



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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JAN 03 2013

REPLY TO THE ATTENTION OF:

Keith Baugues
Assistant Commissioner
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

Dear Mr. ^{KEITH}Baugues:

I am pleased to transmit to you the final report of the Indiana New Source Review (NSR) and Title V program evaluation that took place on March 5-6, 2012. Representatives of the U.S. Environmental Protection Agency met with Indiana Department of Environmental Management (IDEM) managers and staff to discuss IDEM's progress in implementing the NSR and Title V programs. The meeting was part of EPA's initiative to evaluate state permit program implementation.

The enclosed report highlights EPA concerns from the 2005 program evaluation report that have been resolved, current permit program strengths, areas for improvements, and recent permit program challenges. We appreciate IDEM's efforts to issue timely permits and improve its permit program. We will continue to work with IDEM to address NSR and Title V implementation issues.

If you have any questions, please contact Sam Portanova, of my staff, at (312) 886-3189.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Czerniak".

George T. Czerniak
Director
Air and Radiation Division

Enclosure

2012 Review of Indiana's New Source Review and Title V Permit Programs

I. Executive Summary

On March 5-6, 2012, the U.S. Environmental Protection Agency (EPA) conducted an on-site evaluation of the Indiana Department of Environmental Management's (IDEM) New Source Review (NSR) construction permit program and Title V operating permit program. This evaluation is part of EPA's ongoing oversight of state and local NSR and Title V permit programs. As has been done with other program evaluations, EPA provided a questionnaire on various permit program implementation topics to IDEM prior to the on-site meeting. The March 5-6, 2012, evaluation was based on IDEM's response to items from the questionnaire.

IDEM implements a State Implementation Plan (SIP) approved NSR program, which consists of the prevention of significant deterioration (PSD) program for attainment areas and the nonattainment NSR (NNSR) program for nonattainment areas. EPA approved Indiana's NNSR regulations (326 IAC 2-3) on October 7, 1994, and Indiana's PSD regulations (326 IAC 2-2) on March 3, 2003. EPA approved revisions to the PSD and NNSR rules on June 18, 2007, to incorporate NSR Reform provisions. EPA also approved greenhouse gas (GHG) PSD revisions to 326 IAC 2-2 on September 28, 2011. IDEM implements the Title V operating permit program pursuant to state regulations 326 IAC 2-7. EPA published an interim approval of these rules on November 14, 1995, and a full approval of these rules on December 4, 2001.

In August 2004, EPA conducted an on-site evaluation of the Indiana NSR and Title V permit programs. The June 30, 2005, (Title V) and August 4, 2005, (NSR) EPA reports for that program evaluation noted that IDEM's strengths included permit content/detail, permit tracking system, public notification, and public outreach. Among areas for improvement, EPA noted permit notification, tracking synthetic minor permits, RACT/BACT/LAER Clearinghouse (RBLC) entries, Title V permit issuance, and air quality analysis inventories. As part of the 2012 evaluation, EPA included follow up questions to the issues raised in the 2005 reports.

This report summarizes EPA's review and findings of Indiana's NSR and Title V permit programs. The findings in this report are based on the answers IDEM gave to the questionnaire, the March 5-6, 2012, meeting with IDEM, and EPA staff knowledge of the program from experience with reviewing IDEM permits.

II. Evaluation

A. Follow-up from 2005 program evaluation report

EPA identified the following issues as areas for improvement in the 2005 program evaluation report. EPA and IDEM revisited these issues in the March 2012 program evaluation. The following are issues from 2005 that have subsequently been resolved to EPA's satisfaction.

Permit Notification

IDEM has resolved EPA's concern about proper identification of PSD permits that are issued in conjunction with a Title V permit. In EPA's oversight of Indiana's program, we have noted that PSD permits are now clearly identified. According to IDEM, permit actions are identified as major PSD permits through the initial application process and are labeled and tracked as such in the state's internal permit tracking database.

Best Available Control Technology (BACT) Cost Analysis

Based on recent reviews of IDEM's PSD permits, EPA does not have an issue with IDEM's BACT cost analysis documentation. IDEM says they follow guidelines established in the EPA Air Pollution Control Cost Manual¹ when conducting a top-down BACT analysis. According to IDEM, the challenge in conducting a BACT cost analysis is determining what the threshold is for requiring a control option as BACT.

National Ambient Air Quality Standard (NAAQS) Inventories

In the 2005 report, EPA commented that IDEM's use of actual emissions for NAAQS inventories is not consistent with EPA guidelines on air quality models. In EPA's follow-up discussion, IDEM said NAAQS emission inventories are generated from Indiana's Emission Inventory Tracking System, which is based on actual emissions. However, IDEM understands this has been a problem in the past and, therefore, requires applicants to use allowable emissions for the NAAQS inventory for their NAAQS analysis. If the applicant determines the actual emissions data from the inventory is causing a significant impact in their significant impact area, then further measures are taken to determine the permitted allowable emissions. Those permitted allowable emissions are used in the NAAQS analysis. EPA believes IDEM has adequately addressed this issue.

Class I Impact Analysis

EPA commented in the 2005 report that Class I area impact analyses should no longer be routinely dismissed because a proposed source is greater than 100 kilometers (km) from a Class I area and that states should consider impacts for sources up to 300 km from a Class I area. IDEM is changing its modeling policies to reflect the Federal Land Manager's (FLM) criteria. Sources up to 300 km from a Class I area may be included in a Class I impact analysis if the source is of such a size that the State or FLM is concerned about potential impacts on a Class I area. IDEM follows the *Federal Land Managers' Air Quality Related Values Work Group (FLAG) Phase 1 Report—Revised (2010)*² for Class I areas to determine if an impact analysis is needed. EPA believes IDEM has adequately addressed this issue.

Visibility Impacts Analysis

Consistent with 326 IAC 2-2-7 and 40 C.F.R. § 51.166(o)(1), Indiana is required to conduct a visibility impact analysis as part of a PSD permit. In the 2005 report, EPA noted that IDEM did not include a visibility impact analysis in PSD permits. During the

¹ <http://www.epa.gov/ttn/catc1/products.html#cccinfo>

² http://www.nature.nps.gov/air/Pubs/pdf/flag/FLAG_2010.pdf

2012 program evaluation, IDEM reported that they now include a visibility impacts analysis in PSD permits. IDEM uses visibility screening procedures to conduct a visibility impacts analysis. This issue has been resolved.

Other Follow-up Items

EPA identified issues concerning tracking synthetic minor permits, RBLC entries, and file organization in the 2005 report. The status of these issues will be discussed below.

B. Current Program Strengths

Title V Permit Issuance

Although Title V permit issuance was not explicitly included in the program evaluation questionnaire, EPA discussed this topic during its visit. Since January 2011, Region 5 has been tracking the reduction of backlogged Title V permits. Indiana started with the smallest backlog within the region and has managed to reduce it by 56 percent. Indiana is also leading the region in the number of significant power plant and refinery Title V permits issued.

Internal Permit Tracking and Streamlining

In 2007, Indiana conducted a “Lean” streamlining workshop. Through this exercise, IDEM implemented several changes to the permit issuance process that improved efficiency. The majority of these changes involved IDEM’s internal review process, but other changes included outreach on permitting requirements, changes to application forms and web documents, use of pre-application meetings with applicants, improved communication with applicants, and improved training for permit writers. IDEM continues to evaluate its permitting process and has conducted short, focused reviews on certain procedures to ensure that they have streamlined those processes as much as possible. The concept of the electronic document review system was identified in one of these sessions, which has been successfully implemented as a system called AirPro.

AirPro is the electronic document review system used internally to track a permit from draft to final. This system tracks changes and ensures that all comments are received and addressed before going to the next level. Since the document is available in the system almost instantaneously, turnaround time is minimized. This system also provides notifications when changes are made so that people are informed quickly about certain changes.

To ensure consistency among permits issued, IDEM provides templates, model permits, and model technical support documents (TSD) to permit writers. Also, regular internal trainings and meetings are held to discuss permit-specific issues and to ensure that the staff is aware of any changes that have been made to templates or procedures. IDEM also keeps an online repository of decisions and guidance, called Dynamic Electronic Annotated Rules (DEAR), for permit writers to access to aid in the development of permit conditions, TSDs, and responses to comments.

Response to Comments

IDEM permit staff consults DEAR, a library of common comments and responses, as well as their legal department to draft response to comments. IDEM responds to all comments received during the public notice period. In some cases, IDEM groups these comments when they are the same or very similar and provide a single response to the collective comment, but all comments are identified in the Addendum to the TSD (ATSD) and a response is provided for all comments. Responses to comments are only distributed through the ATSD as part of the final permit. However, IDEM does hold public meetings for some permitting actions. The information conveyed at public meetings are not included into the official permit record but give the opportunity for the public to ask questions and for IDEM to respond to the best of their ability. Conversely, during public hearings, IDEM takes questions and comments from the public and adds them to the official permit record. The responses to the questions and comments received during the public hearing are added to the ATSD.

Virtual File Cabinet

The Virtual File Cabinet (VFC) is a complete digital storage program for all documents maintained by IDEM, including permit applications, testing results, compliance certifications, etc. All documents that IDEM receives are uploaded to the system and stored there for the duration of their retention time. These documents are available for review through IDEM's website, and can be reviewed anytime; however, confidential documents are not available for public view through VFC. Documents dated 2006 and later are generally sorted and all documents predating 2006 are grouped together in a single document per source. VFC houses documents for all media, not just air, which leads to duplicative language. The duplicative terminology among media adds difficulty to the searchability of the database. IDEM discussed how best to find the documents and added that staff will often walk citizens through the search process in order to find the documents they are looking for. IDEM has made improvements to VFC to enhance its speed and reliability. The introduction and upkeep of VFC reduces the necessity to travel to Indianapolis to review files since they are available to be found, reviewed, and printed remotely by interested parties.

C. Areas for Improvement

Test Method Identification

EPA expressed concern that Indiana Title V permits do not specify a test method. Unless the underlying requirement lists a specific test method, the test method to be used during a stack test is established after permit issuance. IDEM says that test methods are not prescribed in permits in order to provide flexibility for new or alternative test methods based on information that is not available at the time of permit issuance. The test methods are selected by the source and are submitted to IDEM for review and approval at least 35 days prior to a stack test. EPA is examining this issue to assure that the permit content requirements of 40 C.F.R. 70.6(a)(3)(i)(B) are satisfied while providing the state with flexibility to account for unit-specific variations that affect the test method selection.

RBLC Entries

EPA observed in the 2005 NSR program evaluation report that IDEM was behind in entering data into the RBLC database. At the 2012 program review, IDEM stated again that they were behind in entering data into the RBLC. IDEM cites the difficulty of access to the RBLC and the lack of resources to keep the database updated as reasons for being behind. Entries in the RBLC are used by permit writers to ensure that BACT determinations are both complete and accurate. EPA is concerned that the delay in entering data into the RBLC database will result in an incomplete BACT analysis by other permit writers.

IDEM states that they only have two accounts available to access the RBLC database. Since access is limited to a small number of authorized accounts, IDEM is required to designate specific people to maintain the database. IDEM says this may create an unreasonably large work burden for the people that are tasked with updating the database. IDEM also said that if the designated people leave IDEM, then IDEM would lose access to the database.

EPA notes that since the meeting in March, IDEM has been working toward solving its issues in updating the RBLC. They received a letter from EPA dated March 12, 2012, which describes the methods that can be used to update the RBLC. IDEM has stated that they will be exploring the offline "Standalone Editor" RBLC entry method detailed in the letter to help reduce the delay in entering data into the database. IDEM and EPA will have further discussions in order to address IDEM's efforts to find a suitable RBLC entry method.

Tracking Synthetic Minor NSR Permits

IDEM tracks all minor permits, but does not specifically track whether they are synthetic minor permits for NSR. Specific limits within permits are labeled as synthetic minor if they were established to avoid major NSR. However, the permit itself is not categorized or tracked as a synthetic minor permitting action.

EPA has recommended that Indiana establish a method to track synthetic minor permits. This would allow for better tracking of sources that take limits to avoid NSR. In EPA's discussions on this issue with IDEM, the state noted that tracking minor permits for synthetic minor status may be difficult because of the volume of information per source. Due to the amount of time required to categorize sources, IDEM wanted to know whether this would be useful information for program implementation and oversight. IDEM wants to avoid recordkeeping and reporting information that it believes is difficult to obtain and that may not result in significant improvement in program implementation.

EPA believes that it is important to identify synthetic minor limits established to avoid NSR applicability. Such permit conditions can involve complex permit conditions for emission limits and monitoring, reporting, and recordkeeping requirements. EPA will follow up with IDEM to determine ways to identify new synthetic minor permitting actions without creating unnecessary burden on the state.

PM_{2.5} SIP Submittal

EPA finalized NSR implementation rules for particulate matter less than 2.5 microns (PM_{2.5}) on May 16, 2008 (73 FR 28321). SIP submittals from permitting authorities for this rule were due on May 16, 2011. IDEM submitted its SIP submittal for this rulemaking on July 12, 2012, and EPA is currently processing this submittal.

On October 20, 2010, EPA finalized a PM_{2.5} increment/significant impact levels (SILs)/significant monitoring concentration (SMC) rule (75 FR 64864). The SIP submittal for the 2010 rule was due on July 20, 2012. On December 12, 2012, IDEM updated its July 12, 2012, SIP submittal to include the PM_{2.5} increment portion of this rulemaking. The state has not yet submitted a SIP revision regarding the SIL and SMC provisions.

Compliance Assurance Monitoring (CAM) Plans

As part of the evaluation of Indiana's Title V program, EPA requested that IDEM provide three CAM plans for EPA to review from Title V sources subject to the CAM requirements of 40 C.F.R. Part 64. IDEM submitted CAM plans for IPL Petersburg Generating Station, IPL Harding Street Generating Station, and Liberty Green Renewables Indiana, LLC. The sources submitted these plans to IDEM with their Title V renewal applications as required by 40 C.F.R. §64.5.

IDEM requires sources to satisfy the CAM requirements either by filling out IDEM form FED-03 or by providing a document containing the information required by 40 C.F.R. §64.4. As part of its review, EPA checked whether IDEM's form FED-03 contained the components required by 40 C.F.R. §64.2 through §64.4. EPA concluded that form FED-03 requests the information required by 40 C.F.R. Part 64. As a result, sources that elect to complete FED-03 correctly will satisfy the submittal requirements of 40 C.F.R. §64.4.

EPA notes that each of the three CAM plans utilized IDEM's form FED-03 for each affected emission unit. Upon review of each sources' forms FED-03, EPA found that the documents were completed correctly and with enough detail to satisfy the submission requirements of 40 C.F.R. 64. Of those three CAM plans, only one plan, the CAM plan submitted by Liberty Green Renewables Indiana, LLC, also used an additional document to further discuss the implementation of CAM requirements. This additional document contained all of the information required by 40 C.F.R. Part 64.

40 C.F.R. §64.6 requires the permitting authority to establish permit terms or conditions that at a minimum specifies the approved monitoring approach, defines an excursion from the monitoring plan, establishes an obligation to conduct monitoring and fulfill other obligations required by 40 C.F.R. §64.7 through §64.9, and provides a requirement for minimal data availability if required. IDEM stated during the program review that each permit that they issue contains conditions that fulfill the requirements of 40 C.F.R. §64.6. EPA found that IDEM included all terms and conditions required by 40 C.F.R. §64.6 in each of the three Title V permits CAM requirements reviewed as part of this program evaluation.

While reviewing the CAM plans IDEM submitted for EPA's review, EPA also checked whether these CAM plans were easily available to the public for review. The Title V permits available through Indiana's CAATS online permit database did not include the CAM plans. EPA was able to locate the application for each Title V permit renewal, and by extension the CAM plans, by searching through IDEM's VFC database. However, EPA had some difficulty in locating the application since the permit record for each facility had to be searched via its facility number. There was also some difficulty in locating the appropriate application since the search returned multiple records marked as "application" for each facility. EPA is concerned that the difficulty in locating the CAM plans in IDEM's online databases may also make it difficult for the public to make timely, well-informed comments on the CAM requirements for a Title V permit during the draft permit public notice period.

D. IDEM Comments and Other Noteworthy Issues

1-hour NO₂ and SO₂ NAAQS

EPA published a final rule for a new primary 1-hour nitrogen dioxide (NO₂) NAAQS on February 9, 2010. This rule became effective on April 12, 2010. Also, EPA published a final rule for a new primary 1-hour sulfur dioxide (SO₂) NAAQS on June 22, 2010. This rule became effective on August 23, 2010.

EPA found that IDEM ensures that new construction projects have conducted modeling sufficient to show that they will not adversely impact these new 1-hour standards. However, IDEM says that there have been some difficulties with demonstrating compliance with the new NAAQS. One example provided by IDEM is that high background levels of NO₂ or SO₂ in an area may make it difficult to sufficiently model the impact a new facility will have on the NAAQS. Another example presented by IDEM is a concern regarding mismatched time intervals between stack testing, which is typically the average of three 1-hour test runs, and the 1-hour NAAQS. IDEM notes that it is possible for a facility to be compliant with a limit on average but the facility may exceed the limit during one of the 1-hour test runs.

IDEM stated that they would like additional guidance from EPA to assist states in both conducting the required modeling and managing the limits required to maintain the 1-hour NAAQS in permits.

PSD and Title V GHG Implementation

As of the March 2012 meeting with EPA, IDEM had received three applications from sources that propose to trigger PSD GHG requirements. Two of these permits have been issued final and one permit has been public noticed. IDEM says it cannot predict what number of PSD GHG applications it may receive in the future.

Title V applications were due July 2012 for sources that trigger Title V as a result of GHG emissions. IDEM has conducted outreach to existing FESOP sources to alert them to the possibility that their GHG emissions may require them to either apply for a Title V permit or limit GHG emissions to below the major source threshold. This outreach involved numerous sources, including some sources that weren't familiar with the nature

of their GHG emissions. EPA commends IDEM's outreach efforts to sources that may trigger Title V as a result of existing GHG emissions.

PM_{2.5} NSR Implementation

In EPA's program evaluation, IDEM said it has encountered significant issues in implementing PM_{2.5} requirements for sources subject to NSR. According to IDEM, due to recent EPA determinations on permits using PM₁₀ as a surrogate for PM_{2.5}, the state faces challenges on permits issued using this surrogate policy, which was allowed under federal rules until May 16, 2011. As a result, the state has had to go back and amend the record of or, in one case, re-notice permits that were issued prior to 2011 using the surrogate policy. IDEM considers these recent EPA determinations on the PM₁₀ surrogate policy to be a change in EPA guidance.

IDEM has also encountered difficulty in conducting modeling for some sources that are major for PM_{2.5}. IDEM believes that use of EPA's modeling guidance has resulted in inaccurate or overestimated data that shows violations of the NAAQS or a consumption of greater than 80% of the PSD increment. EPA's position is that the current modeling guidance is designed as tiered screening-level techniques, and is appropriate given the complications introduced by secondarily formed PM_{2.5}. Nonetheless, IDEM and EPA have had to work on ways to overcome the modeling issues at these sources.

Lack of good monitoring in some areas makes it difficult to establish a background level for a source. It is unclear to IDEM what would be used as good monitoring practices for PM_{2.5}. Another issue is lack of test methods to specifically measure PM_{2.5}. Some sources have to rely on PM₁₀ emissions data because they do not have a way to count PM_{2.5} emissions. All of this takes time and resources, making it more difficult to issue final permits.

III. Findings and Recommendations

IDEM has taken several steps to address concerns raised in EPA's 2005 program evaluation reports. Specifically, IDEM has improved PSD permit identification, BACT cost analysis documentation, use of allowable emissions for NAAQS analyses, Class I impact analysis consideration (for sources up to 300 km from a Class I area), and visible impact analyses.

EPA commends IDEM for its Title V permit issuance rates which result in a low number of backlogged Title V renewal permits. IDEM has also implemented new procedures to streamline its internal permitting process. IDEM's internal permit tracking system includes useful tools such as AirPro and DEAR to improve efficiency and consistency. IDEM has demonstrated a commitment to responding to comments it receives on draft permits. Finally, EPA credits IDEM with developing the VFC to enable online access to documents such as permit applications.

EPA has identified the following areas for improvement. IDEM has not submitted all BACT determinations to the RBLC. IDEM discussed the technical obstacles they have

experienced in making timely RBLC submittals and has been working with EPA since our March 2012 meeting to resolve this issue. Since March 2012, IDEM has submitted 30 RBLC entries to EPA for inclusion on the clearinghouse using the standalone editor.

EPA notes that IDEM's Title V permits do not identify test methods when the underlying requirement does not identify one itself. EPA is concerned that excluding the appropriate test methods may not comport with permit content requirements established in 40 C.F.R. 70.6(a)(3)(B). IDEM is concerned that identifying test methods explicitly in these permits will take away the flexibility that is required at different sources. EPA and IDEM are working together to determine the best solution to resolve both agencies' concerns.

Another issue EPA identified is tracking of synthetic minor NSR permits. EPA recommends that IDEM establish a method to track synthetic minor permits. EPA will work with IDEM to determine an appropriate method that is not overly burdensome to the state and will improve program implementation. EPA finds that the three CAM plans IDEM submitted for review and their associated Title V permits sufficiently implement the requirements of 40 C.F.R. Part 64. EPA recommends that IDEM make the CAM plans more easily accessible to the public during the public comment period.

IDEM and EPA identified the following noteworthy issues during our program review. IDEM said they have faced difficulties in modeling the 1-hour NO₂ and SO₂ NAAQS for some PSD permits. The state requests more guidance from EPA regarding modeling for these 1-hour standards. EPA does not have specific additional guidance under development at this time, but will continue to work with IDEM to address issues regarding the 1-hour standards. IDEM has also encountered issues in implementing PM_{2.5} requirements for NSR sources. At issue has been the use of the PM₁₀ surrogate policy and PM_{2.5} modeling requirements. For the implementation of GHG requirements, IDEM has issued two PSD permits and public noticed a third permit with GHG BACT. IDEM has conducted outreach to existing FESOP sources to inform them of the possibility that they may trigger Title V applicability for GHG emissions. As with the 1-hour standards issues, EPA will continue to work with IDEM to implement PM_{2.5} and GHG requirements in permits.