, and for running critical utility lines into the coal mine.

The two main issues that states have been struggling with are (1) how to calculate the amount of methane emissions and to ensure that the calculation methodology is uniform across the states, and (2) whether the methane emissions from active mines should be considered as fugitive. Based on an evaluation by the states, we believe the first issue can be addressed by using the methodology provided by U.S. EPA in the greenhouse gas reporting rule. If this emissions calculation methodology is widely utilized, then there would be a fairly consistent approach to the calculation of methane emissions among the states.

Regarding the second issue, the consensus among the states is that methane emissions from active underground mines are appropriately characterized as "fugitive" emissions. First, the reporting GHG Reporting Rule discussed the calculation of GHGs from underground coal mines and characterized the emissions from ventilation air systems and degasification systems as fugitive. 68 Fed. Reg. 16448, 16553. Second, the emissions of methane from mines cannot reasonably be captured. The overriding

purpose of the ventilation is to assure a safe working environment in the mine and capture systems interfere with the ventilation system and pose a substantial safety risk for workers. Because of this, requiring methane capture systems would not be acceptable. Third, many mines have multiple ingress/egress points where the methane is vented.

The viewpoint of the states concerning coal mine methane emissions is supported by past U.S. EPA guidance. As early as 1980 the U.S. EPA stated in the preamble to the promulgation of the definition for "fugitive emissions" stated that the ability to "collect" emissions is an important variable in defining fugitive emissions. 45 Fed. Reg. 52692-93 (August 7, 1980). Later, a U.S. EPA memorandum dated February 10, 1999, from Thomas C. Curran to Judith Katz (The Curran memo) set out factors to be considered in determining whether emissions are fugitive. The Curran memo set out factors that should be analyzed to determine if emissions can be "reasonably collected" The Curran memo stated that at a facility where emissions are not actually collected, this inquiry should include an analysis of (1) the reasonableness of the collection, including, but not limited to, cost considerations; (2) whether similar facilities are subject to national standards and State implementation plan (SIP) requirements (e.g. reasonably achievable control technology, best available control technology, or lowest achievable emission rate) requiring collection, and (3) whether similar sources actually collect emissions.

With regard to coal mine methane emissions, the industry currently does not have a national standard for collection or control of methane emissions. Further, the only coal mine methane abatement system that has been used to capture and abate emissions at a coal mine in the United States is the Biothermica Vamox system which is being experimentally used at an active underground coal mine near Brookwood, Alabama. The experimental Vamox unit is a 30,000 cfm (cubic feet per minute) system with potential expansion to 80,000 cfm. A typical active underground mine would require more than ten units to mitigate coal mine methane.<sup>1</sup> The lack of a national standard, the inherent safety risk, and the current exorbitant cost of collection at the majority of coal mines in the U.S. all tip the scale toward considering active underground coal mine emissions as fugitive emissions pursuant to U.S. EPA guidance.

We do not believe, therefore, that these facilities should be required to obtain a Title V permit since, at this time, the emissions of GHGs are most appropriately characterized as fugitive emissions. Additionally, the issuance of a Title V permit to active coal mines would simply be a paperwork exercise since there are no applicable requirements to include in the permit. The issuance of Title V permits would have no environmental benefit, but would further stress the States' resources. The undersigned States are not planning to solicit applications from these entities, and attached is the letter that we plan

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<sup>1</sup> The trial and experimentation is not tied to any compliance requirement, and also this experimentation may not be generally applicable since this particular mine has very gassy coal seams. The project was financed primarily by Biothermica to generate an income stream from carbon credits through different GHG reduction schemes and markets. Coalbed Methane Extra, EPA-430-N-00-004 (July 2008).

to send to entities in our state when asked if a Title V permit is needed for an active underground coal mine.

We understand that on May 22, 2012, U.S. EPA's Office of Air Quality Planning and Standards sent an email to Misti Duvall of the National Association of Clean Air Administrators (NACAA) in which U.S EPA expressed its initial thought that active coal mines where "emissions ... are captured and vented through ductwork out of the mine" may be subject to Title V. We believe that this determination is not consistent with typical mining operations and based on the information presented in this letter, we request that you reconsider your initial thoughts on this subject. With the deadline of July 1, 2012 for applications rapidly approaching, if U.S. EPA believes that our analysis is incorrect, we would appreciate a prompt response.

If you have any questions, feel free to contact me at 614-644-2270.

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Robert Hodanbosi".

Robert Hodanbosi, Chief  
Division of Air Pollution Control

cc: Juan Santiago, US EPA, RTP  
Misti Duvall, NACAA  
Laurel Kroack, Illinois  
Keith Baugues, Indiana  
John Lyons, Kentucky  
Michael Dowd, Virginia  
John Benedict, West Virginia

## SAMPLE RESPONSE LETTER

To whom it may concern:

The State of \_\_\_\_ along with the States listed below have written this letter to address an air quality permitting issue involving underground coal mines. Underground coal mines are located in each of our States. We are aware of the liberation of methane gas in mines and the serious explosion risk that is present in the mines. Gas must be vented in order to provide a safe working environment. Depending on the size and the underground footprint of the mine, it may be necessary to have multiple points where the methane is vented, along with large volumes of air.

The issue which has come to our attention is whether Title V operating permits must be obtained by these mines, assuming that CO<sub>2</sub>e emissions exceed the threshold for Title V applicability (100,000 tons/year CO<sub>2</sub>e). Our determination is that Title V permitting is not required, because the methane emissions should be considered fugitive emissions. This determination is consistent with USEPA description of methane emissions as fugitive in its guidance on quantifying emissions from mines.

The primary basis for our determination is that the methane emissions from a working mine can be emitted from multiple exits and are diluted that capture and control is technically and economically infeasible. Secondly, any Title V permit issued to a mine would be "hollow", i.e., it would not contain any substantive control requirements, since none exist. The issuance of a Title V permit would further stress our permitting resources for no environmental benefit. Please see the enclosed letter from several states sent to US EPA that presents a detailed explanation of why the emissions should be treated as fugitive. Also for your information is a recent email from US EPA on the subject that was sent prior to the combined states letter.

Therefore, we do not plan to solicit or act upon any Title V permit applications from underground coal mines at this time. If questions arise, please contact me at (\_\_\_\_) - \_\_\_\_ - \_\_\_\_.

Sincerely,

State Air Director

Ron Gore, Alabama  
Laurel Kroack, Illinois  
Keith Baugues, Indiana  
Robert Hodanbosi, Ohio  
Michael Dowd, Virginia  
John Benedict, West Virginia

## Hodanbosi, Bob

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**Subject:** FW: TV GHG applicability for underground coal mines  
**Attachments:** graycol.gif

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**From:** Juan Santiago [Santiago.Juan@epamail.epa.gov]  
**Sent:** Tuesday, May 22, 2012 2:26 PM  
**To:** Misti Duvall  
**Cc:** Anna Wood; Janet McDonald  
**Subject:** RE: TV GHG applicability for underground coal mines

Hi Misti,

Sorry for the delay in responding to your question. We have been discussing it internally and based on our understanding of the industry, our initial thoughts are that these emissions need to be considered point source emissions as they are captured and vented through ductwork out of the mine. There may be variations in the way methane is vented out of underground coal mines and these would have to be considered for a particular permitting action. If you have a state that is dealing with a particular permitting action and would like to discuss the specifics of the mine design and how they deal with their methane emissions, please let us know and we will be happy to work with the state and the region to reach a resolution of the particular permit action.

Thanks and don't hesitate to contact me if you have any questions.

Juan