

**2006 ALABAMA
ENVIRONMENTAL PROTECTION
DIVISION
STATE REVIEW FRAMEWORK REPORT**



I. Executive Summary

Introduction

The Environmental Protection Agency's (EPA's) Office of Enforcement and Compliance Assurance (OECA), all ten EPA Regions, the Environmental Council of States (ECOS) Compliance Committee and other state representatives have jointly developed a method to assess state performance in the enforcement and compliance assurance program. This report reflects the FY2005 review by Region 4 of the Alabama Department of Environmental Management (ADEM) compliance and enforcement program and the Jefferson County Department of Health (Jefferson County), Air compliance and enforcement program utilizing the State Review Framework (SRF). This review has been a collaborative effort between the Region, State and Jefferson County and captures both successes as well as any identified areas that need improvement. As this is the first review of this type for ADEM and Jefferson County, this report will serve as a baseline review. Future reviews will look at performance as a comparison to the level documented in this review.

The purpose of the SRF assessment is to provide consistency in the level of core enforcement activity and performance thus in environmental protection across the country. It provides a consistent tool for EPA Regions to use in overseeing state enforcement program performance as well as to provide the basis for a consistent mechanism for EPA Regions to provide flexibility to states which can demonstrate an adequate core enforcement program.

The review consists of 12 critical elements which compare actual compliance and enforcement practices in the Clean Air Act (CAA) Stationary Sources Program, the Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) program, and the Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste program with EPA policies and guidance. The 12 evaluation areas posed by this Framework are consistent with evaluation areas delineated in the 1986 EPA guidance memorandum signed by Jim Barnes entitled *"Revised Policy Framework for State /EPA Enforcement Agreements."* Additionally the Framework utilizes existing program guidance, such as national enforcement response policies, compliance monitoring policies, and civil penalty policies or similar state policies (where in use and consistent with national policy) to evaluate state performance and to help guide definitions of an acceptable level of performance. There is also an optional 13th element. EPA and ECOS encourage the use of the 13th element to ensure the review takes a measure of the full range of program activities and results. These components can add meaningful input into a state's overall performance and program. Examples of topics could include program areas such as compliance assistance, pollution prevention, innovation, incentive or self-disclosure programs, outcome measures or environmental indicators that go beyond the core program activities covered in Elements 1 - 12.

ADEM's Air program is implemented by the State as well as two local air agencies;

- Jefferson County, Birmingham, Al, and,
 - Natural Resources and Environmental Management, for the City of Huntsville, Al
- Regional resources were sufficient to conduct a review of the State's enforcement and

compliance program and one local Air agency. Jefferson County regulates a greater number of air sources and is more industrialized than Huntsville and therefore was chosen for review. Huntsville will be reviewed in the next review cycle.

Jefferson County requested, for the purpose of this review, that the Jefferson County Air program be evaluated independently. Therefore, Jefferson County underwent a review that was parallel to the state review effort. For the Jefferson County Air program, Regional staff performed a separate data analysis, adjusting the statewide data as appropriate, as well as a separate file selection and review process. OECA provided the RCRA Alabama Regional Data Quality Review Check List, however for the Air and Water programs the data was obtained from the OECA SRF website. The Region then refined the Air data further to obtain specific data for Jefferson County.

Process Followed in the Review

Region 4's evaluations of the ADEM's core enforcement programs and Jefferson County's Air program were conducted by staff from the Region's Office of Environmental Accountability (OEA) and the Air, RCRA and Water enforcement programs using Elements 1-12 of the SRF, described above. The State and Jefferson County chose to submit information for the optional Element 13. Each media technical authority (TA) from OEA and staff from the program worked with their counterparts at the State and Jefferson County to determine the number of files to be reviewed. The number of files to be reviewed was determined based on the protocol in the Implementation Guide, and was based on the number of facilities in the universe, the number of inspections performed and the level of enforcement activity in each program at a statewide level. ADEM collected and made available all selected files at their central office. In addition, files from Jefferson County were reviewed at their Birmingham office. For each program, files were selected at random within a representation of types or program areas within each program. The scope of review generally evaluated the State against FY2005 agreements and outputs. For those instances where two years of data was required, FY2004 and FY2005 information was used. The report contains findings of the review for each program, and areas of concern with a full explanation of these concerns along with recommendations for resolution.

Information Considered From Other Reviews and Other Sources

For each of the compliance and enforcement programs, Region 4's OEA staff obtained those documents that identified negotiated compliance and enforcement commitments with ADEM and Jefferson County. These documents were reviewed for consistency with national and regional policy and guidelines as well as commitments that may differ from OECA expectations.

Overall Summary

This report documents the findings and recommendations of EPA's review of the ADEM compliance and enforcement program, and the Jefferson County Air compliance and enforcement program. The report examines 12 elements covering inspection implementation, enforcement activity, commitments in annual agreements and data integrity.

The State and Jefferson County, as a whole, have effective compliance and enforcement programs. In most instances, the State exceeded national averages identified in the Alabama SRF Metrics, across all media programs. These data metrics compared Alabama data to national figures such as inspection coverage, identifying and addressing significant violators in a timely way, etc. Alabama's high level of inspection coverage and activity is indicative of an active field presence for their compliance and enforcement program.

The report includes recommendations for improvement for all of the enforcement media programs. One overarching issue most significant for ADEM is the supporting documentation and rationale in files as to how penalties and economic benefit were calculated.

Inspection Implementation

CAA - In FY2005 ADEM completed 100% of the full compliance evaluations (FCEs) required for the Compliance Monitoring Strategy (CMS) major source universe, with the national average being 78%. Furthermore, in FY2005 ADEM completed 100% of the FCEs required for the CMS SM-80 source universe, with the national average being 78%. ADEM also reviewed 99.6% of the Title V Annual Compliance Certifications received and had no sources designated with an unknown compliance status code.

Jefferson County completed 100% of FCEs required of its CMS for majors. Furthermore, Jefferson County reviewed 100% of the Title V Annual Compliance Certifications and is to be commended for this effort.

ADEM completed most inspection reports within days of the inspection and all were written within EPA's 60 day target. The reports contained adequate documentation that showed the elements of a FCE.

In Jefferson County, four of 15 inspection reports took greater than EPA's guidance target of 60 days to be completed. Jefferson County should investigate the time it takes to complete a written inspection report from the date of the inspection and try to shorten this period to 60 days.

NPDES - In FY2005 ADEM completed 95% of NPDES major inspection, exceeded the national average of 64.3%. Furthermore, ADEM inspected 20% of their minor facilities, exceeding the national average of 11%. ADEM's high level of inspection activity, ADEM conducted over 3800 inspections in IY2005, indicates an effective field presence in their enforcement and compliance program.

The sample of inspection reports reviewed were generally thorough addressing permit requirements, records, site review, effluent/receiving stream, flow measurements, self monitoring program, laboratory, operation and maintenance, sludge utilization, pretreatment, etc.

RCRA - In the Large Quantity Generators (LQGs) universe category, Alabama exceeded the recommended inspection coverage of the RCRA regulated universe in FY2005, and also had good inspection coverage of the Small Quantity Generators (SQGs) universe over a five-year period. However, ADEM did not follow the statutory requirement for inspecting 100% of

Treatment, Storage, and Disposal Facilities (TSDs) over a two-year time frame. It is recommended that ADEM carefully review inspection targeting to ensure this requirement is consistently met.

In addition, ADEM did not meet the OECA FY2005-2007 Memorandum of Agreement (MOA) Guidance guidelines for compliance monitoring of the groundwater monitoring regulations at RCRA land disposal facilities. In FY2005, only 17% of the universe received the required inspections. In general, the inspections ADEM conducted were well-documented. There does appear to be variability among ADEM staff as to the thoroughness of the inspection documentation. EPA Region 4 recommends that ADEM establish a consistent protocol for thoroughly documenting RCRA compliance inspections.

Of the inspection files reviewed, ADEM RCRA Inspectors complete the inspection report on average between 30-40 days from the date of the inspection. All reviewed inspection reports were completed within appropriate time frames.

Enforcement Activity

CAA - ADEM's FY2005 high priority violation (HPV) discovery rate was 12.7% with the national average 9.3% based on FCEs completed in FY 2005. In addition, the HPV discovery rate based upon active major sources was 10.13% versus the national average of 4.2%

Jefferson County's HPV discovery rate based on FCEs completed in FY 2005 was in line with the national average. However, the discovery rate based upon active major sources was above the national average. Given the smaller number of sources that a local agency oversees, this is not unexpected.

ADEM had only six of 66 HPVs (9.0%) not addressed within the 270-day time line prescribed in the HPV policy. This far exceeds the national average of 49%.

Jefferson County's data metrics show two of six HPVs (33%) not addressed within the 270-day time line prescribed in the HPV policy. This is better than the national average of 49%.

As to appropriateness of the enforcement actions, ADEM and Jefferson County had all the HPVs corrected through consent orders appropriate to the violation.

ADEM does not have a written penalty policy. A key element of EPA's penalty policy that is not captured in their state code is how to compute dollar amounts for each factor. Having such computations is vital to an equitable implementation of penalties. It is recommended that ADEM develop a comprehensive penalty policy.

Jefferson County uses the EPA civil penalty policy to determine their penalties.

Gravity and economic benefit are assessment factors in ADEM's penalty calculations when assessing civil penalties, however, ADEM should document the economic benefit and gravity contributions for all penalties assessed. If ADEM determines that an action does not warrant a

penalty, documentation of the decision and rationale for the decision should be included in the case file. It is recommended that ADEM develop a penalty calculation worksheet and that the completed worksheet be available in the file for review.

NPDES - There is a history of false significant noncompliance (SNC) violations due to discharge monitoring report (DMR) non-receipt. This false SNC trigger was due to ADEM's untimely data entry of DMRs rather than facilities not submitting their DMRs. Although significant efforts have been made to address this concern, SNC determination due to false DMR non-receipt continues to impact the Alabama Watchlist. It is recommended that ADEM on a monthly basis review the quarterly noncompliance report (QNCR) and the Watchlist that the Region provides, to ensure that all SNC's are addressed in a timely and appropriate manner.

As noted in the body of this report, there is a difference in definition/terminology in what EPA and ADEM consider to be an NOV. ADEM defines a Notice of Violation (NOV) as a formal enforcement action containing specific components. EPA does not consider the ADEM NOV a formal action because it typically does not contain a date certain for the source to come into compliance and it generally does not explicitly state the consequences of noncompliance with its requirements. Rather EPA refers to this type of action as a Letter of Violation (LOV), Letter of Noncompliance, (LOC) or an NOV. It is recommended that ADEM investigate the modification of their "NOV" process to include a date certain, making the enforcement action formal as defined by EPA.

The majority of enforcement actions taken by ADEM resulted in the issuance of a Warning Letter. However, there were several occasions noted during the file review whereby the Warning Letter proved to be inadequate in returning the facility back to compliance. ADEM did not escalate their enforcement by pursuing either the issuance of a Consent or Unilateral Order. Formal enforcement action should be pursued when informal enforcement has not been successful in returning a facility back to compliance.

ADEM's enforcement files were generally complete; however, copies of the penalty calculations, associated economic benefit or ability to pay reports used to assess the civil penalties were missing from the files. It is recommended that records of calculations of proposed penalty, economic benefit, and settlement calculations must be created, maintained by ADEM, and made available for review to EPA upon request. If exceptions to the established penalty range per violations are made, then a detailed explanation should follow documenting the cause for such deviations.

RCRA - Generally all SNC information contained in the files was accurately reported in RCRAInfo. However, one case had the SNC date of determination as the same day that a draft compliance order was sent to the facility, which was also greater than 150 days after the initial inspection. ADEM should follow the RCRA Enforcement Response Policy for timely and accurate entry of all enforcement data into RCRAInfo. All enforcement files reviewed included required actions for the facility to return to compliance.

EPA's review of ADEM's 23 inspection files identified three facilities that should have been designated at SNCs but were only designated as Secondary Violators (SVs). EPA recommends

that ADEM closely review the RCRA Enforcement Response Policy to determine the appropriate response to violations at RCRA facilities.

It is ADEM's policy not to include penalty calculations in the enforcement files. The enforcement orders do state that the gravity of the violations and economic benefit are considered in the penalty calculation, however no documentation of this is maintained in the files. In addition there was one enforcement case where ADEM did not assess any penalty in the enforcement action. There was no justification, such as inability to pay, for the waiver of penalty in the enforcement case. It is recommended that ADEM consider options to maintain both initial and final penalty documentation, including economic benefit and gravity-based calculations.

Commitments in Annual Agreements

CAA - ADEM and Jefferson County have consistently met or exceeded all of the enforcement requirements in their 105 Grant funded Annual Planning Agreement (APA).

NPDES - ADEM has consistently met or exceeded all the enforcement requirements of their 106 Grant Work Plan and Enforcement Management System (EMS) for FY2005.

RCRA - ADEM has met or exceeded all requirements of the FY2005 RCRA Grant workplan with regard to compliance and enforcement activities reviewed as part of the SRF for FY2005.

Data Integrity

CAA - In examining the minimum data requirements (MDRs) for the 30 selected ADEM files, no significant data deficiencies were noted.

No significant data deficiencies were noted in Jefferson County's MDRs. Where some data issues arose, Jefferson County took immediate steps to update AFS.

ADEM reported that they concur with the information reflected in the data metrics and are satisfied with the information in AFS.

NPDES - Currently there is no automatic interface between Alabama's internal tracking systems and Permit Compliance System (PCS). All data are entered directly into both PCS and appropriate State tracking systems. ADEM has purchased the NPDES Management System (NMS) and plans on having the system implemented by the fall 2006. The NMS allows for the use of electronic DMRs and automatically uploads data into PCS. ADEM should ensure timely implementation of the NMS.

It is noted that Alabama enters data for minor facilities and general permittees into PCS. Alabama is currently the only state in the Region that tracks general permits in PCS. When ICIS-NPDES comes on-line, the industrial general permit information and data will be required to be entered. Alabama has voluntarily elected to begin entering and tracking their industrial general permits in PCS. As a result, Alabama is approximately 2 years ahead of the

requirements.

RCRA - ADEM should follow the RCRA Enforcement Response Policy for timely and accurate entry of data into RCRAInfo. In one of the seven enforcement cases reviewed, the policy was not followed.

The Alabama SRF Data Metrics were provided to ADEM, and there is no disagreement from Alabama with the data.

Summary

EPA Region 4's review of the Alabama and Jefferson County enforcement programs has determined that both the State and Jefferson County have a thorough understanding of their enforcement programs and are implementing the delegated enforcement programs.

The Region will continue to work closely with the State of Alabama and Jefferson County to implement the recommendations made in this report.

II. Media Program Element Reviews

Program: CAA Stationary Source Enforcement Program

Introduction: The CAA portion of this report entailed a two day review of files and an analysis of data in ADEM (3/22-24/06) and Jefferson County (4/24-25/06). The file selection protocol from the SRF was used to select the 45 files reviewed: 30 in ADEM and 15 in Jefferson County. The selected list of files was submitted to both agencies for concurrence as to being representative of the air enforcement program. ADEM responded with information that showed three of the files chosen were now class B sources so we substituted these with class A sources.

On-site at Jefferson County it was realized that we had selected a disproportionate number of synthetic minor (SM) sources to review so five SM sources were substituted with major sources. The 45 files reviewed consisted of 26 Title V major sources and 19 SM sources. Nineteen of these were carried in the AFS as HPV sources at some point during FY 2004-2005.

The data analysis consisted of reviewing information generated by the SRF data metrics for fiscal years 2004 and 2005, the most recent completed two fiscal year period. The data metrics pull was done on 4/27/06. The source of the metrics data for the air program is AFS.

1. **Degree to which state program has completed the universe of planned inspections/evaluations (addressing core requirements and federal, state, and regional priorities).**

Findings:

Inspections at Title V major sources: Under ADEM's FY 2004-2005 Compliance Monitoring Strategy biennial plan, ADEM planned to perform FCEs at all 332 of its Title V major sources. Names of 332 Title V major sources were enclosed in their plan. This plan is in conformance with EPA's April 25, 2001 CAA Compliance Monitoring Strategy where FCEs are to be conducted at least once every two years at all Title V major sources. The data metrics (pulled on 4/27/06 for FY 04/05) showed 306 FCEs actually performed at Title V major sources. According to the data metrics these 306 FCEs represents 100% of their CMS major source universe (the national average is 78%). Upon asking ADEM about the difference in numbers between their CMS plan (332 Title V major sources) and the data metrics (306 Title V major sources) - a difference of 26 major sources, ADEM shared that though they keep the CMS code in AFS as accurate as they can the universe of major sources is dynamic in nature (meaning sources shut down, change from major to synthetic minor or new sources come on line) and thus, at any given time, the universe of Title V major sources can be different. ADEM also shared that they try to do FCEs at major sources every year (i.e., twice as frequently as their biennial CMS plan and EPA guidance) and were concerned that the data metrics did not reflect this. Upon investigation it was learned that the data metrics only counts one FCE per biennial period. To confirm ADEM's statement that FCEs are done almost annually, R4 did an AFS query. This query, done on 10/25/06, indicated ADEM conducted 656 FCEs at major sources in both FY'04 and '05 thus confirming that ADEM does FCEs annually at their major sources. This pull also indicated that Alabama currently has 295 major sources reflecting again the dynamic nature of the source universe. Lastly, ADEM

enters FCEs on the last day of the fiscal year (present EPA guidance says to enter FCEs on a real time basis), and on-site inspections are entered on a real-time basis as PCEs. Based current policy ADEM should enter FCEs in AFS on a real time basis. The current Information Collection Request (ICR) specifies that all federally-reportable actions should be entered within 60 days of completion. Approximately 10% of the PCE actions entered by ADEM are off-site and the other 90% are on-site.

Jefferson County's FY 2004-2005 Compliance Monitoring Strategy biennial plan for major sources contains a schedule for conducting FCEs at 41 major sources (reduced to 39 in FY 2005 due to dynamic nature of source universe – see above explanation). The initial data metrics show 48 major CMS sources. Subsequent to the on-site visit, Jefferson County was asked about the difference in numbers. Jefferson County reported there was incorrect data in AFS due to erroneous and outdated EPA class codes and AFS has now been corrected to reflect 39 major CMS sources. An AFS pull was done on 10/25/06 and it showed Jefferson Country completing FCEs at 100% of its major sources (24 in 2004 and 15 in 2005). This percentage far exceeds the national average of 78% of CMS major sources receiving a FCE. Jefferson County started entering CMS information on a real-time basis (vs. end of year) in late FY '04 which is in conformance with EPA policy.

Inspections at SM-80s (80 percent of major source level): The universe of SM-80s includes those sources with an EPA or state classification code in AFS for synthetic minors and with a CMS source code for SM-80s. While EPA's April 2001 CMS requires that FCEs be conducted once every five years at the SM-80 sources, in ADEM's FY 2004/2005 CMS biennial plan they planned to perform FCEs at all their SM-80 sources in these two fiscal years (names of 141 SM- 80 sources were enclosed in their plan). This commitment is more frequent than EPA's once every five year requirement.

According to the data metrics, ADEM completed FCEs at 100% (148/148) of its CMS SM-80 sources. The difference again in numbers between the CMS plan and the data metrics is the dynamic nature of the source universe. The national average of SM-80 sources receiving a FCE is 77.7%.

Jefferson County's December 30, 2003, CMS plan contains a schedule for conducting FCEs at 33 of their 91 SM-80 sources in the first two fiscal years of this 5 year plan (FY 04 through FY 08). This schedule conforms to the national goal of performing FCEs at all SM-80 sources once every 5 years. Jefferson Country confirms that they met this plan and in fact exceeded it by performing 36 FCEs at SM-80 sources (23 in FY 2004 and 13 in FY 2005).

The most recent data metrics retrieval identifying FCEs conducted at SM-80 sources for the five year period of FY 2002-2006, shows Jefferson County at 93.3% (97 FCEs out of 104 SM-80 sources) with the national average of SM-80 sources receiving an FCE is 77.7%.

Subsequent to the on-site visit, Jefferson County reviewed the data metrics and

commented to the Region that there were a number of discrepancies in the reported data metrics. The original data metrics show Jefferson County completing FCEs at 68.7% (57 of 83) of their SM-80 sources in FY 2002-2005. Given the results of the latest data metrics, Jefferson County is doing a good job on conducting FCEs at their SM-80 sources.

Title V Annual Compliance Certifications received and reviewed: According to the data metrics for ADEM, 270 Title V annual compliance certifications were to be received and reviewed in FY 2005. Of this universe, the data shows 269 (99.6%) as reviewed (national average is 73.4%). ADEM is to be commended for overseeing the Title V annual certifications!

Jefferson County data indicates that Jefferson County received and reviewed 39 annual compliance certifications (100%) in FY 2005. The AFS data metrics showed Jefferson County received eight compliance certificates and that none of these had been reviewed. The cause of the discrepancy is thought to be the result of a failed monthly batch upload. Jefferson County ran reports for 2005 certifications. In examining the data, only 32 certifications were shown to have been received and reviewed for FY2005 prior to the data pull. This was due to the fact that one entire monthly batch upload to AFS, containing seven SR actions, failed to update. At the time of the upload, the error report indicated “no error,” therefore, Jefferson County was not aware of the transmission failure of the seven SR actions. The missing data have since been re-uploaded to AFS. Jefferson County has implemented a new QA/QC procedure to run transmittal reports to verify that data uploaded into AFS has been properly transmitted. Jefferson County is to be commended for overseeing the Title V annual certifications!

Sources with Unknown Compliance Status Designations: The data metrics show no sources that are the responsibility of ADEM designated with an unknown compliance status. Usually an unknown compliance status code is automatically generated for major sources when a FCE is not entered into the database by the end of the second succeeding fiscal year, but the unknown compliance status code may be entered for other reasons at any time.

Jefferson County’s data metrics showed six sources (major and SM 80 sources) with an unknown compliance status. Jefferson County was asked about this and they reported that at time of their AFS pull of unknowns (May 06), AFS only showed five unknowns (note that the compliance status codes are dynamic - meaning the compliance codes are always changing to reflect present compliance status of a source) and that none of these five unknown listings was due to lack of FCE completion and only one of these five unknown listings was a major source.

Since the national number of unknowns is close to 2,500, ADEM and Jefferson County are to be commended for keeping this universe low.

Citation of information used for this element

- ADEM’s FY 2004-2005 CMS biennial plan

- Jefferson County's FY 2004-2005 CMS biennial plan
- Data Metrics (source of data is AFS)

Recommendation(s): None

2. Degree to which inspection reports and compliance reviews document inspection findings, including accurate description of what was observed to sufficiently identify violations.

Findings:

Thirty of ADEM's files were reviewed: 17 major sources and 13 SM-80 sources to see how ADEM documents a completed FCE. The 30 files examined represent 6% of the 450 FCEs done in FY 2004/2005. The elements that make up a FCE could be found within the source file. The elements that were examined consisted of: general and facility information about source; a description or listing of all applicable requirements for the source; an inventory and description of regulated units and processes. These elements were found in the Title V permit and/or statement of basis. Information on previous enforcement actions; compliance monitoring activities and findings/recommendations were located in the source file (see EPA's April 25, 2001 CMS for a description of these terms). Also examined and found was the documentation associated with reviews of reports (such as memos to and from the source), for example, reports required of Title V permits; assessments of process operating conditions, process parameters and control equipment performance parameters; reviews of facility records and operating logs; and visible emissions observations and stack tests, where such were needed.

Fifteen of Jefferson County files were reviewed: 9 were major sources and 6 were SM-80 sources to see how Jefferson County documents a completed FCE. The 15 files examined represent 21% of the 72 FCEs done in FY 2004-2005 (39 FCEs at major sources and 33 at SM-80 sources). The files contained the documentation that showed the elements of a FCE being accomplished. Many of these elements were documented in the source inspection report or the Title V permit located in the source file. The source files contained correspondence to and from the source regarding: stack testing; record keeping and reporting associated with Title V requirements; emission inventories and fees; conclusions and recommendations; and enforcement actions.

In addition to the review of these files, the periodic issuance of NOV's, enforcement actions taken and internal notes on reviews of source submitted reports supports the level of FCEs reported each year by both agencies as these activities come from the execution of a FCE.

Citation of information used for this element

- ADEM and Jefferson County source files
- EPA's 4/25/2001 CMS guidance

Recommendation(s): None.

3. Degree to which inspection reports are completed in a timely manner, including timely identification of violations.

Findings: In ADEM, all inspection reports were written within days of the inspection and deficiencies were noted in the reports where appropriate.

In Jefferson County, two of fifteen files reviewed did not contain an inspection report. The evaluation team was told that one file (Melsur Corp.) had its inspection report misplaced though the inspector's field visit notes were found. The other source file was discovered to be a SM source (Birmingham Hide & Tallow). This source is scheduled for inspection in FY2008. Of the 13 files containing an inspection report, eight were written within 60 days with 253 days being the most time it took to write a report. Deficiencies were noted in the inspection reports where applicable.

Citation of information used for this element

- ADEM and Jefferson County source files

Recommendation(s): None.

4. Degree to which HPVs are reported to EPA in a timely and accurate manner.

Findings: According to the data metrics, ADEM's HPV discovery rate was 12.7% (national average 9.3%) based on FCEs completed in FY 2005. Discovery rate means new major source HPVs identified by the state in the fiscal year divided by the number of sources with state FCE's performed in the fiscal year. In addition, the HPV discovery rate based upon active major sources was 10.13% (national average 4.2%). Discovery rate means new major source HPVs identified by the state in the fiscal year divided by the number of active major sources. These discovery rates are in the acceptable range. ADEM does not enter HPV flags. Region 4 agreed to make the HPV determination and enter "day zero" for ADEM. ADEM believes that HPV reporting timelines are EPA triggers, and EPA should be responsible for entering the data. ADEM provides EPA with all the necessary information to make the HPV determinations. ADEM sends an enforcement package which consists of NOV's (ADEM considers a NOV formal enforcement action), NOV responses, consent orders, closing memos, stack test results, etc., to EPA monthly. EPA reviews the information, adds the new HPVs to the enforcement list (conference call notes), prepares data entry forms for AFS reporting, then compares information in AFS (653 Report) with the monthly data. Corrections to the data are made, if needed. EPA sends the conference call notes and the 653 Report to ADEM for their review and for discussion during the monthly enforcement call.

According to the data metrics, Jefferson County's HPV discovery rate was 8.0% based on FCEs completed in FY 2005 and 2.0% based upon active major sources. Though these rates are slightly below the national averages of 9.3% and 4.2%, respectively, they are still creditable given the smaller number of sources in a local agency. Jefferson County reports from their own analysis that their discovery rate for FCEs completed and active

major sources is 8.3% and 5.0%, respectively.

As to how HPV information is managed, Jefferson County historically has not entered HPV information into AFS. EPA agreed to make the HPV determinations and enter “day zero” for Jefferson County into AFS. Jefferson County provides EPA all the necessary information to make the determinations. Jefferson County sends all necessary enforcement documents (NOVs, CO, etc.) to EPA before the monthly conference calls are held. EPA conducts the monthly enforcement call, updates the conference call notes, based on the discussions, and sends the 653 Reports to Jefferson County for their review. EPA then prepares the data entry forms for AFS reporting. Starting FY 2007, Jefferson County agreed to make the HPV determinations and enter day zero actions.

ADEM and Jefferson County have accurately and timely reported HPV information to EPA in the form of monthly enforcement packages. Since ADEM and Jefferson County do not make HPV determinations and set day zero, EPA enters this information into the national database. The Region enters the data into the national data base within 30 days of receiving and reviewing the enforcement packages from ADEM. Because ADEM and Jefferson County do not enter the HPV information, they must use “action linking” to update the steps taken to closeout the HPV. In most cases, EPA sets the “day zero” no later than 45 days after the date of discovery as the HPV Policy requires unless the violation was self-reported (day zero is set 30 days from date information is received) or if additional information is requested (day zero is set 90 days from date of violation or when the information is received, which ever is first). The Region does not consider the NOV date the discovery date.

Citation of information used for this element

- Data Metrics (source of data is AFS)
- Monthly Region 4/ADEM/Jefferson County HPV Enforcement Packages/Calls

Recommendation(s): None

5. Degree to which state enforcement actions include required corrective or complying actions (injunctive relief) that will return facilities to compliance in a specific time frame.

Findings: Of the 30 ADEM files and 15 Jefferson County files reviewed, 12 contained enforcement actions with penalties (six in each agency). Examples of violations cited in these orders include record keeping and reporting issues, failed stack tests and failure to minimize emissions during equipment malfunctions. Most of the enforcement actions examined did not require compliance schedules or any form of corrective action as the cause of the violation was immediately corrected. One source file under Jefferson County’s jurisdiction required injunctive relief with a compliance schedule. The source failed to install a Low NOx burner due to the NOx SIP call requirement. Jefferson County issued a Settlement Agreement with a compliance schedule. The source met all the terms outlined in the Settlement Agreement.

Citation of information used for this element

- ADEM and Jefferson County source files

Recommendation(s): None

6. Degree to which a state takes timely and appropriate enforcement actions, in accordance with policy related to specific media.

Findings: According to the data metrics, ADEM had only six of 66 HPVs (9.0%) not addressed within the 270-day time line prescribed in the HPV policy. This far exceeds the national average of 48.8%.

Of the 30 ADEM files reviewed, 14 were identified as HPVs. ADEM considers issuing a NOV a formal enforcement action. All but one had their HPV addressed within 270 days (range was 0 - 264 days). The HPV exceeding 270 days was Dorsey Trailer who had a day zero of 9/26/05. Dorsey Trailer had multiple violations during FY04 and 05. ADEM issued Dorsey a Consent Order on June 11, 2004, with a penalty amount of \$50,000. Dorsey set-up an installment agreement with ADEM and paid one installment before it shutdown and filed for bankruptcy. ADEM issued a NOV on 3/9/05, after months of failed attempts to contact the source. ADEM referred the case to Region 4 for enforcement at the end of FY 2005 (9/26/05).

Jefferson County's data shows two of six HPVs (33%) not addressed within the 270-day time line prescribed in the HPV policy. This is better than the national average of 48.8% on addressing HPVs in a timely manner.

Of the 15 Jefferson County files reviewed, six were identified as HPVs. Four had their HPV addressed within 270 days. Of the two that took longer to address, one (Sloss Industries) was addressed in 563 days. In an AFS summary report, Sloss Industries is shown as a HPV that took 563 days to address ("day zero" being 2/6/04 and date "addressed" being 8/23/05). During the FY 2004/2005 timeframe, Sloss had two unresolved HPVs. The first HPV was (day zero 8/15/02) for not complying with the HON, and the second (day zero 2/6/04) was for numerous underfiring stack violations. The first HPV was very resource intensive and complex warranting EPA, Jefferson County and Sloss Industries to work together very closely to resolve the issues. The circumstances surrounding the number of days to address the violations were very extenuating because Jefferson County referred the case to EPA. EPA negotiated the case and gave it back to Jefferson County for resolution. The resolving action included the SEP detailed in Element 13 for Jefferson County. Jefferson County discovered a second HPV with a day zero of 2/6/04 while negotiations were ongoing with the first HPV. This new HPV was addressed on 8/23/05 and will be resolved when Jefferson County renews Sloss' Title V permit. The other untimely HPV (Rock Wool) was addressed in 404 days. It received two NOVs (10/17/03 and 7/16/04) from Jefferson County for various violations relating to complying with the Mineral Wool MACT. Jefferson County also relied heavily on technical assistance from the Region, Headquarters and OAQPS to resolve the Rock Wool HPV.

As to appropriateness of the enforcement actions, ADEM and Jefferson County corrected HPVs through consent orders or settlement agreements appropriate to the violations.

Citation of information used for this element

- Data Metrics
- Source files

Recommendation(s): None.

7. Degree to which the State has a penalty policy that includes both gravity and economic benefit calculations.

Findings: The Alabama Environmental Management Act (AEMA) addresses criteria to be considered in the assessment of penalties. ADEM reports that they calculate air penalties in consideration of six penalty factors enumerated in the AEMA. Specifically, Alabama Code Section 22-22A-5(18) provides that “...in determining the amount of penalty, consideration shall be given to the seriousness of the violation, including any irreparable harm to the environment and any threat to the health or safety of the public; the standard of care manifested by such person; the economic benefit which delayed compliance may confer upon such person; the nature, extent, and degree of success of such person’s efforts to minimize or mitigate the effect of such violation upon the environment; such person’s history of previous violations; and the ability of such person to pay such penalty.” “...any order issued under this paragraph shall include findings of fact relied upon the [D]epartment in determining...the amount of civil penalty...”

Notwithstanding ADEM's consideration of these six factors, ADEM does not have a written penalty policy. A key element of EPA's penalty policy not captured in the above state code is how to compute dollar amounts for each factor. Having such computations is vital to an equitable implementation of penalties.

Jefferson County uses the EPA civil penalty policy to determine their penalties.

Citation of information used for this element

- AEMA – penalty section
- EPA’s Civil Penalty Policy

Recommendation(s): It is recommended that ADEM develop a comprehensive penalty policy.

8. Degree to which state documents both gravity and economic benefit in accordance with any applicable penalty policy.

Findings: Of the 30 ADEM files reviewed, six were subject to an enforcement action. All six contained a state penalty. ADEM said that since early 2005 the six factors listed in the above cited Alabama code have been used and this process works well for them.

In fact, ADEM pointed out that their assessed penalties are representative of penalties they see in other Region 4 states. However, ADEM does not document how they use this code for each penalty it calculates (e.g., the files do not contain a penalty calculation worksheet). Thus, it could not be determined if and how the gravity and economic components are considered.

As to Jefferson County, six of the 15 files reviewed were subject to an enforcement action. All six contained a penalty that considered gravity and economic benefit. This was documented via a calculation worksheet found in each file. The calculations were accurate and adequately considered both gravity and economic benefit.

Citation of information used for this element

- Source files
- Jefferson County penalty calculation worksheet
- State Committee's April 2005 final report entitled "*Final Report and Recommendations of the Enforcement and Administrative Penalties Stakeholders Committee to the Alabama Environmental Management Commission*"

Recommendation(s): ADEM needs to document its implementation of the six factors used when determining a penalty. One suggestion would be to develop a penalty calculation worksheet. It should be noted that a similar recommendation was made last year by a state Committee formed to implement the provisions contained in the Strategic Plan adopted by the Environmental Management Commission in 2004. In this Committee's April 2005 final report entitled "*Final Report and Recommendations of the Enforcement and Administrative Penalties Stakeholders Committee to the Alabama Environmental Management Commission*", it recommended that "ADEM make a contemporaneous record showing how it calculated penalties (penalty calculation worksheet), including the dollar amount that is added or subtracted for each of the six penalty factors described in the statute".

9. Degree to which enforcement commitments in the PPA/PPG/categorical grants (written agreements to deliver a product/project at a specified time), if they exist, are met and any products or projects are completed.

Findings: ADEM has an annual Air Planning Agreement (APA) with EPA Region 4. It is funded through CAA Section 105 grant dollars for non-major sources only. Activities related to Title V sources are funded through industry fees. With respect to the Compliance and Enforcement programs, ADEM in FY2005, committed to the following for Monitoring and Enforcement, as enumerated in the grant:

1. Ensure that AFS contains accurate and timely data and the minimum data elements,
2. Resolve violations of any rule delegated to state for non-Maximum Achievable Control Technology (MACT) sources and synthetic minor sources,
3. Utilize the pollution prevention (PP) database to enhance PP outreach activities during inspections,

4. Inspect 25% of all National Emissions Standards for Hazardous Air Pollutants (NESHAP) asbestos demolition/renovation projects,
5. Observe asbestos work practices in progress whenever possible to assess compliance,
6. Report the following asbestos NESHAP activities within 45 days after each quarter: number of notifications received; number of inspections; non-noisier activity; number of non penalty enforcement actions; number of enforcement actions with a penalty and total penalty assessment,
7. Maintain a state/local health and safety plan for asbestos demolition/renovation inspectors, and
8. Recommend cases and provide support to the EPA Criminal Enforcement Program.

In addition, ADEM committed to a number of compliance incentive activities for non-major sources including encouraging self disclosures.

ADEM has met these deliverables based upon the overview the region does on a semi-annual and annual basis using the regions grant tracking system.

Jefferson County has these same commitments in their FY 2005 APA. Jefferson County has also met these deliverables based upon the overview the region does on a semi-annual and annual basis using the regions grant tracking system.

Citation of information used for this element

- ADEM and Jefferson County's FY 2005 APA

Recommendation(s): None

10. Degree to which Minimum Data Requirements (MDR) are timely.

Findings: MDRs represent the minimum amount of data that EPA believes nationally is necessary to oversee the national stationary source compliance monitoring and enforcement program. Examples of the 26 elements that comprise the MDRs are FCEs, stack test results, compliance status, and results of Title V annual compliance certification reviews. In examining the MDRs for the 30 selected ADEM files, no significant data deficiencies were noted.

The data metrics for ADEM indicated that 20% (nine of 44) of HPVs that were entered into AFS were entered more than 60 days after the HPV designation (day zero). This is better than the national average of 56%.

No significant data deficiencies were noted in Jefferson County's MDRs. Where some data issues arose via their review of the data metrics, Jefferson County took immediate steps to update AFS. The data metrics for Jefferson County showed one HPV reported to EPA greater than 60 days following the date of discovery.

HPV determinations and day zero actions for ADEM and Jefferson County are entered by the Region. Each Agency provides enforcement reports to EPA to make the HPV determinations. Jefferson County has initiated a new QA/QC procedure to ensure that data uploaded into AFS has been properly transmitted. Jefferson County should continue to implement the new data QA/QC procedure that is in place. Jefferson County has agreed to start making HPV determinations and entering “day zero” actions starting in FY 2007.

Citation of information used for this element

- EPA’s Minimum Data Requirements
- Data Metrics

Recommendation(s): None

11. Degree to which Minimum Data Requirements are accurate (focus on plant compliance status)

Findings: This metric analyzes sources carried as HPVs compared to their AFS plant compliance status. HPVs should be shown in AFS as in non-compliance. The data metrics for ADEM show that in FY 2005 there were 60 HPV sources, federal and state combined, and that 52 (87%) are carried in AFS as in non-compliance, i.e., eight HPV sources are carried in AFS as something other than non-compliance. The goal should be for 100% of all HPV sources to be coded in AFS as in non-compliance with the national average of accurate coding at 94%. Upon asking ADEM about this, the Region was told that there was one miscoded state HPV. ADEM has corrected the one miscoded HPV. Thus ADEM says that 100% of the State lead HPVs are coded correctly in AFS.

With respect to stack test data, the data metrics for ADEM show that stack test results (780 in FY 2005) have their pass/fail results coded into AFS. This is commendable.

The data metrics for Jefferson County show in FY 2005 all six of their HPV sources coded into AFS as in non-compliance. As to reporting of stack test results into AFS, the data metrics show 14 of 14 stack tests not having their pass/fail results coded into AFS. Jefferson County was asked about this, and they subsequently have corrected AFS to reflect the results of their stack tests. Jefferson County has initiated a new QA/QC procedure to ensure that data uploaded into AFS has been properly transmitted. Jefferson County should continue to implement the new data QA/QC procedure that is in place.

Citation of information used for this element

- Data Metrics

Recommendation(s): None

12. Degree to which the minimum data requirements are complete, unless otherwise negotiated by the region and state or prescribed by a national initiative.

Findings: The goal of this metric was to ensure agreement between the states/locals and Region 4 on the completeness of the MDR being reported into AFS and where discrepancies exist, to develop an action plan for making appropriate corrections. Specific MDR elements examined included: universe of Title V sources; universe of major, synthetic minor and NESHAP minor sources; universe of NSPS, NESHAP and MACT sources; completeness of FCEs and partial compliance evaluations (PCEs) being reported; historical non compliance counts; completeness of sources receiving NOV's; completeness of HPV reporting; completeness of enforcement actions being reported; completeness of penalty dollars assessed by state and number of major sources missing CMS applicability.

ADEM and Jefferson County report that the MDR information in AFS is accurate. Jefferson County has also initiated a new QA/QC procedure to ensure that data uploaded into AFS has been properly transmitted. Region 4, however, notes that ADEM does not enter the results code into AFS after the Annual Compliance Certification (ACC) review (see MDR item 20, footnote 10). ADEM contends that the ACC is not the first report of a deviation that the department receives and further states that if a violation is discovered as a result of an ACC review, the review becomes the discovery action for the violation. ADEM should enter the results code of the ACC review in AFS because the MDR and the current ICR requires the compliance status to be entered at the time of the review. Jefferson County should continue to implement the new data QA/QC procedure that is in place.

For HPV reporting, the Region enters HPV "day zero" actions for ADEM and Jefferson County. Each Agency provides the necessary information to EPA to make the HPV determinations. Jefferson County has agreed to start making HPV determinations and entering "day zero" actions starting in FY 2007.

Citation of information used for this element

- AFS

Recommendation(s): None

Information Sources Included in the CAA Review:

- ADEM and Jefferson County's CMS for FY2005/2005
- ADEM and Jefferson County's FY2005 Air Program Agreement (APA)
- ADEM and Jefferson County's enforcement files
- AFS
- Final Report and Recommendations of the Enforcement and Administrative Penalties Stakeholders Committee to the Alabama Environmental Management Commission.

The ADEM State Review Framework Metrics data is available from the national data system. However, the following table identifies the State Review Framework Metrics data specifically generated by Region 4 for Jefferson County and also reflects data changes that are based on Jefferson County data metric review and input.

Modified Data Metrics for Jefferson County

Metric	Metric Description	Measure Type	Metric Type	National Goal	Nat. Avg.	Alabama	State Only	Birmingham	Alabama Adjusted	Birmingham Adjusted
A01A1	CAA Major Full Compliance Evaluation (FCE) Coverage (2 FY)	Goal	State	100%	75.20%	90.20%	95.29%	64.06%	95.94%	100%
A01A1	CAA Major Full Compliance Evaluation (FCE) Coverage (2 FY)	Goal	Combined		76.10%	90.20%	95.29%	64.06%	95.94%	100%
A01A2	CMS Major Full Compliance Evaluation (FCE) Coverage (2 FY)	Data Quality	State	100%	77.90%	97.00%	100.00%	79.17%	100%	100%
A01A2	CMS Major Full Compliance Evaluation (FCE) Coverage (2 FY)	Data Quality	Combined		78.80%	97.00%	100.00%	79.17%	100%	100%
A01B	CAA Synthetic Minor 80% Sources (SM-80) FCE Coverage (4 FY)	Goal	State	>= 80%	77.70%	88.70%	100.00%	68.67%	97.22%	93.3%
A01B	CAA Synthetic Minor 80% Sources (SM-80) FCE Coverage (4 FY)	Goal	Combined		78.00%	89.10%	100.00%	69.88%	97.22%	93.30%
A01C1	CAA Synthetic Minor FCE and reported PCE Coverage (4 FY)	Informational-	State Only			83.90%	95.75%	57.98%	95.75%	NA
A01C1	CAA Synthetic Minor FCE and reported PCE Coverage (4 FY)	Informational-	Combined Only			84.20%	95.75%	59.50%	95.75%	NA
A01C2	CMS Synthetic Minor FCE and reported PCE Coverage (4 FY)	Informational-	State Only			88.70%	100.00%	69.05%	100%	NA
A01C2	CMS Synthetic Minor FCE and reported PCE Coverage (4 FY)	Informational-	Combined Only			89.10%	100.00%	70.24%	100%	NA
A01D	CAA Minor FCE and Reported PCE Coverage (4 FY)	Informational-	State Only			59.30%	70.21%	0.00%	70.21%	NA
A01E	CAA Stationary Source Investigations (4 FY)	Informational-	State Only			0	0	0	0	0
A01F	Review of Self-Certifications Completed (1 FY)	Goal	State	100%	75.00%	96.90%	99.63%	0.00%	99.68%	100%
A01G	Number of Sources with Unknown Compliance Status (Current)	Review Indicator	Combined			6	0	6	6	6
A04A	High Priority Violation Discovery Rate - Per Major FCE Cov. (1 FY)	Goal	State	> 1/2 National Avg	9.30%	12.00%	12.70%	8.00%	12.00%	8.00%

A04A	High Priority Violation Discovery Rate - Per Major FCE Cov. (1 FY)	Goal	Regional		19.30%	0.00%	0.00%	0.00%	0.00%	0.00%
A04B	High Priority Violation Discovery Rate - Per Major Source (1 FY)	Review Indicator	State	> 1/2 National Avg	4.20%	8.30%	10.13%	2.08%	8.30%	2.08%
A04B	High Priority Violation Discovery Rate - Per Major Source (1 FY)	Review Indicator	Regional		0.20%	0.00%	0.00%	0.00%	0.00%	0.00%
A04C	No Activity Indicator - Number of HPVs (1 FY)	Review Indicator	State			65	63	2	65	2
A04D	Percent Actions With Prior HPV (1 FY)	Review Indicator	State	> 1/2 National Avg	78.40%	92.90%	91.30%	100.00%	92.90%	100.00%
A06A	Percent HPVs Unaddressed for >270 Days (1 FY)	Review Indicator	State		48.80%	11.30%	9.09%	40.00%	15.00%	33.00%
A06A	Percent HPVs Unaddressed for >270 Days (1 FY)	Review Indicator	Regional		63.50%	100.00%	100.00%	#DIV/0!	100.00%	#DIV/0!
A06B	Percent HPV Pathways Exceed 270 Days** (1 FY)	Review Indicator	State		NA	NA	NA	NA	NA	NA
A06C	No Activity Indicator - Number of Actions (1 FY)	Review Indicator	State			45	40	5	45	5
A08A	No Activity Indicator - Actions with Penalties (1 FY)	Review Indicator	State			43	38	5	43	5
A08B	Percent Actions at HPVs With Penalty (1 FY)	Review Indicator	State	>= 80%	79.50%	94.90%	94.12%	100.00%	94.90%	100.00%
A10A	Percent HPVs Entered > 60 Days After Designation, Timely Entry*** (1 FY)	Review Indicator	State		56.40%	21.70%	20.45%	100.00%	21.70%	100.00%
A11A	Number of HPVs/Number of NC Sources (1 FY)	Data Quality	Combined	<= 100%	93.50%	108.20%	115.38%	75.00%	115.38%	NA
A11B1	Stack Test Results at Federally-Reportable Sources - % Without Pass/Fail Results (1 FY)	Goal	State	0%	9.50%	1.80%	0.00%	100.00%	1.80%	100.00%
A11B2	Stack Test Results at Federally-Reportable Sources - Number of Failures (1 FY)	Data Quality	State			16	16	0	16	0
A12A1	Title V Universe: AFS Operating Majors (Current)	Data Quality	NA			397	321	63	360	39

A12A2	Title V Universe: AFS Operating Majors with Air Program Code = V (Current)	Data Quality	NA	368	312	44	351	39
A12B1	Source Count: Majors (Current)	Data Quality	NA	397	321	63	360	39
A12B2	Source Count: Synthetic Minors (Current)	Data Quality	NA	390	261	115	352	91
A12B3	Source Count: NESHAP Minors (Current)	Data Quality	NA	6	5	1	6	1
A12C1	CAA Subpart Designation: NSPS (Current)	Informational- Only	NA	271	211	48	271	48
A12C2	CAA Subpart Designation: NESHAP (Current)	Informational- Only	NA	34	20	12	34	12
A12C3	CAA Subpart Designation: MACT (Current)	Informational- Only	NA	148	127	15	148	15
A12D1	Compliance Monitoring: Sources with FCEs (1 FY)	Data Quality	State	545	486	39	545	39
A12D2	Compliance Monitoring: Number of FCEs (1 FY)	Data Quality	State	577	517	39	577	39
A12D3	Compliance Monitoring: Number of PCEs (1 FY)	Informational- Only	State	1414	1410	0	1414	0
A12E	Historical Non-Compliance Counts (1 FY)	Data Quality	Combined	109	98	10	109	10
A12F1	NOV: Number Issued (1 FY)	Data Quality	State	74	69	5	74	5
A12F2	NOV: Number of Sources (1 FY)	Data Quality	State	64	61	3	64	3
A12G1	HPV: Number of New HPV Pathways (1 FY)	Data Quality	State	65	63	2	65	2
A12G2	HPV: Number of New HPV Sources (1 FY)	Data Quality	State	58	56	2	58	2
A12H1	Formal Action: Number Issued (1 FY)	Data Quality	State	45	40	5	45	5
A12H2	Formal Action: Number of Sources (1 FY)	Data Quality	State	34	29	5	34	5
A12I	Assessed Penalties Comp. (1 FY)	Data Quality	State	\$960,100	\$603,600	\$356,500	\$960,100	\$356,500
A12J	Major Sources Missing CMS Policy Applicability (Current)	Review Indicator	Combined	34	18	15	34	15

Program: Clean Water Act - NPDES

Introduction: The NPDES program is administered through the ADEM, with the duties shared between the Water Division and Field Operations Division. The Water Division is responsible for compliance and enforcement for the Industrial/Municipal facilities and Field Operations Division is responsible for mining and nonpoint source activities, i.e., concentrated animal feeding operations (CAFOs), animal feeding operations (AFOs), construction storm water. The Field Operations Division consists of four regional branches: Montgomery, Birmingham, Decatur and Mobile.

Alabama identifies and addresses all violations using EPA criteria outlined in program delegation documents and the memorandum of agreement. ADEM uses enforcement actions to correct serious environmental problems and to bring businesses, individuals and government entities into compliance with environmental laws. The State maintains a current Enforcement Management Strategy (EMS) that describes how and when the State will take action on violations. The EMS also addresses the level of enforcement that should be taken, including consideration of several factors, such as environmental and health impacts, related to violations.

The CWA portion of the evaluation involved the review of inspection/enforcement case files, primarily from FY2005. Files in the central office in Montgomery for both the Water Division and the Field Operation Divisions were readily available and well organized. Forty one (41) facilities were randomly selected. The files routinely contained correspondence including inspection reports, LOVs, Warning Letters, administrative orders, communications from the facility, and current permit status.

The File Selection Protocol requires a range of 25 to 40 files be reviewed for a universe of greater than 700 files. For the review of the Region 4 NPDES program in Alabama, the review team selected 41 facility files to review from a universe of 10,027 files (9993 inspection files and 34 enforcement files). The files were randomly selected by the following categories: 2 Majors (one traditional/conventional and one MS4), 39 non-majors (which includes conventional, storm water, general permits, and CAFOs). A total of 47 inspection reports and 9 formal enforcement and numerous informal enforcement actions were reviewed. The evaluation utilized EPA Headquarters' data pulls to provide national average and state specific information. The information from the file reviews and data pulls were used to answer specific questions covering the twelve elements.

1. Degree to which state program has completed the universe of planned inspections/evaluations (addressing core requirements and federal, state, and regional priorities).

Findings: Alabama conducts inspections in accordance with the Water Grant Commitment Workplan pursuant to the Clean Water Act Section 106, annual inspection plan commitment. ADEM uses checklists/inspection forms in their inspections/evaluations. The checklists/inspection forms provide for a level of consistency in areas assure thorough inspections are performed. The storm water compliance inspections involved the use of a checklist. The checklists/inspection forms

and photographic documentation of field observations were in the file in the majority of the cases.

Alabama exceeded the national average of 64.3% for NPDES major inspection coverage as reported in the EPA Online Targeting Information System (OTIS) at 94.8%. Furthermore, Alabama also inspected 20% of their minor facilities, exceeding the national average of 11%.

Citation of information reviewed for this criterion:

- CWA SRF Metrics Data Pull by EPA Headquarters
- EPA/AL CWA§106 Program Workplan
- Final FY2000 Composite State of Alabama Compliance Assurance Program Evaluation
- PCS Data Pull for IY2005

Alabama's high level of inspection activity indicates an active field presence in their enforcement and compliance program. Alabama conducted 3262 inspections in IY2005., 237 Major and 3025 non-major inspections. This conclusion is supported by information in PCS.

Recommendation(s): None

2. Degree to which inspection reports and compliance reviews document inspection findings, including accurate description of what was observed to sufficiently identify violations.

Findings: The sample of inspection reports reviewed were generally thorough addressing permit requirements, records, site review, effluent/receiving stream, flow measurements, self monitoring program, laboratory, operation and maintenance, sludge utilization, etc.

The quality of the inspections reports reviewed were good, detailing observations and deficiencies and when appropriate, violations. When violations were discovered as a result of the inspection, Alabama's enforcement response was the issuance of an LOV or NOV. The LOV/NOV requires corrective action and explanation of the cause of such violations.

EPA notes that there is a difference in definition/terminology in what EPA and ADEM consider to be an NOV. ADEM considers a Notice of Violation (NOV) as a formal enforcement action containing specific corrective action requirements. EPA does not consider the ADEM NOV a formal action because it typically does not contain a date certain for the source to come into compliance. Rather, EPA refers to this type of action as a Letter of Violation (LOV) or NOV. ADEM explained their reasoning for not including a return to compliance date because the NOV is a document that can be appealed. Should the date of compliance change for any reason, the only course of action available to the source is to appeal the NOV or for ADEM to rescind and issue a new NOV. Throughout this document the term LOV will be used to refer to what ADEM

defines as an NOV.

It is ADEM's position that the LOV, while not containing a monetary penalty, is in fact considered by ADEM as a formal enforcement in that the operator is required by ADEM to take certain actions to achieve compliance. Failure to fully comply with the requirements of the LOV, including a full response to the Department, is in itself a significant violation of ADEM's NPDES rules and Alabama law, which subjects the operator to further enforcement and/or enhanced administrative penalties. The LOV can be appealed to the Alabama Environmental Management Commission (AEMC) and to Alabama Circuit Court, and ultimately to the Alabama Supreme Court.

Because the LOV is considered a formal action by ADEM and can be issued in a relatively short timeframe, as public notice is not required, it is a useful tool for ADEM to assure immediate corrective action is taken and to put the facility on notice that further action may be pending, if full compliance is not achieved in a timely manner. Furthermore, ADEM issues orders and files litigation as needed based on the seriousness and/or recurrence of the violation. It is also important to note that an LOV is sometimes issued while awaiting the completion of an administrative order, to again assure that immediate corrective action is taken.

Noncompliance/deficiencies were addressed by ADEM through the issuance of a Warning Letter or LOV requiring the facility to respond to the inspection report concerns identifying corrective actions taken. Alabama's SNC rate, percent of majors in SNC is at 19.2%, equivalent to the national average of 19.1%. This is an indication that the enforcement process in Alabama is effective, resulting in returning the facility back into compliance, in most cases.

Citation of information reviewed for this criterion:

- On-site file review

Recommendation(s): It is recommended that ADEM investigate the modification of their LOV process to include a date certain, increasing opportunities to address noncompliance/deficiencies noted during inspections through formal enforcement actions.

3. Degree to which inspection reports are completed in a timely manner, including timely identification of violations.

Findings: The file review¹ identified only one of 47 inspection reports that exceeded the

¹ **File Selection Protocol**
Majors: 194 inspections

Minors: 1410 inspections

guidelines for timely completion, that one being finalized and sent four months after the Compliance Evaluation was conducted. Alabama should make every effort to complete all inspection reports in a timely manner.

Citation of information reviewed for this criterion:

- PCS data pull for IY 2005
- On-site file review
- ADEM Memorandum #105: Enforcement Strategy

Recommendation(s): None

4. Degree to which significant violations are reported to EPA in a timely and accurate manner.

Findings: The State of Alabama identifies and generally addresses all violation using EPA criteria outlined in program delegation documents and the MOA. The AL/EPA MOA is currently in the process of being revised to address the traditional NPDES universe, as well as wet weather and CAFOs. The revised MOA is expected to be finalized in FY07. The State maintains a current Enforcement Strategy (ADEM Memorandum #105), which describes how and when the State will take action on violations. The Enforcement Strategy also briefly addresses the level of formal enforcement that should be taken and the enforcement escalation process. This involves

Industrial: 2870 Industrial General
CAFO: 568 inspections

Storm Water: 4942 (General and individual MS4)
9984 Total Universe of Inspection Files

EPA selected and reviewed 41 total inspection files.
2 majors (i.e. once conventional/traditional major and 1 MS4 facility)
39 non-majors

- 19 construction storm water general facilities
- 11 industrial general facilities
- 6 conventional/traditional minors
- 3 CAFO

For purposes of determining universe of inspection files, all inspections were counted except reconnaissance inspections.

consideration of several factors related to violations such as the environmental or health impacts.

PCS automatically flags SNC based upon the Discharge Monitoring Reports (DMRs) and other reports. Alabama's SNC rate, percent of majors in SNC is at 19.2%, equivalent to the national average of 19.1%.

ADEM historically has utilized the final QNCR reviews and has also constantly monitored the Watchlist to stay ahead of and address compliance issues. In addition, since January 2006, ADEM has also added the following internal procedures as a routine:

- Monthly Watchlist Reports
- Monthly Missing Data Reports
- Monthly SNC Reports
- Additional Pre-QNCR Reviews (second and fourth run)

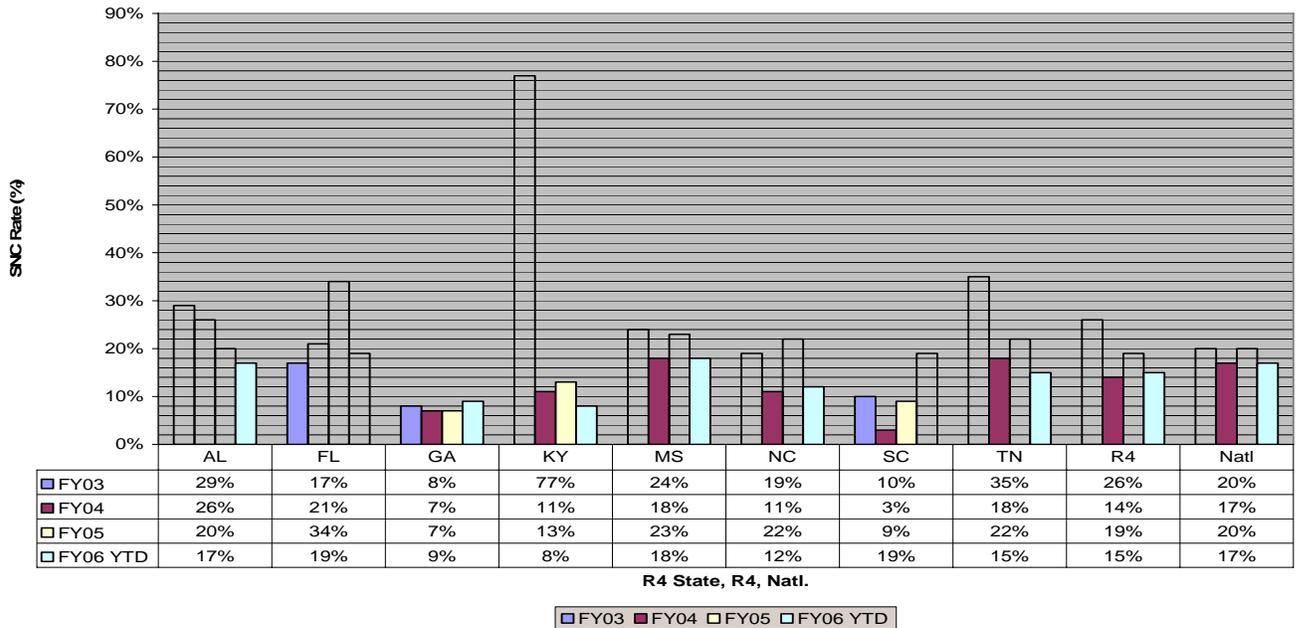
Also, ADEM has made a significant investment of resources in development of a NPDES Management System (NMS) database to allow electronic submission of DMRs. This system is currently in the testing stages and hopefully will be fully operational in early 2007.

ADEM has had a history of false SNC violations due to data inputting errors causing the appearance of DMR non-receipt violations. This false SNC trigger was due to ADEM's un-timely data entry of DMRs rather than facilities not submitting their DMRs. PCS data entry responsibility is handled in the Permit Services Division, rather than internally in the Water Division. Although significant efforts have been made to address this concern, SNC determination due to false DMR non-receipt continues to impact the AL Watchlist. The January 2006 DMR non-receipt contribution to the AL Watchlist was about 45% and the April 2006 rate was about 15%. Previous Alabama Watchlist DMR non-receipt contributions had been up to about 66%.

ADEM has made strides in attempting to address this issue and has sought EPA Region 4 assistance to correct the false DMR non-receipt violations. ADEM has further invested staff resources to focus on the PCS operation and to be a liaison with the Permits Service Division (PSD) which is responsible for ADEM's data entry into PCS.

ADEM has decreased the total number of facilities on the Watchlist from 45 (April 2002) to 20 (April 2006). It is also recognized that the majority of the facilities on the January 2006 Watchlist with effluent violations have been addressed through enforcement actions. Alabama is the only state in the Region that has exhibited an overall SNC rate decrease during the past three consecutive years (see bar chart below).

SNC Rate/Trend R4 States (Period: FY03 - FY06 YTD)



It is noted that a large portion of Alabama’s NPDES efforts are in regulatory areas other than those that currently might appear on the Watch List (e.g. construction storm water), which illustrates ADEM’s comprehensive approach to implementing its overall compliance and enforcement responsibilities.

Alabama should consistently be entering violations arising from major compliance monitoring. This includes single event violations (SEV) at majors. This is to assess whether violations determined by means other than automated discharge to limits comparisons are being reported and tracked in PCS. Single event violations are currently required data entry for majors (per PCS Policy Statement), and plans are underway to also make SEV required for non-majors in ICIS-NPDES. Alabama did not report any single-event violations in PCS at majors and only one (1) for non-majors for FY05. Alabama’s low percent of major facilities in SNC maybe artificially low due to lack of SEV data entered.

Citation of information reviewed for this criterion:

- EPA/AL MOA
- ADEM Memorandum #105: Enforcement Strategy
- CWA SRF Metrics Data Pull by EPA Headquarters
- EPA/AL CWA§106 Program Workplan
- AL Watchlist

Recommendation(s): It is recommended that ADEM, on a monthly basis, review the QNCR and the Watchlist that the Region provides to ensure that all SNC’s are addressed in a timely and appropriate manner. ADEM should utilize the Watchlist as a tool to

gauge progress in addressing timely and appropriately those facilities that are in SNC two or more quarters and to target facilities that may not be in SNC but meet the Watchlist criteria 2c, 2d1, and 2d2 for significant technical review and to take formal enforcement action if appropriate.

5. Degree to which state enforcement actions require complying action that will return facilities to compliance in a specific time frame.

Findings: Alabama addressed non-compliance through several levels of enforcement responses: Warning letter, LOV, Consent Order or other formal actions.² The Warning letter is considered by the state as an informal enforcement action. The warning letter is not appeal-able and requires a response from the facility. The LOV, as described previously, is considered by ADEM to be a formal enforcement response, requiring the facility to provide corrective actions performed addressing the violations noted. The LOV is signed by the Water Division Director and by the Field Operations Division Chief (Director) for facilities regulated by that Division. The LOV is appeal-able, however, there is no return to compliance date included, therefore, it is not recognized and credited by EPA as a formal enforcement action.

The majority of enforcement actions taken by ADEM resulted in the issuance of a LOV. This generally has proven to be adequate in returning the facility back to compliance. However, there were several occasions noted during the file review whereby the LOV proved to be inadequate in returning the non-major facility back to compliance. ADEM repeatedly issued LOVs instead of escalating enforcement by pursuing appropriate enforcement action by either issuing a Consent or Unilateral Order.

The NOV template for Municipal and Industrial facilities is in the process of being revised to require the submittal of an implementation schedule with the engineering report. This process has been implemented, where appropriate by the Field Operations Division. The implementation schedule once approved by ADEM will become the approved compliance date.

² **File Selection Protocol**

Majors: 12 Enforcement Actions

Minors: 22 Formal Enforcement Actions

34 Total Universe of Enforcement Actions

Citation of information reviewed for this criterion:

- PCS data pull for FY2005
- On-site file review
- ADEM Memorandum #105: Enforcement Strategy

Recommendation(s): ADEM should consider developing a more robust LOV/NOV that includes a date certain for compliance and requirements to submit a detailed engineering report and a potential compliance schedule. ADEM should utilize all available enforcement tools such as formal enforcement actions in addressing non-compliance.

6. Degree to which the state takes enforcement actions, in accordance with national enforcement response policies relating to specific media, in a timely and appropriate manner.

Findings: Alabama identifies and addresses violations using EPA criteria outlined in program authorization documents and the MOA. The State maintains a current Enforcement Management System (EMS), which describes how and when the State will take action on violations. The EMS also addresses the level of formal enforcement that should be taken, includes consideration of several factors related to violations such as environment/health impacts. ADEM's EMS is called Memorandum #105- Enforcement Strategy.

Alabama generally responds to violations in a timely manner through the issuance of a Warning Letter or LOV. The file and data metric review indicate that ADEM generally does not issue Consent or Unilateral Orders even when informal actions have proved to be insufficient; rather ADEM appears to prefer addressing violations informally.

ADEM stated that notices of permit expiration for municipal and industrial facilities are mailed out at 18 and 12 months, respectively, prior to permit expiration. Mining facilities receive a notice 12 months prior to permit expiration. If the applications are not received 180 days prior to expiration, LOVs are issued for failure to reapply on-time.

Additionally, reminder letters are sent to permittees notifying them of the upcoming permit expiration and requesting the permittees to submit re-issuance/re-registration request with the completed forms, fees, etc. Three such notices are issued, 90, 60, and 30 days before the expiration. The file review identified instances where the permit had been expired a year or more and the facility remained active. No more than a warning letter or NOV was issued even when inspections revealed BMP issues.

Citation of information reviewed for this criterion:

- CWA SRF Metrics Data Pull by EPA Headquarters
- On-site file review
- ADEM Memorandum #105: Enforcement Strategy

Recommendation(s): None

7. Degree to which the state includes both gravity and economic benefit calculations for all penalties.

Findings: The Alabama Environmental Management Act (AEMA) addresses criteria to be considered in the assessment of penalties. ADEM does not have a written penalty policy but considers the criteria established by the AEMA, their enabling legislation. ADEM calculated penalties in consideration of six penalty factors enumerated in the Alabama Environmental Management Act.

Alabama Code Section 22-22A-5(18) provides that “...in determining the amount of penalty, consideration shall be given to the seriousness of the violation; including any irreparable harm to the environment and any threat to the health or safety of the public; the standard of care manifested by such person; the economic benefit which delayed compliance may confer upon such person; the nature, extent, and degree of success of such person’s efforts to minimize or mitigate the effect of such violation upon the environment; such person’s history of previous violations; and the ability of such person to pay such penalty.” “...any order issued under this paragraph shall include findings of fact relied upon the [D]epartment in determining...the amount of civil penalty...”

ADEM Administrative Orders drafted since the summer of 2005, contain a detailed discussion of each of the six factors enumerated in the Environmental Management Act and associated rationale that led to the penalty assessed. In addition a penalty worksheet containing the penalty ranges, discussion of violations, evaluation of the six penalty factors and rationale, final penalty, and corrective action, is now being placed in the facility file and is available for review by the public. The procedures used and the key elements used to compute the penalty amounts are documented in the penalty worksheets.

- The nature and location of each alleged violation are identified and assessed at least \$100.00 per violation per day;
- The six penalty factors listed in the statutorily adopted “penalty policy” dictated by the Code of Alabama are reviewed and the resulting impact is documented in the worksheet. Based on this review, the dollar value of the penalty are increased up to the maximum of \$25,000 per violation per day;
- Historical penalty data for similar violations is reviewed to ensure consistency.

ADEM’s enforcement files were incomplete missing documentation related to penalty calculations, associated economic benefit or ability to pay reports used to assess the civil penalties were missing from the files. ADEM states that the penalty related documents are maintained separately at either their Attorney General Office or with ADEM counsel. This is due to the public availability of all files, Sunshine Law. However, during the review, these documents were not available, although requested. An independent determination of the appropriateness of the penalties assessed could not be made.

There has been inconsistency within ADEM in regard to the protocol for documentation of the penalty rationale. The Industrial/Municipal Facilities Branch and the Field Operations Division each exercise their own discretion on the creation and retention of penalty calculations. For example, the Industrial/Municipal Facilities Branch documents the violations and penalty determination, however, this rationale is not copied in the facility file. The Field Operations Division does not use a worksheet or template when calculating penalties. The Field Operations Division does not retain any documentation related to penalty derivation.

Citation of information reviewed for this criterion:

- The Environmental Management Act, Code of Alabama
- On-site file review

Recommendation(s): Historically, all ADEM orders, proposed and final include the necessary findings of fact per Alabama law. EPA's recommends including in the case file, all supporting documentation as to how penalties and economic benefit were calculated. Although ADEM considers its current unwritten penalty assessment process sufficient in ensuring consistency in penalty enforcement actions, EPA has encouraged ADEM in the past to adopt a penalty policy that meets minimum federal stringency requirements and provides for the documentation of penalty and economic benefit calculations.

Alabama has recognized the need for developing a written penalty policy and has initiated actions to address EPA's recommendations. ADEM's Director and Deputy Director have been coordinating with the Commission in drafting a penalty policy. When finalized, EPA will monitor application of the policy to ensure that timely and appropriate enforcement responses are taken, including appropriate penalties, and where actions are not timely or appropriate, EPA will consider escalation of enforcement response as provided under the EMS and related policies.

Further, ADEM has developed a worksheet for NPDES penalty orders that identifies the penalty range (past order range and statutory range) and provides an explanation addressing each of the six assessment factors. This worksheet will be placed in the facility file and be available for public review. It may be appropriate to file more detailed penalty calculations/rationale in a separate folder and held under privileged conditions and not disclosed to the public. Such information should however be made available to EPA upon request and other duly authorized agencies/authorities.

If exceptions to the established penalty range per violations are made, then a detailed explanation should follow documenting the cause for such deviations (i.e. waiving penalties).

- 8. Degree to which final enforcement actions (settlements or judicial results) take appropriate action to collect economic benefit and gravity portions of a penalty, in accordance with penalty policy considerations.**

Findings: ADEM's enforcement files were incomplete, not including documents related to the penalty calculations, associated economic benefit or ability to pay reports used to assess the civil. An independent determination of the appropriateness of the penalties assessed could not be made. According to data in OTIS, 82.9% of enforcement actions had a penalty associated with the action. A penalty worksheet containing the penalty ranges, discussion of violations, six penalty factors and rationale, final penalty, and corrective action, is now being placed in the facility file and is available for review by the public.

Citation of information reviewed for this criterion:

- On-site file review
- CWA SRF Metrics Data Pull by EPA Headquarters

Recommendation(s): The State's penalty policy and its strategy for taking formal enforcement for repeat violators are not clear. Although the both gravity and economic benefit are assessment factors and should be taken into consideration when assessing civil penalties, Alabama should document the economic benefit and gravity contributions for all penalties assessed. If Alabama determines that an action does not warrant a penalty, documentation of the decision and rationale for the decision should be included in the case file. Appropriate action to assess and collect economic benefit and gravity portions of a penalty should be addressed in the written penalty policy currently under development, as referenced under Element 7.

9. Enforcement commitments in the PPA/PPG/categorical grants (written agreements to deliver product/project at a specified time), if they exist, are met and any products or projects are complete.

Findings: EPA has a Performance Partnership Agreement (PPA) and a categorical grant, CWA §106 grant, with Alabama. Alabama has met or exceeded all the enforcement requirements of their CWA§106 grant workplan.

Citation of Information Reviewed for this Criterion:

- EPA/AL PPA
- AL Enforcement Strategy
- EPA/AL CWA§106 Program Workplan

Recommendation(s): None

10. Degree to which the Minimum Data Requirements are timely.

Findings: Alabama uses the Permit Compliance System (PCS) as a secondary form of data tracking. Primary tracking of applications and permits, facility information, discharge information, complaints, compliance and enforcement actions, and industrial pretreatment program elements is done through an internal state database. The Section 106 workplan contains requirements and commitments for Alabama to enter all inspection and enforcement actions for majors and minors. Currently, there is no

automatic interface between Alabama's internal tracking systems and PCS. All data are entered directly into both PCS and appropriate state tracking systems. Data in PCS and the various state systems are periodically compared as a data quality assurance measure.

Alabama has purchased the NPDES Management System (NMS), which is currently used by the State of Michigan, and foresees system implementation by the fall of 2006. The NMS allows for the use of electronic DMRs and automatically uploads data into PCS- which would minimize the need for staff resources and decrease errors due to manual data transfer. NMS does not, however, have the ability to automatically upload data to ICIS-NPDES, which will replace PCS by the end of 2007. As part of the purchase and installation of ADEM NMS, the contractor will design and implement an auto-data upload feature that transfer data to PCS via the ICIS-NPDES data exchange node.

Citation of Information Reviewed for this Criterion:

- On-site file review
- Final FY2000 Composite State of Alabama Compliance Assurance Program Evaluation
- EPA/AL CWA§106 Program Workplan
- AL Permitting for Environmental Results Report

Recommendation(s): Alabama should ensure timely implementation of the NMS.

11. Degree to which the Minimum Data Requirements are accurate.

Findings: As described in Element 10 above, ADEM does not have an automatic interface between the state data system and PCS, the data has to be manually entered into PCS. Most discrepancies noted in PCS were due to data entry and reporting errors. It is noted that Alabama enters data for minor facilities and general permittees into PCS. Alabama is currently the only state in the Region that tracks general permits in PCS. The entry of non-major facility information in PCS is approximately 88% completed. When ICIS-NPDES comes on-line, the industrial general permit information and data will be required to be entered. Alabama has voluntarily elected to begin entering and tracking their industrial general permits in PCS. As a result, Alabama is approximately two years ahead of the requirements. Additionally, Alabama is doing a good job on the data entry of non-major permits limits, reported on the OTIS CWA SRF site at 75.2%.

The file review discovered on two occasions, reports for inspections and eight NOV's or Warning Letters identified in PCS for non-major facilities could not be found in the files.

Furthermore, the file review found one inspection and four NOV's or Warning Letters in the facility file, for non-majors, but not entered into PCS. According to OTIS, in FY2005, ADEM had almost 11,000 non-major facilities. Based on this large universe and that in FY2005 entering non-major facility information was not a requirement, EPA Region 4 does not consider this a significant issue. Alabama should continue to strive to ensure that the data in PCS and the compliance and enforcement documents found in the facility files are accurate and consistent.

Citation of Information Reviewed for this Criterion:

- On-site file review
- CWA SRF Metrics Data Pull by EPA Headquarters
- EPA/GA CWA§106 Program Workplan
- PCS Data Pull for FY2005

Recommendation(s): Alabama should continue to utilize the current standard operating procedures, or update it as necessary, for entering all required data into PCS both timely and accurately until NMS can be relied on.

12. Degree to which the Minimum Data Requirements are complete, unless otherwise negotiated by the Region and state or prescribed by a national initiative.

Findings: Alabama has an active facility universe of majors of 193 facilities. Alabama is above the national average of 83.9% for correctly coded limits for majors in PCS at 89.1%. Alabama's DMR entry rate of 96.9% for majors is also above the national average of 93.4%.

The number of NOV's (metric 12f) as shown on the OTIS SRF website includes the following PCS Enforcement Action Type Codes, PCS.ENAC = 03, 20, A8, 02, 08, 61, 91, 92, 93, 98, and 99. These codes are treated as informal enforcement actions in PCS because they do not resolve RNC. Alabama codes NOV's and LOV's as 20 and 03, respectively. The inclusion of LOV's as informal actions under metric 12f helps contribute to Alabama's high informal enforcement action rate.

Citation of information reviewed for this criterion:

- On-site file review
- CWA SRF Metrics Data Pull by EPA Headquarters

Alabama is encouraged to continue their good work in striving to achieve meeting the national goal for the entry standard for majors.

Information Sources Included in the CWA Review:

- On-site file review
- CWA SRF Metrics Data Pull by EPA Headquarters
- PCS Data Pull for FY2005
- EPA/AL CWA§106 Program Workplan
- Final FY2000 Composite State of Alabama Compliance Assurance Program Evaluation
- PCS Data Pull for IY2005
- ADEM Memorandum #105: Enforcement Strategy
- EPA/AL MOA and PPA
- The Environmental Management Act, Code of Alabama
- AL Enforcement Strategy

Recommendation(s): None

Program: RCRA Hazardous Waste Enforcement Program

- 1. Degree to which state program has completed the universe of planned inspections/evaluations (addressing core requirements and federal, state, and regional priorities).**

Findings:

Inspections at TSDs: The Solid Waste Disposal Act §3007(e) requires that every TSD be inspected once every two years. The SRF Metrics indicate that ADEM inspected 87% of the TSDs in their state in the two-year time period of FY2004 to FY2005, which is below the statutory requirement of 100% inspection coverage.

According to the OECA data metrics, there were two TSDs that were not inspected during this time period. One facility was incorrectly coded into RCRAInfo as an operating TSD. The facility information has since been updated in RCRAInfo to correctly indicate its current operating status as a non-handler. The second TSD is a permitted site that is currently undergoing RCRA closure. It is no longer operating as a TSD, but has not fulfilled all the requirements of the approved closure plan. During this time period, the site has been monitored by ADEM permitting section rather than the compliance section, but these activities are not reflected in the CM&E module of RCRAInfo.

Inspections at Federal Facility TSDs: The Solid Waste Disposal Act §3007(c) requires that every TSD facility owned or operated by the federal government must be inspected every year to determine compliance with the hazardous waste regulations. There are five federally-owned TSDs located in Alabama, and in FY2005 all five facilities received a compliance inspection as required by federal statute.

Inspections at State & Local TSDs: The Solid Waste Disposal Act §3007(d) requires that every TSD facility owned or operated by a state or local government must be inspected every year to determine compliance with the hazardous waste regulations. There are three state-owned TSDs located in Alabama, and in FY2005 all three facilities received a compliance inspection as required by federal statute.

Inspections at Land Disposal Facilities: The OECA FY2005-2007 MOA Guidance (dated May 2004) specifies that every Land Disposal Facility (LDF) should receive an inspection of their groundwater monitoring system once every three years. This could be a Comprehensive Groundwater Monitoring Evaluation (CME) for new or newly regulated LDFs, or an Operation & Maintenance (OAM) inspection at LDFs where the groundwater monitoring system has been adequately designed and installed (as determined by EPA and/or the state). More frequent CMEs should be conducted in situations involving complex compliance or corrective action requirements; inadequate ground water monitoring systems, significant changes to ground water monitoring systems, and actual or suspected changes in local ground water regimes. When hazardous waste is no longer being received, and the regulated unit has a ground water monitoring

program in place, physical inspections can be replaced by record reviews of the sampling/analysis data and the quarterly/annual ground water monitoring reports generated from the detection monitoring activities.

In RCRAInfo, there are 59 land disposal facilities in Alabama subject to the RCRA Subpart F groundwater monitoring requirements. In FY2005, 10 facilities, or 17% of the universe, received a CME and/or OAM evaluation. This is below the estimated average of 33%, or one-third, of the LDF universe that should receive these inspections, as outlined in the OECA FY2005-2007 MOA Guidance (dated May 2004).

Inspections at LQGs: The OECA FY2005-2007 MOA Guidance specifies that 20% of the LQG universe should be inspected every year, with a goal of achieving 100% inspection coverage every five years. The State Framework Metrics indicate that ADEM has inspected 31% of the LQG universe in their state in FY2005. The data metric also shows that from FY2001-FY2005, ADEM inspected 93% of the LQG universe. Variations in generator and facility status can attribute to the level averaging below 100%. In addition, pursuant to OECA NPM Guidance (dated May 2004), ADEM can substitute SQG or CESQG inspections for LQG inspections at a 3:1 ratio (see SQG inspection coverage below).

Other Inspections: Although the FY2005-2007 OECA MOA Guidance does not specify further inspection coverage requirements, it does recommend that the regions and states determine appropriate levels of inspection coverage for SQGs. Alabama has more than 1,000 SQGs, and according to the State Framework Metrics, ADEM inspected an average of 98% of all SQGs over a five-year period (FY2001-FY2005).

Citation of information reviewed for this criterion:

- Solid Waste Disposal Act
- OECA FY2005-2007 MOA Guidance
- OECA RCRA SRF Metrics
- RCRAInfo data.

Recommendation(s): Due to data inaccuracies in RCRAInfo, it appears that ADEM did not follow the statutory requirement for inspecting 100% of TSDs over a two-year time frame (FY2004-FY2005). It is recommended that ADEM annually evaluate their inspection universe for accuracy in RCRAInfo while formulating their fiscal year grant commitments.

ADEM did not meet the OECA FY2005-2007 MOA Guidance (dated May 2004) guidelines for compliance monitoring of the groundwater monitoring regulations at RCRA land disposal facilities. The recommendation is that at least one third, or approximately 33%, of the universe receive a CME and/or OAM every year. In FY2005, only 17% of the universe received the required inspections. Although the OECA MOA guidance has changed this requirement in the revised FY2006 OECA NPM Guidance (dated June 2005), it is recommended that ADEM follow the most current OECA core program requirements for inspecting land disposal facilities. This can be implemented

annually during while formulating the fiscal year grant commitments.

In the LQG universe category, Alabama exceeded the recommended inspection coverage of the RCRA regulated universe in FY2005. However, over a 5 year time period, from FY2001 to FY2005, ADEM inspected 93% of the LQG universe rather than the recommended 100% inspection coverage. The OECA data metrics indicates that 20 LQGs were not inspected. This can be attributed to the changes in generator status in RCRAInfo that takes place over five years. Also, ADEM had good inspection coverage of the SQG universe over the same five-year period, inspecting 98% of the SQG universe (national average 89.9%). There are no recommendations for generator inspection coverage.

2. Degree to which inspection reports and compliance reviews document inspection findings, including accurate description of what was observed to sufficiently identify violations.

Findings: The State Framework file selection protocol indicates that the number of files to be reviewed should be based upon the selected universe of files. For the RCRA State Framework Review, the universe of files is the number of facilities that received an inspection during the fiscal year subject State Framework Review, and/or were subject to formal enforcement during that time frame. According to the OECA SRF Metrics, Alabama conducted 573 inspections, including all evaluation types, at 452 facilities in FY2005. In the protocol, this translated to 20 to 35 files that should be reviewed where 50% were enforcement files and 50% were inspection files. Since there were only seven facilities that were newly identified SNCs and/or in enforcement proceedings from the previous fiscal year, EPA selected a total of seven enforcement files and 23 inspection files, for a total of 30 files to be reviewed. All files were reviewed at ADEM's offices in Montgomery, Alabama

In general, the inspections were well-documented. There does appear to be variability among ADEM staff as to the thoroughness of the inspection documentation. Many of the trip reports were very detailed and included excellent photo documentation. In other instances (approximately 20%), the inspection reports contained minimal descriptions, or were only documented through a "Compliance Assessment/Noncompliance Warning" form, with no descriptions of facility operations, hazardous waste management activities or photographs included in the report.

Citation of information reviewed for this criterion:

- ADEM files

Recommendation(s): Documentation of facility hazardous waste management activities are necessary components to inspection reports, as are photo documentation of violations. EPA Region 4 recommends that ADEM establish a consistent protocol for thoroughly documenting RCRA compliance inspections.

3. Degree to which inspection reports are completed in a timely manner, including

timely identification of violations.

Findings: In the Memorandum of Agreement (MOA) between the state of Alabama and EPA, dated November 2, 1998, there is no established deadline for the completion of inspection reports by ADEM. Of the inspection reports reviewed, 86% were completed within 60 days of the initial day of the inspection (average 45 days). Fourteen percent of the inspection reports were completed in excess of 150 days. There does not appear to be any explanation for the late reports, such as the need for additional information or sampling.

Citation of information reviewed for this criterion:

- ADEM RCRA Inspection files
- ADEM/EPA RCRA MOA (dated November 2, 1998)

Recommendation(s): According to the RCRA Enforcement Response Policy (ERP), the state (implementing agency) should determine if formal enforcement action is required within 150 days after the first day of inspection. ADEM did not identify compliance status in a timely manner in 14 % of the inspection files reviewed. While the state has done a good job in completing inspection findings in the large majority of the inspection files reviewed, there is room for improvement. ADEM should follow ERP guidelines for the timely determination of violations, at a minimum.

4. Degree to which significant violations are reported to EPA in a timely and accurate manner.

Findings: During the file review, RCRAInfo data pulls were compared with information in the file to determine if the violation data was reported timely and accurately. All SNC information contained in the files was accurately reported in RCRAInfo. However, of the seven enforcement files reviewed, one case had the SNC date of determination (SNY) as the same day that a draft compliance order was sent to the facility, which was also greater than 150 days after the initial inspection. ADEM indicated that this was an error in RCRAInfo, and the SNY date was actually 65 days from the initial inspection.

The OECA data metrics indicates that the ADEM SNC identification rate is below half of the national average (national average = 3.1%; ADEM = 0.7 %). ADEM attributes this to the RCRAInfo evaluation codes that OECA used in the calculation. ADEM does not consider NRR and OTH evaluations equivalent to a CEI evaluation where a SNC would typically be determined. Therefore, using a large denominator in the calculation (with the NRR and OTH evaluations included) would result in a skewed SNC identification rate. To address ADEM's concerns, the SNC rate was recalculated without the NRR and OTH evaluations. However, even when the OTH and NRR evaluations removed from the equation the ADEM SNC rate is 0.9%, still only one-third of the national state average.

One of the factors that may be contributing to the low SNC rate is the misidentification of significant violators. Upon reviewing ADEM's 23 inspection files, EPA identified three

facilities (13% of the files reviewed) that should have been designated at SNCs but were only designated as secondary violators (SVs). Violations at these facilities were significant in that they included releases to the environment and/or facilities with histories of noncompliance, and in one instance, imminent and substantial endangerment (the facility was subsequently referred to EPA's Emergency Response & Removal program).

Citation of information reviewed for this criterion:

- ADEM inspection files
- RCRAInfo data
- OECA data metrics

Recommendation(s): ADEM should follow the RCRA Enforcement Response Policy for the appropriate identification of SNC facilities, as well as timely and accurate entry of all enforcement data into RCRAInfo. In the review of inspections files, 13% were not properly identified as SNC facilities.

5. Degree to which state enforcement actions require complying action that will return facilities to compliance in a specific time frame.

Findings: All enforcement files reviewed included required actions for the facility to return to compliance. Following the issuance of an informal or formal enforcement action, ADEM requires documentation by the facility that they have returned to compliance as specified in the enforcement action. In addition, ADEM may conduct an onsite follow-up inspection to monitor compliance with the schedule in a formal enforcement order.

Citation of information reviewed for this criterion:

- ADEM enforcement files
- RCRAInfo.

Recommendation(s): None.

6. Degree to which the state takes enforcement actions, in accordance with national enforcement response policies relating to specific media, in a timely and appropriate manner.

Findings:

Timely Enforcement: The RCRA Enforcement Response Policy (ERP) designates the following time lines for responding to SNCs:

- Day 150 - by this number of days after the first day of inspection, the state (implementing agency) should determine if formal enforcement action is required (identifying the violating facility as a SNC),
- Day 240 - by this number of days after the first day of inspection, the state should issue its unilateral or initial order, if appropriate, and

- Day 360 - by this number of days after the first day of inspection, the state should enter into a final order with the violator, or make a referral to the State's Attorney General office.

The ERP recognizes circumstances that may dictate an exceedance of the standard response times, such as multimedia cases, national enforcement initiatives, additional sampling or information needs, etc. A ceiling of 20% of cases per year may exceed the above time lines.

In FY2005, the ADEM RCRA program concluded five consent orders with SNC facilities. Of the five consent orders, four orders or 80% of the cases exceeded the 360 day time line for entering into a final order. According to ADEM, this delay was due to a new public notice law that was passed in the fall of 2004 requiring all ADEM enforcement actions to be public noticed prior to finalization. Following the passage of the new requirement, the Department had to develop a protocol for implementing this public notice period into enforcement proceedings. This effort delayed the enforcement actions that were ongoing at that time, thereby causing the exceedance of the RCRA ERP time frames.

Appropriate Enforcement: The RCRA ERP was intended to provide a "level playing field" within the regulated community, where facilities with more serious violations were held to a more substantial formal enforcement response by the States or EPA. The facilities with minor violations were issued informal enforcement actions. The ERP is a framework for the States and EPA to follow to help prioritize enforcement efforts with respect to RCRA violations.

Upon reviewing ADEM's 23 inspection files, EPA identified three facilities (13%) that should have been designated at SNCs but were only designated as SVs. According to the RCRA ERP guidelines, the facilities should have been addressed through formal enforcement actions rather than the informal enforcement response taken by ADEM. Violations at these facilities were significant in that they included releases to the environment and/or facilities with histories of noncompliance, and in one instance, imminent and substantial endangerment (the facility was subsequently referred to EPA's Emergency Response & Removal program).

Citation of information reviewed for this criterion:

- Hazardous Waste Civil Enforcement Response Policy (December 2003)
- ADEM facility files
- RCRAInfo data

Recommendation(s): EPA recommends that ADEM closely review the RCRA Enforcement Response Policy for the appropriate identification of SNC facilities, as well to determine the appropriate response to violations at RCRA facilities. Regarding the new ADEM public notice requirements, EPA recommends that ADEM factor these proceedings into the enforcement response time in order to achieve timely enforcement actions for significant violations.

7. Degree to which the State includes both gravity and economic benefit calculations for all penalties.

Findings: It is ADEM's policy not to include penalty calculations in the enforcement files. The enforcement orders do state that the gravity of the violations and economic benefit are considered in the penalty calculation, however no documentation of this is maintained in the files.

Citation of information reviewed for this criterion:

- ADEM RCRA enforcement files

Recommendation(s): In order to maintain consistency in enforcement proceedings and penalty calculations, ADEM should consider options to include economic benefit into penalty calculations, as well as documenting the calculations in the enforcement files.

8. Degree to which final enforcement actions (settlements or judicial results) take appropriate action to collect economic benefit and gravity portions of a penalty, in accordance with penalty policy considerations.

Findings: It is ADEM's policy not to include penalty calculations in the enforcement files. The final penalties were reflected in RCRAInfo, but the penalty calculations were not formally documented in the files. In addition there was one enforcement case where ADEM did not assess any penalty in the enforcement action. There was no justification, such as inability to pay, for the waiver of penalty in the enforcement case.

Citation of information reviewed for this criterion:

- ADEM enforcement files
- RCRAInfo data.

Recommendation(s): In accordance with the RCRA Civil Penalty Policy, ADEM should assess penalties appropriate to the violations, and only mitigate the penalty where allowed by policy. Also, in order to maintain consistency in enforcement proceedings and penalty calculations, ADEM should consider options to maintain both initial and final penalty documentation, including economic benefit and gravity-based calculations.

9. Enforcement commitments in the PPA/PPG/categorical grants (written agreements to deliver product/project at a specified time), if they exist, are met and any products or projects are complete.

Findings: In February 2006, EPA Region 4 conducted a review of the ADEM RCRA program, as required by 40 CFR §35.115, to assess progress toward meeting the FY2005 Grant Workplan commitments and discuss any potential obstacles to meeting FY2006 commitments. Following the review, a report to document the findings was developed. In the FY2005/FY2006 RCRA Review, the report found that ADEM met and exceeded all of the core enforcement and compliance grant workplan commitments for FY2005.

Below is a chart outlining the grant commitments:

ADEM GRANT REQUIREMENTS FOR FISCAL YEAR 2005

	FY 2005 Grant Commitment	FY 2005 Accomplishments
Land Disposal Facilities Subject to Subpart F		
CMEs at facilities owned/operated by Federal Government	0	0
O&Ms at facilities owned/operated by Federal Government	0	0
CEIs at facilities owned/operated by Federal Government	1	1
CMEs at facilities owned/operated by State/Local Government	0	0
O&Ms at facilities owned/operated by State/Local Government	0	0
CEIs at facilities owned/operated by State/Local Government	0	0
CMEs at all other LDFs subject to Subpart F	0	0
O&Ms at all other LDFs subject to Subpart F	6	8
CEIs at all other LDFs subject to Subpart F	13	14
Treatment/Storage Facilities Subject to Subpart X		
CEIs at facilities owned/operated by Federal Government	4	4
CEIs at facilities owned/operated by State/Local Government	0	0
CEIs at all other treatment/storage facilities	4	4
Other Handlers		
CEIs at LQGs (≥20% of LQG universe)	45	58
CEIs at SQGs (8% of SQG universe)	90	89 (EOY report) (108 in RCRA Info)
First time inspections (CEI) at newly regulated TSDFs	0	-
Potential Non-notifier inspections	25	27
Citizen Complaints	60	41
Special inspections in support of EPA	0	7
Case development inspections	1	4
Inspections supporting criminal program	0	-
Follow-up inspections (other than TSDFs w/formal enforcement)	10	7
Inspections of used oil processors and re-refiners	2	0

Enforcement Actions		
SNCs that have not had formal enforcement action	-	-
Formal administrative enforcement actions issued	4	6
Civil and criminal cases filed (against Subtitle C handlers)	0	-
Notices of Violation (NOVs) and Warning Letters (WLs) issued	150	171 (142 WLs & 29 NOVs)
Civil/Judicial Orders	0	0
Corrective Action Orders	0	0
Show Cause/Informal meetings	2	2
Criminal Investigations supported	0	0
Compliance/administrative Orders appealed	0	0
Record Reviews		
Closure Plans	1	1
Post-Closure Plans	0	0

Financial Responsibility Documents	10	10
Update reviews of closure/post-closure cost estimates and financial assurance documentation	10	10
Record reviews of groundwater	20	20
Reviews of manifest exceptions/discrepancy reports	10	10
Reviews of annual reports	20	20
Reviews of delisting petitions	1	1
Reviews of waste minimization plans	0	0

Citation of Information Reviewed for this Criterion:

- ADEM RCRA Annual Review Report, FY2005/2006.

Recommendation(s): None.

10. Degree to which the Minimum Data Requirements are timely.

Findings: The RCRA Enforcement Response Policy states that data should be entered when compliance determinations are made, but no later than 150 days from day zero or the first day of the inspection. This provision is included so that no SNC entry is withheld until enforcement is completed, and therefore not tracked for timely enforcement response

In the data metrics for this element, OECA has measured the percentage of SNCs that are entered into RCRAInfo more than 60 days after the determination (i.e., the first date of inspection). According to the OECA metrics, ADEM entered 50% of the SNCs (two facilities) in FY2005 greater than 60 days after the date of determination. In the EPA R4 / ADEM RCRA MOA (dated November 2, 1998), there is no established deadline for SNC data entry into RCRAInfo.

Of the two SNC facilities identified in the OECA data metrics, one was originally a Secondary Violator (SV) that did not respond to the informal enforcement issued by ADEM. The facility was then reclassified from an SV to a SNC, explaining the delay in SNC entry. A subsequent site visit showed that the facility had ceased operations. The second facility, according to the OECA data metrics, was entered as a SNC into RCRAInfo approximately 111 days after the inspection. However, the facility was issued an imminent hazard order within one week after the inspection. A consent order was subsequently signed within the RCRA ERP timelines.

Citation of Information Reviewed for this Criterion:

- OECA Data Metrics
- RCRAInfo data
- RCRA Enforcement Response Policy

Recommendation(s): ADEM should continue to follow the RCRA Enforcement Response Policy for timely and accurate entry of data into RCRAInfo.

11. Degree to which the Minimum Data Requirements are accurate.

Findings: The following discussion addresses the findings of the RCRA SRF Metrics for data accuracy.

Metric 11(a) (1) - This metric measures the “closeness” between SNC determination and formal enforcement actions. The ERP states that the data should be entered when the determination is made, and SNC entry should not be withheld until the action is completed. The metric indicates that during FY2005, there were no ADEM RCRA SNC determinations made on the same day as formal enforcement actions.

Metric 11(a) (2) - This metric also measures the “closeness” between SNC determination and formal enforcement actions. The metric indicates that during FY2005, there were no ADEM RCRA SNC determinations made within one week of formal enforcement actions.

Metric 11(b) - This metric measures the longstanding secondary violations that are not “returned to compliance” or redesignated as SNC. According to the data metric, in Alabama there was one facility that was in violation for greater than three years. Although the OECA data metrics show one facility, Don Ron Trucking (ALR000011205), in this category, it appears to be a data error. This facility was designated as a SNY on 6/28/1999, and issued an initial administrative order with penalty on 1/25/2000. On 2/17/2000, the ADEM RCRA program turned the case over to their OGC for referral to the Attorney General’s office for collection. The facility was designated SNN on the date it was referred to ADEM’s OGC/Attorney General’s office.

Citation of Information Reviewed for this Criterion:

- RCRA SRF Metrics.

Recommendation(s): None.

12. Degree to which the Minimum Data Requirements are complete, unless otherwise negotiated by the Region and State or prescribed by a national initiative.

Findings: The SRF Metrics were provided to ADEM, and there is no disagreement from Alabama with the data provided in the report under Metric 12.

Citation of information reviewed for this criterion:

- RCRA SRF Metrics

Recommendation(s): None

Information Sources Included in the RCRA Review:

- RCRAInfo data
- ADEM RCRA Annual Review Report, FY2005/2006.

- Hazardous Waste Civil Enforcement Response Policy (December 2003)
- ADEM facility files
- ADEM enforcement files
- EPA/ADEM RCRA Memorandum of Agreement (November 1998)
- Solid Waste Disposal Act
- OECA FY2005-2007 MOA Guidance (May 2004)
- OECA RCRA SRF Metrics

Element 13 – ADEM Compliance Assistance and Innovative Projects

Supplemental Environmental Project (SEP) EMS Compliance Option

Overview - Traditional regulatory methodologies employ a system of fines and monetary penalties in instances of non-compliance. While this approach requires corrective actions to return the offending entity to compliance, environmental gains are usually limited to those levels legally required by the authorizing government organization. The ADEM Supplemental Environmental Projects (SEP) EMS Compliance Option provides a mechanism for the offending entity to return to legal compliance levels while also utilizing resources to prevent reoccurrences and achieve beyond compliance performance. Facilities are provided with the option to design and implement an EMS which not only addresses the concerns in question, but serves to achieve environmental benefits in addition to those which would be realized through traditional enforcement requirements. The agreement requires additional monetary resources to be applied toward the facilities EMS than that required for a non-compliance penalty.

The facility electing to participate is provided with information and assistance in EMS development and implementation by ADEM personnel who are trained and assist in the identification and selection of appropriate pollution prevention opportunities. Given that the program is voluntary, the facility has the choice of following the traditional regulatory requirements, or utilizing the EMS to correct the non-compliance and reap additional environmental benefits and associated cost savings. The implemented EMS serves not only to eliminate problems in the area(s) cited, but in all aspects of the facility's environmental responsibilities. Pollution prevention techniques are heavily emphasized for inclusion to provide the greatest economic and environmental improvement possible. The program provides for additional penalties for non-completion of the EMS while still maintaining the requirement for full compliance. No additional costs are incurred by ADEM for the program as existing personnel and monetary resources already allocated to compliance and pollution prevention are utilized. Activities required for managing and conducting the program fit perfectly within existing work plans and strategies.

Requirements for Eligibility - The program is voluntary, due to requirements for substantially more investment and environmental performance than provided for under the legal regulatory structure. Applicability is subject to negotiation between the facility and ADEM to ensure that the needs and requirements of both parties are met. The agreed upon EMS program must not only address the specific area and environmental media of non-compliance, but must address all aspects with the potential for environmental damage. ADEM Personnel serve to oversee development and implementation of the EMS, and ensure that expenditures, milestones, and other requirements set forth in the agreement are adhered to. Monthly progress reports, developed procedures and documentation are submitted for review and approval. The inclusion of ISO 14001 EMS certified ADEM personnel on the facility's EMS team is mandatory. All compliance orders and agreements for use of the EMS Compliance Option to meet requirements are open to and available for comment by the public.

Major Purposes of the Program - Ensuring that the facility returns to compliance must be the foremost consideration of the EMS Compliance Option. However, the program provides

opportunities for additional environmental and business benefits as the development and implementation of an EMS which utilizes pollution prevention reduces or eliminates the use of feedstock and raw materials which may present environmental hazards. ADEM personnel provide pollution prevention alternatives during the aspect and impact identification phase and in the development of objectives and targets. The fact that in most cases environmental and economic performance are not mutually exclusive is emphasized to the facility. The program seeks to push EMS concepts and benefits to subsidiaries and contracting agencies, as well as other organizations which may not choose to pursue EMS development on their own. Facility management commitment for pollution prevention or other environmentally preferable projects is gained through consideration of cost savings. Facilities may then apply savings to further improvements. Thus the facility may realize additional benefits above and beyond those which would have been realized had the traditional regulatory process been selected. Publicity of EMS successes encourages transferability to and implementation by other facilities with similar operations.

Program In Action - The Alabama Department of Transportation (ALDOT) is responsible for the construction and maintenance of transportation infrastructure within the state. With operations statewide, the cumulative effect of the organizations activities has the potential for enormous environmental improvements or negative impacts, depending on the business and environmental practices to which they subscribe. ALDOT operations and associated violations concerning stormwater, erosion control and hazardous waste led to two compliance orders from ADEM. The fact that ALDOT is a state agency, provided the perfect opportunity to test the merits and identify needed improvements to the program, before encouraging use by the private sector.

ALDOT, faced with a large monetary penalty, exercised the option of utilizing the EMS Compliance Option to correct violations noted in the compliance order. They realized that allocating additional resources and committing to the development and implementation of an EMS was a far superior approach than to pay a fine which would not be utilized to correct problems. The agreement required ALDOT to develop an EMS incorporating all activities with environmental impact potential at its 41 facility locations within Alabama, as well several hundred transportation projects. ADEM personnel, trained in EMS and pollution prevention, assist ALDOT in development of the EMS providing technical assistance in reducing environmental impacts associated with operations. The program serves to protect Alabama's environment and increases the efficiency and cost-effectiveness of ALDOT operations.

Benefits and Conclusions - The program is being used as a model by other states and will be marketed to other organizations in cases of non-compliance where additional benefits may be realized through the EMS approach versus traditional regulatory mechanisms. Public and private organizations utilizing the EMS Compliance Option will achieve higher levels of environmental protection, realize economic advantages, correct existing and avoid future compliance problems, and experience improved environmental management. Through this cooperative and innovative partnership approach, the ADEM will meet its' goals of protecting the environment, the public health of its' citizens and help to secure a more sustainable Alabama for future generations.

NPDES Compliance Assistance Program

ADEM has introduced an innovative, proactive program to help wastewater treatment systems throughout Alabama address potential compliance issues associated with NPDES permits. Formed in October 2004, the Compliance Assistance Program of the Department's Permits and Services Division, attempts to assist municipal, semi- public and private wastewater treatment facilities that hold NPDES permits to effectively address operation, maintenance, and other permit compliance concerns before enforcement actions become necessary. Wastewater treatment involves a complex series of mechanical, biological and/or chemical processes intended to ensure compliance with NPDES permit limits. Permit limits such as biochemical oxygen demand, ammonia nitrogen, total suspended solids, and fecal coliform are established for each individual wastewater treatment system based on hydraulic flow capacity depending on the number and type of residential, commercial, and industrial customers connected to them, and are calculated carefully to be protective of the environment and human health.

EPA has recognized the importance of, and the need for such programs as ADEM's Compliance Assistance Program as identified in Section 104(g) Operator Assistance Program of the Federal Water Pollution Control Act (FWPCA). In addition, EPA has launched its Enforcement and Compliance History Online (ECHO) website to track compliance with NPDES permits, and to make this information easily accessible to the public. The Department is acting pro-actively to assist permittees toward compliance, preferably before they receive official enforcement action from ADEM, or possibly, from individual citizen or Attorney General lawsuits.

The Department's Compliance Assistance Program, which is offered at no cost to wastewater treatment systems, has partnered with the Alabama Rural Water Association (ARWA) and the Rural Community Assistance Program (RCAP) to lend assistance to small rural wastewater treatment facilities that experience compliance problems. Although these smaller systems typically do not have the same complex infrastructure as larger systems, they are nonetheless held to the same exacting compliance standards. By partnering with the ARWA and the RCAP, ADEM is able to extend compliance assistance activities to those smaller systems that are least able to afford monetary penalties and/or extensive system overhauls. Complementing the compliance assistance program is the reliance on the engineering community to help identify technical and mechanical problems, and design effective solutions to those problems.

Currently, the program is lending technical and compliance assistance, annually, to more than 100 municipal, semi-public, and private wastewater treatment facilities in Alabama, including many schools, nursing homes, the Alabama Department of Corrections, and the Alabama Department of Transportation, that have older, individual wastewater treatment systems. In many instances, these systems do not connect to larger municipal systems and are further inhibited by lack of sufficient funding for infrastructure construction and maintenance.

Subsurface Wetlands Modifications Proves Successful for Town and School

Between 1988 and 1992 several hundred subsurface wetland areas were constructed across the United States to treat wastewater prior to discharge, according to standards and limitations established under the NPDES permit program. Two such facilities were constructed in Alabama,

in Cottonwood in Houston County and at Phillips High School in Marion County.

Subsurface wetlands are large, shallow, submerged (saturated) coarse rock media beds constructed to allow natural bacterial breakdown of pollutants in the pretreated wastewater that migrate slowly through the rock interstices. An integral component of proper wastewater treatment using this method involves the oxidation of ammonia nitrogen. This is accomplished using suitable vegetation whose root systems penetrates the wetlands' rock media and provides oxygen for the biological treatment of pollutants as they pass through the rock media. However, over time, the plant growth which supplies oxygen to the media may die and the water treatment capabilities of the process may suffer, resulting in compliance problems. Based on the EPA report, this deficiency can be overcome by converting the rock media bed to an unsaturated state, then allowing the pretreated wastewater to be aerated as it cascades through the media.

ADEM, as part of its Compliance Assistance Program, became aware of such problems at both Alabama facilities. As a result, department staff met with the operators and their consulting engineers to recommend corrective measures for resolving existing and potential treatment shortcomings. Corrective actions in Cottonwood involved converting the rock bed to an aerobic trickling filter system by draining the bed and spray irrigating the pretreated water on the beds, thereby providing the oxygen required for proper treatment. In addition, chlorination and dechlorination of the effluent was recommended to enhance the treatment process. Similarly, the Phillips High School subsurface wetlands were drained and the pretreated wastewater allowed to naturally percolate through the bottom of the media to provide the oxygen needed for treatment. Other improvements included the addition of a settling tank to prevent solids from the preliminary treatment plant from entering the subsurface wetland system and chlorination/dechlorination for enhanced final treatment.

The Department plans to continue and refine its efforts to assist similar facilities with permit compliance and will share this information with those that experience similar problems.

Aquaculture Proves Successful for DOT I 65 Rest Area Lagoons near Evergreen

The Compliance Assistance Program which was started last October as an innovative initiative by the Department to assist NPDES permittees in coming into compliance with their permits has proved successful in assisting more than 80 facilities. Two of these facilities involved Department of Transportation Rest Areas Southbound and Northbound Lagoons located on I-65 near Evergreen in Conecuh County.

One of the lagoons, the southbound, was having problems with % Removals for Carbonaceous BOD and Total Suspended Solids. Such problems are sometimes brought on by proliferation of algae, which although needed to assist in the treatment process to produce oxygen for the treatment process through photosynthesis, can sometimes contribute to other violations. The Department through its Compliance Assistance Program recommended the use of water hyacinths and duckweed in the final polishing ponds as cover to prevent the growth and discharge of algae and enhance overall treatment capabilities. The water hyacinth and duckweed are some of the most prolific plants on earth which float on the surface of the water. The shade provided by these plants limit the growth of algae and the hyacinth root system can provide a site

for wastewater treatment and nutrient uptake.

The other lagoon, the northbound, was having similar problems but in particular with ammonia nitrogen, and pH. The Department also recommended the use of aquaculture for this facility, but also assisted by provided DOT with nitrification tower material which was available from a municipal facility that had contributed it for their use. This plastic material is used to provide a growth site for specialized bacteria that can oxidize ammonia.

DOT staff seeded the polishing ponds with hyacinths obtained from the Alabama River near Millers Ferry, and installed the nitrification media in the final pond in front of a directional aerator in the spring of 2005. In addition, DOT also installed liquid chlorination and dechlorination facilities at both sites for enhanced treatment. The Department with aid of Rural Community Assistance Program (RECAP) of Mobile, a partner in the Compliance Assistance Program, assisted DOT in operation and monitoring the facilities. According to DMR reports for the last three months, these facilities are now in compliance with their permits. The Department plans to continue and refine its efforts to assist similar facilities with permit compliance and will share this information with those that experience similar problems.

Jefferson County Innovative Project Summary of Sloss Industries Diesel Locomotive Retrofit Program

Six diesel locomotives were modified by Sloss Industries as a component of an enforcement settlement. The locomotives were physically modified by replacing parts such as sleeves, pistons, and fuel injectors, the timing of the engines was adjusted, and a *SmartStart* system was installed on each locomotive.

The *SmartStart* system reduces the idle time of a locomotive and allows Sloss Industries to voluntarily achieve full compliance with the EPA Tier 0 standards specified by 40 Code of Federal Regulations (CFR) 92.

The environmental gains in terms of air emissions from the physical modifications to the locomotives are projected to be significant. It is estimated that nitrous oxide emissions were reduced by 36%, hydrocarbon, carbon monoxide, and particulate matter emissions were each reduced by 11%.

The total cost of the retrofit of the six locomotives was \$435,562.00. The cost of the Diesel Retrofit Project SEP offsets a \$580,750 penalty, with the remaining \$145,188.00 being paid to the Jefferson County Board of Health.

As of this date all retrofits have been completed and emissions reports are being compiled as is required by the SEP.