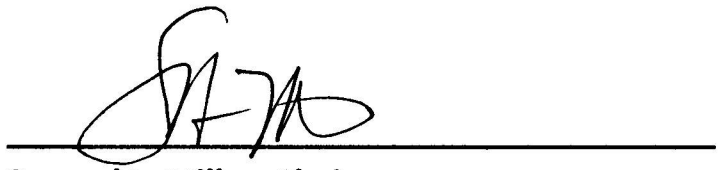
8/19/19

Minutes
Environmental Management Commission Meeting
Alabama Department of Environmental Management Building
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400
June 21, 2019

This is to certify that the Minutes contained herein are a true and accurate account of actions taken by the Alabama Environmental Management Commission on June 21, 2019.



Samuel L. Miller, Chair
Alabama Environmental Management Commission

Certified this 16th day of August 2019.

Minutes
Environmental Management Commission Meeting
Alabama Department of Environmental Management Building
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400
June 21, 2019

Convened: 11:00 a.m.
Adjourned: 11:54 a.m.

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Part A

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ALABAMA ENVIRONMENTAL MANAGEMENT

COMMISSION MEETING

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Alabama Room
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

June 21, 2019
11:00 a.m.

* * * * * * *

Taken by: Bridgette W. Mitchell,
ACCR 231

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APPEARANCES

COMMISSION MEMBERS PRESENT:
Samuel L. Miller, M.D., Chair
H. Lanier Brown, II, Esquire,
Vice Chair
Kevin McKinstry
Thomas P. Walters, P.E.
Ruby L. Perry, D.V.M.
Mary J. Merritt
John (Jay) H. Masingill, III

ALSO PRESENT:
Robert Tambling, EMC Legal Counsel
Lance R. LeFleur, ADEM Director
Debi Thomas, EMC Executive Assistant

CHAIRMAN MILLER: Good morning, everyone. I would like to call the meeting to order and acknowledge we do have a quorum.

The first item on the agenda is considering the minutes of our last meeting from April 12th. I assume that everyone has had a chance to look those over. I will entertain a motion to accept the minutes.

DR. PERRY: So move.

CHAIRMAN MILLER: Second?

MR. McKINSTRY: Second.

CHAIRMAN MILLER: Any discussion?

(No response.)

CHAIRMAN MILLER: All right. All in favor say aye.

(So indicated.)

CHAIRMAN MILLER: All oppose?

(No response.)

CHAIRMAN MILLER: The ayes have it.

We would like to now call on Director LeFleur.

DIRECTOR LeFLEUR: Good morning, all, and welcome to the fifth meeting of the Alabama Environmental Management Commission for fiscal year 2019. Today's report will update you on -- update the Commission on: The Department's budget status; report on progress with the physical facilities and software systems upgrades discussed at the April Commission meeting; present the annual review of the performance of the Department's Air Division using EPA dashboards; address the public comments on coal ash remediation activities brought up at the April Commission meeting; and, report on several personnel matters.

On the budget front, the Department continues to be on target with its FY 2019 funding and expenditures. The Department received an FY 2020 General Fund appropriation of $4 million. The increase over the prior year's $575,000 appropriation will help assure the

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Department's continued high performance in the coming fiscal year. A big thank you to the House and Senate leadership, numerous legislators, the Governor's office, several private-sector organizations, and interested individuals who supported the increased funding.

At the April Commission meeting, planned investments in a new Mobile Field Office, upgrades to the lab facilities in Birmingham Field Office, and software systems upgrades were reviewed. Progress has been made on each of these initiatives.

The Federal RESTORE Act Council is in the process of finalizing the necessary documentation to authorize the distribution of funding for projects selected by the Alabama State RESTORE Council, one of which is our Mobile Field Office. The mechanics of obtaining the funding is slower than we would like. However, it appears our Mobile Field Office project will be among the first to have funding distributed through

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the Federal Reserve -- the Federal Council. Additional progress has been made on the Mobile Field Office project following an in-depth qualification and interview process that included the Department of Finance, Division of Construction Management, and numerous ADEM personnel, the consortium of firms -- the consortium of firms of Watermark Design Group, Thompson Engineering, and Goodwin, Mills and Cawood was selected as the architectural/engineering contractor for the Mobile Field Office. Also, negotiations are underway with the Alabama State Port Authority for the purchase of approximately four acres of property on South Broad Street in Mobile on which the field office will be constructed. The purchase will be accomplished through an interagency transfer agreement between the Port Authority and ADEM.

Plans for the Birmingham Field Office lab updates are being drafted by the

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architectural firm of Seay, Seay and Litchfield and will be the basis for bid documents anticipated to go out for bids this summer.

The procurement process for the computer software upgrades described in the April Commission meeting has been completed and a purchase order issued. The software development firm of Windsor Solutions has been selected to provide services to assist the Department in upgrading a number of our operating systems. The first steps in the upgrade will be to implement the enterprise identification and forms development systems and then to apply them to our Solid Waste program followed by application to our Underground Storage Tank and NPDES programs.

Each of these investments, including the funding mechanisms, is the result of a deliberate planning process, significant portions of which stretch back to 2012. These projects are critical tools needed to

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continue to be a high-performance organization and to accomplish our mission.

Moving on, today we will look at the performance of our Air Division. While we are looking at standard EPA-developed metrics today, a comprehensive review of Departmental performance would take into account additional measures less suited to statistical analysis such as environmental quality trends in Alabama, which will be reviewed for all media in the August Commission meeting; innovations that improve operational efficiencies; the quality of nondiscrimination programs; effectiveness of outreach to the public; progress in achieving strategic and annual plan goals; and other qualitative measures.

As is done with the Department's other divisions, we will look at the most recent updates to the same dashboard performance metrics reviewed in years past so we can see trends. The dashboards will cover the size of the regulated universe, the rate of

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inspections, the findings from those inspections, and then the enforcement actions taken where violations were found. As was noted last time, Air Division metrics -- the last time we reviewed Air Division metrics, EPA changed the format the states are required to use in reporting their air data into the EPA database, which has resulted in reporting problems for a number of states. While the Department has been able to quickly implement the new format, many other states have not completed the process. EPA is able to publish statistics for ADEM's Air program but is unable to provide a comparison of our performance against national averages. The graphs you will see today will show ADEM performance measures for the years 2011 through 2018. However, national averages are only available for the years 2014 and earlier.

A couple of additional things to note: First, the information in the following

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graphs is for the entire state of Alabama. However, Jefferson County and the City of Huntsville implement the Clean Air Act in their respective jurisdictions. Because the performance analysis is for the Department as well as Jefferson County and Huntsville, these dashboards do not solely reflect the Department's universe of regulated facilities or its activities.

Second, these dashboards only reflect information for federally-reportable facilities. To be federally reportable, a regulated facility must be a major source, a synthetic minor source, which is a facility that's capable of being a major source but which has elected to restrict its emissions to a level that which would be put it in the category -- below that which would be put in a category of major source, or any minor source that had a federally- reportable violation during the most recent fiscal year. The Department actually reports compliance and enforcement

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data for approximately 1300 of its regulated facilities, but all these activities are not classified as federally reportable and, therefore, not reflected in these dashboards.

So with those caveats in mind, please turn your attention to the screen where I'll walk you through a few of the more than 50 Air dashboards available for analysis of the air pollution control program.

This first slide depicts data from EPA's database for Alabama's total universe for federally-reportable facilities under the Clean Air Act. There are currently 337 facilities classified as major sources, which are shown in dark blue; 355 synthetic minor sources, which are shown in yellow; and 18 minor or other sources which are shown in light blue. These numbers do not include facilities that are exclusively regulated by EPA. The number of majors is down by four, synthetic minors up by five,

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and minor sources down by seven, for a net change of six out of the universe of more than 700. The changes are within the normal range of year-to-year variations seen historically.

In this second slide, you see an analysis of the percentage of full-compliance evaluations, or FCEs, conducted on federally-reportable facilities in Alabama for the period from 2011 through 2018. Full-compliance evaluations are analogous to inspections for land and water media. EPA does not require that federally-reportable facilities receive an FCE each year. EPA requires an FCE for major sources once every two fiscal years and for synthetic minor sources once every five fiscal years.

However, the Department's goal is to conduct a full compliance evaluation on each of these sources every fiscal year. The reason the bars on the graph are less than the Department's 100-percent goal is

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that local programs in Jefferson County and the city of Huntsville do not seek to operate with the same self-imposed goal to conduct compliance evaluations for 100 percent of the federally-reportable facilities each year. In 2018, the Department achieved 100 percent compliance evaluation coverage as in years past. During the past eight years, the statewide coverage has fluctuated between 80 and 90 percent. The statewide trend is essentially flat.

As you can see, Alabama as a whole has consistently exceeded EPA's inspection requirement of at most once every two years, or 50 percent. The FCE national average across all states is shown as the dashed blue line hovering just below 40 percent on the graph. As noted earlier, on this and other air media graphs, the national average comparison information is only available through 2014.

The dashboard graph shown on this third

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slide reflects the percentage of federally-reportable facilities that were found to have a federally-reportable violation. There are expected year-to-year fluctuations in violations rates that often relate to the effective dates of new air regulations. The dashed green line at the top of the graph represents the national average violation rate across all states through fiscal year 2014. The data indicates that the violation rate in Alabama was significantly lower than the national average. The violation rate in Alabama in 2018 is around the all-time low of about three percent. Over the last eight years, the violation rate has consistently been much lower than prior national averages and the rate is trending down. A reasonable explanation for this lower violation rate in Alabama is that the high-compliance evaluation or inspection rate and the high informal enforcement rate, which is a form of compliance

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assistance or education, discourage violations.

On this fourth slide, you see displayed the percentage of federally-reportable facilities involved in informal and formal enforcement actions. Informal enforcement actions appear in blue and formal enforcement actions appear in yellow. In the Air program, formal actions are typically preceded with informal actions; therefore, a facility may be represented in both columns.

The dashed green line at the top of the graph represents the national average informal enforcement action rate across all states, and the dashed purple line at the top of the graph represents the national average formal enforcement action rate across all states through fiscal year 2014. Please note that unlike the prior graph, this graph includes enforcement actions that were taken for both nonfederally-reportable violations and federally-

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reportable violations. That's why the percentage of facilities with alleged violations presented in the prior slide is typically lower than the percentage of facilities receiving enforcement actions for the same fiscal year in this slide.

The low violation rate shown in the previous slide is attributable in part to the relatively high level of informal enforcement actions in recent years shown here in blue. The downward trend of enforcement actions in recent years shown on this slide reflects the reduced need for enforcement actions because of that very low level of violations. The Department-wide strategy of efficiently using resources by employing less resource-intensive informal enforcement to obtain high levels of compliance is clearly evident in these last two slides.

Are the Department's compliance and enforcement efforts shown on these -- on these three previous slides resulting in

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actual environmental improvement? Well, in 2017, for the first time since the Clean Air Act became law nearly 50 years ago, Alabama met and today continues to meet all National Ambient Air Quality Standards despite the fact that those standards have become more and more stringent over the years.

To summarize, Alabama has a steady universe of facilities with air permits; our inspection rates are trending steady at a rate much higher than the national averages through 2014; the percentage of facilities with violations is much lower than the available national averages and trending down; and there is increasing use of informal enforcement along with formal enforcement, which is the strategy that delivers the lower rate of violations being experienced in Alabama. Most importantly, Alabama has moved from at or near the bottom in air quality to at or near the top in air quality.

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At the April Commission meeting, concerns were voiced regarding handling of Coal Combustion Residuals, CCRs, in Alabama. CCRs contain hazardous constituents, primarily heavy metals, which can enter groundwater when disposed of in unlined impoundments. Although EPA has determined that CCRs are not hazardous waste, EPA developed rules that required coal-burning utilities to test for certain discharges to groundwater and, beginning in 2018, to publicly report results of the testing.

Reporting of the testing results required by the federal CCR rules provided the Department the opportunity to consider potential environmental impacts. From the newly-released information, the Department determined that there were unauthorized releases to groundwater at six open impoundments in Alabama and the Department then took enforcement action under the existing Alabama Water Pollution Control

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Act and the ADEM groundwater rules. Subsequently, it was determined that a previously-closed CCR impoundment site also had unauthorized releases to groundwater.

In addition to monetary penalties, the enforcement orders issued on each of these impoundments require the utilities to take a series of steps to address both past releases to groundwater and potential future releases. Those steps are to take place on a timetable that allows for orderly investigation, planning, and execution of actions to protect human health and the environment. The steps include development of a comprehensive groundwater assessment plan; implementation of the assessment plans; development of ADEM-approved groundwater remediation plans based on the assessments; a public comment period on the proposed remediation plans; if necessary, amendments to the remediation plans based on public comments; and implementation of the remediation plans.

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The Department completed its review of the assessment plans and the groundwater assessments are now underway.

Following approximately a year of development by the Department, a preliminary review by EPA and a public comment period, in 2018, the Commission adopted rules related to CCRs. Although the federal rules promulgated by EPA were and are still under review as a result of appeals and are likely to be amended, the ADEM rule was patterned after the then-existing and anticipated amended EPA federal rules. This gave the Department a second tool to address CCRs.

The ADEM CCR rules have not received a final review and approval by EPA. The one state that early on did receive EPA approval of its CCR rules has had the rules challenged and the EPA approval is likely to be rescinded. One additional state has been awaiting EPA approval of its CCR rules longer than ADEM. Until EPA approves the

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ADEM CCR rules, Alabama CCR facilities are required to comply with both state and federal CCR rules.

The process to address CCRs in Alabama is progressing under both ADEM groundwater enforcement actions and the recently-adopted state CCR rules. As noted a moment ago, the remediation of groundwater contamination caused by CCRs is being addressed by enforcement under previously-existing rules. The closure of CCR impoundments is being addressed under the recently-enacted state CCR rules. Closure plans are being developed with concurrent review by ADEM. When the plan development and departmental review are completed, the closure plans will be subject to public comment before becoming final.

Several states have enacted legislation or have begun taking regulatory action without rulemaking to address CCRs. Those state actions are being challenged in court to determine their legality absent

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rulemaking and whether rate payers or utility shareholders will pay the multibillion-dollar cost for the single closure method they mandated for CCR impoundments.

Despite the unsettled situation at the federal level and in other states, ADEM is working with regulated industry and others to address contamination from CCRs in Alabama in a way that will be enforceable as well as be protective of human health and the environment. This issue will continue to develop over time and will be addressed in future reports to the Commission.

Next I'd like to announce the retirement of two senior personnel. First is Tom Johnston, who has led our Office of General Counsel for the last eight years. Tom has been with the Department for 31 years, having begun his career as a junior attorney, eventually working his way up to the top as Attorney IV, the highest level

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attainable in the state system. He leaves behind an extraordinary record of successfully representing the Department in hundreds of legal matters. We wish Tom the very best for a rewarding retirement.

Replacing Tom will be Shawn Sibley. Shawn is well-qualified to be assuming leadership of the Office of General Counsel. His background includes several years as a prosecutor in the Elmore County District Attorney's office as well as 21 years of service in state government, 16 years of which have been in the ADEM Office of General Counsel. Shawn has been admitted to practice in all Alabama state courts, all Alabama federal district courts, the 11th U.S. Circuit Court of Appeals, and the District of Columbia U.S. Circuit Court of Appeals.

Shawn, would you please stand? Here he is right here. Shawn -- we are in good hands with Shawn.

(Applause.)

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DIRECTOR LeFLEUR: Also retiring as of July 1st after 33 years with the Department will be Glenda Dean, Chief of our Water Division. Glenda has overseen making the performance of our Water Division the envy of our region. In fact, there's considerable basis to believe the division is one of the very top water programs in the nation. Glenda, are you here?

(No response.)

DIRECTOR LeFLEUR: She got shy. All right. We -- we've already thanked her for a job well done.

Replacing Glenda will be Jeff Kitchens. Jeff has been with the Department 25 years, serving in increasingly more responsible positions in our Air, Land, and Water Divisions. For the last six years, he has been chief of our Stormwater Management Branch. As you're aware, our organizational structure -- in our organizational structure, a branch is the

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management level right below division.
Jeff, please stand. I am confident Jeff will build on the already-impressive record of performance of the Water Division. Congratulations.
(Applause.)
DIRECTOR LeFLEUR: I think you both get raises out of this. Or at least more responsibility.
Finally, I'm sad to report that Dr. Jim Laier, who served on the Commission from October 2010 to March 2018 in the position of Professional Engineer, passed away on May 29, 2019. Those of us who had the pleasure of knowing him would describe him as a fine gentleman in every sense of the word. Condolences have been extended to Diana, his wife of 55 years, and his family on behalf of the Department and the Commission.
And that concludes today's report. If you have any questions, I'll be pleased to address them.

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CHAIRMAN MILLER: Any Commissioners have questions for the Director?
(No response.)
CHAIRMAN MILLER: Thank you.
DIRECTOR LeFLEUR: Thank you.
CHAIRMAN MILLER: Now for the report from the Commission Chair. It's time once again to begin our evaluation of Director LeFleur. I'm going to ask Commissioner Walters to -- who's head of our Personnel Commission, to begin the evaluation starting at 10/20/18, which is the day after the last report was filed, and to begin asking for Commissioners as well as the public to comment on Director LeFleur's performance. We will ask Commissioner Walters, along with help from Debi, to set out a timeline to get this accomplished and then report back in our October meeting with their findings.
Do you take that on, Tom Walters?
MR. WALTERS: I will.
CHAIRMAN MILLER: Okay. Thank you

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very much. Now, next item is Agenda Item No. 4, consideration of proposed amendments to ADEM Administrative Code 335-13, Solid Waste Program Regulations. We'll call on the Department for comments.
MR. COBB: Thank you, Mr. Chairman, and good morning, Commissioners. I'm Stephen Cobb, Chief of the Land Division, and I'm here today to recommend that the Commission adopt amendments to the Department's Division 13 Solid Waste Program regulations. These amendments propose to extend the permit duration, update existing public notice requirements, and clarify operating and reporting requirements for regulated solid waste facilities.
The proposed revisions to the Solid Waste Program Regulations were the subject of a public comment period. They ran from February 17, 2019 through April 4, 2019, and a public hearing which was held at the Department on April 4th. Written comments

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were also received by the Department during the public notice period. Based on the comments received, the proposed regulations have been amended to remove the provision which would increase the permit rule application filing deadline from 180 days to 270 days prior to permit expiration. No other changes were made to the proposed regulations as a result of the remaining comments. The Department's response to the comments received during the public notice period has been provided to the Commission. The revised regulations presented to -- are presented to you today for your consideration and the Department asks that the Commission adopt the proposed changes to the Division 13 Solid Waste Program Regulations.
I'll be happy to answer any questions that you might have.
CHAIRMAN MILLER: I think one of the things that struck me about all the public comments was I got the feeling that

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the people who were commenting felt like this was going to weaken the regulation. Will you comment on that, please?

MR. COBB: Mr. Chairman, I don't see any way that this will weaken the regulations. This provides clarifications, provides more clarity to what we're doing. It does not reduce the availability of public comment. It does not reduce the enforcement nature of the regulations. So, no, I do not believe it will reduce the regulations in any way.

CHAIRMAN MILLER: Okay. Thank you. Any other questions?

(No response.)

CHAIRMAN MILLER: All right. I'll entertain a motion from the Commission regarding the proposed amendments from the Solid Waste Program.

MR. MASINGILL: Move we adopt the proposed amendments.

MR. WALTERS: Second.

CHAIRMAN MILLER: We have a motion

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and a second. Is there any further discussion?

(No response.)

CHAIRMAN MILLER: If not, I'll call for the question. All in favor of adopting the new regulation, please signify by saying aye.

(So indicated.)

CHAIRMAN MILLER: All opposed say no.

(No response.)

CHAIRMAN MILLER: That passes. Thank you.

While this is being passed down the line here, let's go ahead with Agenda Item No. 5, proposed amendments to ADEM Administrative Code 335-1, payment of fees. I call on the Department for comments.

MR. KELLY: Mr. Chairman, members of the Commission, I'm Russell Kelly, Chief of the Permits and Service Division. In the Division, one regulation. The only permit fee that has been changed is the fee

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that addresses the modification of the solid waste facilities. So with that -- I don't believe we got any comments. And with that, I'll ask for your favorable consideration.

CHAIRMAN MILLER: What does the change accomplish? What happened with the change?

MR. KELLY: They want a five-year cycle and this went to a ten-year cycle, requiring more efforts on the Department, so the fee was doubled to relay that as to the resources necessary in order to carry out that function.

CHAIRMAN MILLER: Okay. Thank you. All right. I'll entertain a motion to adopt the rule change or regulation change.

MR. MASINGILL: Move to adopt the proposed amendment.

DR. PERRY: Second.

CHAIRMAN MILLER: Any further discussion?

(No response.)

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CHAIRMAN MILLER: If not, I call for the question. All in favor of the change, please signify by saying aye.

(So indicated.)

CHAIRMAN MILLER: All oppose?

(No response.)

CHAIRMAN MILLER: Okay. Passes.

MR. KELLy: Thank you, Mr. Chairman, members of the Commission.

CHAIRMAN MILLER: All right. Then to Item No. 6, consideration of proposed amendments to ADEM Code 335-7, Water Supply Program Regulations for Special Monitoring and Analytical Requirements for Unregulated Contaminants.

We'd like to hear from the Department.

MR. WHITE: Good morning. I'm Aubrey White, Chief of the Drinking Water Branch of the Department's Water Division. Before you today is a proposed revision to the Administrative Code Rule 335-7-2-10. This rule sets the special monitoring requirements that public water systems

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follow for unregulated contaminants. The Department proposes to revise this rule by adding monitoring for additional unregulated contaminants when health advisories or toxicity values have been issued.

Notice was published on February 24, 2019, and the public hearing was held on April 11, 2019. Written comments were received from one interested party, but as noted in the reconciliation statement, the Department determined that no changes to the proposed rule were necessary. We respectfully ask for your favorable consideration of the proposed rule. And I would be happy to answer any questions.

CHAIRMAN MILLER: Any questions?

(No response.)

CHAIRMAN MILLER: All right. I'll entertain a motion to deal with this proposed amendment.

MS. MERRITT: Move to adopt the proposed amendment.

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CHAIRMAN MILLER: Is there a second?

MR. McKINSTRY: Second.

CHAIRMAN MILLER: Any further discussion?

(No response.)

CHAIRMAN MILLER: All right. Calling for the question. All in favor say aye.

(So indicated.)

CHAIRMAN MILLER: All opposed say no.

(No response.)

CHAIRMAN MILLER: It passed. Thank you.

MR. WHITE: Thank you.

CHAIRMAN MILLER: Looks like you're on the box again.

MR. WHITE: Yes, sir.

CHAIRMAN MILLER: All right. Let's -- let's proceed on, then. We've got to consider a proposed -- or proposed amendments to ADEM Administrative Code

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335-7, Water Supply Program Regulations, Distribution Facilities Design and Construction Requirements.

MR. WHITE: Hello again. And also up for your consideration today is a proposed revision to Administrative Code Rule 335-7-7-03. This rule sets the design and construction requirements for public drinking water distribution systems. The Department proposes to revise this rule by requiring the products installed in a distribution system be certified to the specifications of the National Sanitation Foundation and the American National Standards Institute, Standard No. 61.

Notice was published on March 24, 2019 and the public hearing was held on May 13, 2019. No written comments were received but there was one comment received during the public hearing in favor of the revision. We respectfully ask for your favorable consideration of the proposed rule. And, again, I would be happy to

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answer any questions.

CHAIRMAN MILLER: What set of rules were we operating on before this would come into effect?

MR. WHITE: Well, this standard was actually required as practice -- standard practice for us when we reviewed plans and specifications. It had just never been formally adopted into the rules. So with this, we will join, I think, 44 or 45 other states that have it either in their statute or in their rules.

CHAIRMAN MILLER: Okay. All right. I'll entertain a motion upon this amendment.

MR. WALTERS: Move to adopt the proposed amendment.

CHAIRMAN MILLER: Is there a second?

MS. MERRITT: Second.

CHAIRMAN MILLER: Moved and seconded. I'll call for the question if there's no further discussion. All in

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favor say aye.
(So indicated.)
CHAIRMAN MILLER: All opposed say no.
(No response.)
CHAIRMAN MILLER: Okay.
MR. WHITE: Thank you.
CHAIRMAN MILLER: Thank you.
Our next item is Shady Side Farm, LLC, versus ADEM. And this is a request to suspend the appeal, giving both parties the opportunity to resolve this without going to a formal hearing. Kind of a strange request, but I see no harm in going ahead and voting whether we should allow this event to occur. So all in favor say aye.
(So indicated.)
CHAIRMAN MILLER: All opposed, no.
(No response.)
VICE CHAIRMAN BROWN: We need a motion. I move to grant the motion to suspend the administrative appeal.
CHAIRMAN MILLER: Okay.

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MR. MASINGILL: I second.
CHAIRMAN MILLER: All right. Any further discussion?
(No response.)
CHAIRMAN MILLER: If not, all in favor of the motion, please say aye.
(So indicated.)
CHAIRMAN MILLER: All opposed, no.
(No response.)
CHAIRMAN MILLER: Is there any other business that needs to come before the Commission?
(No response.)
COMMISSIONER MILLER: Our next Commission meeting will be August 16, 2019. Is there anyone who has a conflict with that date that we need to consider moving the date?
(No response.)
CHAIRMAN MILLER: All right. We'll move along now to the public comment period. And we have one registered commenter, Mayor McCarty of Wilsonville.

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We call upon the Mayor for his comments.
MR. McCARTY: Good afternoon, Mr. Chairman, ladies and gentlemen of the Commission. I know you're going to be shocked. I'm here to talk about coal ash. But we now have a short little wheelbase going here. We have a plant -- a coal ash pond that has been closed and kept in place. And the results, I know everybody in the room is shocked to hear from the groundwater testing around it, the groundwater is still polluted. In fact, in some instances, it's polluted worse after we capped in place or polluted in perpetuity.
But I'm -- I mean, who would have thought that groundwater ebbs and flows and moves and takes off chunks of this stuff in an unlined pond and gets in the groundwater. Defies common sense, doesn't it? But at least y'all took real strong action. Got a $250,000 fine on the perpetrator here. I bet that represents

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0.000000 something of their money on hand.
All sarcasm aside, we now know, we've known, to cap in place does not work. But now we've actually come to an area where we can do something about it. We have something coming up called the assessment of corrective measures. And the assessment of corrective measures that comes out of this body needs to read sort of like the DEQ from North Carolina, like theirs reads. It needs to say that there really is no way, except in perhaps some limited circumstances, to do anything about this coal ash unless you dig it up and move it to a lined pond.
Mr. LeFleur talked about better outreach to the public. This is where we need really good outreach to the public. We need to know about this ACM. We need it to read like y'all wrote it, not like the power company wrote it. Y'all need to sign it. You need to dissent on it. We need to know when these public hearings are. Is

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there one public hearing per plant -- per pond, rather -- or is there just one? And where is it going to be? When's it going to be? How much notice are we going to have? Are we going to be presented with a 4,000-page report the night of the public hearing and we haven't even had a chance to look at it?

This is where we need transparency. As soon as these dates become available -- if they're available now, tell me now. But we need to know when these dates are, when these meetings are supposed to happen, who can be there, what kind of public comments. Is it question and answer or just where somebody gets up and says this is the way it's going to be? We need this information as quickly as possible so that the public can know what their ability to comment on this is and so that you can see what the public really thinks about this.

Thank you for your time. Does anybody have any suggestions how to get this

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information, when these dates will be?

DIRECTOR LeFLEUR: Those dates have not yet been determined. When they are determined, the public will be given ample notice.

MR. McCARTY: It will be on your website?

DIRECTOR LeFLEUR: Yes.

MR. McCARTY: Okay. Thank you very much.

CHAIRMAN MILLER: Thank you, Mayor. Anything else we need to discuss?

VICE CHAIRMAN BROWN: I do have a question.

CHAIRMAN MILLER: Okay.

Vice CHAIRMAN BROWN: Mr. McCarty referenced some document out of North Carolina and their findings. Are you familiar with that? Can you explain what that was?

DIRECTOR LeFLEUR: Mayor McCarty referred to the activities going on in North Carolina. I met with my counterparts

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in each of the Region 4 states a couple weeks ago and my counterpart reported that there are two lawsuits involved with the activities going on there right now. As you may know, the legislature mandated that the administrator of the environmental agency require clean closure or excavation of all coal ash facilities in the state. He did so without having rules in place to allow him to do that. So the first suit in North Carolina is to determine whether the direct -- my counterpart acted in accordance with the rules and regulations of the state. A second suit is underway to determine who will pay the estimated five- to ten-billion-dollar cost of implementing that -- that method of closing the CCR impoundments. So those two suits are going on.

And the -- the estimate, just -- this is simply an estimate from my counterpart, was that rate payers would pay approximately 93 percent of the cost of the

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closure and that the shareholders would assume about seven percent. Once again, no basis for that other than her understanding of the past activities in court and how they've come out.

VICE CHAIRMAN BROWN: And I think what I thought Mayor was referring to was some sort of document, I guess an assessment of corrective measures or some similar document, scientifically stating that closure in place does not work to protect the public. And I guess I was interested if --

DIRECTOR LeFLEUR: I'm not aware of any document that supports either one. There was a non- -- well, it was a judgmental circumstance where it was determined what is the risk level, and that was analyzed on the basis of how many people are potentially impacted and whether there's an opportunity for a breach in the impoundment.

VICE CHAIRMAN BROWN: Okay.

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MR. WALTERS: Another question. Just curious. Thank you for Lanier because he got my wheels turning. Any information about, like, relative size of the impoundment to, say, the one that Mayor referred to this one? And the level of investigative measures up to that point as far as contamination, is it a similar degree of contamination of the groundwater? I'm trying to put it in a perspective of relative to the case that the Mayor referred to.

DIRECTOR LeFLEUR: In Alabama, we have basically seven impoundments. Two have been closed -- excuse me -- eight impoundments and -- eight impoundments and two have been closed. In Georgia, they have 30 impoundments that they will be reducing to ten impoundments by consolidating among the group. In North Carolina, I don't off the top of my head recall. This is just -- if I --

MR. WALTERS: That's fine. I

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understand.

DIRECTOR LeFLEUR: Fuzzy recollection. They have about a similar number to what we have. In other words, they are rather large impoundments as we have here. And the other part of your --

MR. WALTERS: I was asking the level of contamination as far as --

DIRECTOR LeFLEUR: Oh, groundwater.

MR. WALTERS: Yeah.

DIRECTOR LeFLEUR: They are still doing their groundwater assessments. However, their assessments are roughly comparable to --

MR. WALTERS: Okay.

DIRECTOR LeFLEUR: -- to what we have here.

Do you have any different information, Steve?

MR. COBB: No.

DIRECTOR LeFLEUR: Engineers always have a good --

MR. WALTERS: Well, you know.

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DIRECTOR LeFLEUR: And the attorneys. And attorneys. Okay?

CHAIRMAN MILLER: Mayor McCarty, I'd like for you, if you have a chance, to forward us your information so we can look it over and see --

MR. McCARTY: I'll be glad to.

CHAIRMAN MILLER: Okay.

MR. McCARTY: Some of it is in line with what Mr. LeFleur just said, some of it is a little bit different. The -- the cost estimates are one thing that I'm going to dispute heavily. The power companies have been intentionally putting out disinformation as to what the estimated costs are. South Carolina, for example, removed all of their coal ash for about a third of the initial money that they claimed it was going to cost.

MR. WALTERS: What I -- excuse me. What I interpreted Mr. LeFleur to say was referring to the one in North Carolina only.

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MR. McCARTY: But -- but all of the power companies generally have inflated the cost. And the cost is substantial. There's no doubt about that. The cost is substantial. But they've inflated it. You know, South Carolina literally did it for about a third of what their initial assessments were going to be. And the -- the entity suing the DEQ -- I'm assuming that's a power company -- they're unhappy with the decision, of course. But the -- there's a whole lot of studies out there, really good studies, that just say -- and I brought this up to you before. Look at -- look at the Kingston, Tennessee court decision.

By the way, Gallatin TVA has decided -- TVA has agreed to move coal ash in Tennessee at the Gallatin site. The big spill they had in Tennessee, that judge absolutely went through -- that -- that -- that judge's decision about what you have to do with coal ash to remedy it is -- is a

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guideline. It's -- it's the book on what you do with coal ash.
And so -- because it's going to continue to pollute from now on. I mean, there's so much. In Wilsonville, we've got so much of it, it's going to be polluting down the Coosa River. And now the plant in Gadsden, not the Gaston plant in Wilsonville but the plant in Gadsden, it's capped in place, it's still polluting, stuff's going all the way down the Coosa River. It is -- it is a ticking time bomb unlike -- in fact, in Wilsonville, we've got radio -- we're radioactive, 224 and 226 combined numbers there, way over the MCL. We just don't have any choice. I don't -- I agree that it's a terrible choice to have to make, but we just don't have any choice but to move it. We'll have to move it eventually. We might as well do it now.
In Virginia, by the way, I don't think -- in Virginia, are the rate payers paying or the utilities paying?

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DIRECTOR LeFLEUR: I don't have enough information --
MR. McCARTY: I believe --
DIRECTOR LeFLEUR: -- to be able to tell you what went down.
MR. McCARTY: I believe in Virginia the power companies wound up -- they're having to pay for it all. It may be the other way around. I forget. One of those, the rate payers are paying most of it and one of them the -- I don't know that for sure. But -- and besides, Alabama Power just got a 3.5 percent rate increase to pay for coal ash. That ought to cover it.
CHAIRMAN MILLER: Well, just forward us what you have.
MR. McCARTY: I'll be glad to.
CHAIRMAN MILLER: Okay. Any other business that any Commissioners wish to bring up?
DIRECTOR LeFLEUR: I would mention, if I may interrupt, we are actively working on both the remediation, groundwater

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remediation plans, and the closure plans related to all of these facilities. And we have not come up with an acceptable plan; but whatever the plan is, it will meet the legal requirements. And we -- we are obligated to approve plans that meet the legal requirements. We are encouraging Alabama Power to go beyond the legal requirements, but that's -- that's currently in process.
CHAIRMAN MILLER: Did I understand you to say that in Georgia they had 30 of these and they put out the press release that they're closing 20 of them but what they're really doing is taking 30 and combining them into ten?
DIRECTOR LeFLEUR: For the most part, yes.
MR. McCARTY: They are being removed from the most difficult locations, though, which makes a lot of sense.
CHAIRMAN MILLER: All right. I'll entertain a motion to adjourn.

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MR. WALTERS: So moved.
CHAIRMAN MILLER: Second?
MR. MASINGILL: Second.
CHAIRMAN MILLER: All in favor say aye.
(So indicated.)

(The meeting concluded at 11:54 a.m., on June 21, 2019.)

REPORTER'S CERTIFICATE

STATE OF ALABAMA)
)
ELMORE COUNTY)

I do hereby certify that the above and foregoing transcript was taken down by me in stenotype, and the questions and answers thereto were transcribed by means of computer-aided transcription, and that the foregoing represents a true and correct transcript of the testimony given by said witness.

I further certify that I am neither of counsel, nor any relation to the parties to the action, nor am I anywise interested in the result of said cause.

I further certify that I am duly licensed by the Alabama Board of Court Reporting as a Certified Court Reporter as evidenced by the ACCR number following my name below.

Bridgette Mitchell
Certified Court Reporter and
Commissioner for the State of
Alabama at Large
ACCR No. 231 - Expires 9/30/19
MY COMMISSION EXPIRES 12/15/21

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Part B

Attachment Index

Attachment 1

Amended 6/7/19

AGENDA*
MEETING OF THE
ALABAMA ENVIRONMENTAL MANAGEMENT COMMISSION
DATE: June 21, 2019
TIME: 11:00 a.m.
LOCATION: Alabama Department of Environmental Management (ADEM) Building
Alabama Room (Main Conference Room)
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

* The Agenda for this meeting will be available on the ADEM website, www.adem.alabama.gov, under Environmental Management Commission.

** The Minutes for this meeting will be available on the ADEM website under Environmental Management Commission.

1. CONSIDERATION OF MINUTES OF MEETING HELD ON APRIL 12, 2019

2. REPORT FROM THE ADEM DIRECTOR

3. REPORT FROM THE COMMISSION CHAIR

4. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-13, SOLID WASTE PROGRAM REGULATIONS, RULES 335-13-1-.03, 335-13-4-.12, 335-13-4-.21, 335-13-4-.22, 335-13-4-.23, 335-13-4-.27, 335-13-5-.02, 335-13-5-.03, 335-13-14-.07, AND 335-13-15-.09

The Commission will consider proposed amendments to ADEM Administrative Code 335-13, Solid Waste Program Regulations to the above rules. Revisions to these rules are being proposed to incorporate changes to ensure consistency with State and Federal Statutes and provide clarification of State requirements for the management of solid waste. The Department is also proposing to modify the permit renewal time from five years to ten years and correct a citation error in the existing regulations. The Department held a joint public hearing on the proposed amendments to the Division 13 and Division 1 regulations on April 4, 2019.

5. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-1, GENERAL ADMINISTRATION REGULATIONS, RULE 335-1-6-.07 (SCHEDULE E), *PAYMENT OF FEES*

The Commission will consider proposed amendments to ADEM Administrative Code 335-1, General Administration Regulations, Rule 335-1-6-.07 (Schedule E), *Payment of Fees*. Revisions to this rule are being proposed to modify fees to reflect changes in the solid waste disposal permit renewal requirements. The Department held a joint public hearing on the proposed amendments to the Division 13 and Division 1 regulations on April 4, 2019.

6. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-7, WATER SUPPLY PROGRAM REGULATIONS, RULE 335-7-2-.10, *SPECIAL MONITORING AND ANALYTICAL REQUIREMENTS FOR UNREGULATED CONTAMINANTS*

The Commission will consider proposed amendments to ADEM Administrative Code 335-7, Water Supply Program Regulations, Rule 335-7-2-.10, *Special Monitoring and Analytical Requirements for Unregulated Contaminants*. A revision to this rule is being proposed to give the Department the authority to require monitoring for additional unregulated contaminants if health advisories or toxicity values have been issued for such contaminants. The change is necessary to determine the occurrence of these contaminants in drinking water and to provide the Department, public water systems, and consumers the data needed to make informed decisions about water sources and treatment. The Department held a public hearing on the proposed amendments on April 11, 2019.

7. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-7, WATER SUPPLY PROGRAM REGULATIONS, RULE 335-7-7-.03, *DISTRIBUTION FACILITIES DESIGN AND CONSTRUCTION REQUIREMENTS*

The Commission will consider proposed amendments to ADEM Administrative Code 335-7, Water Supply Program Regulations, Rule 335-7-7-.03, *Distribution Facilities Design and Construction Requirements*. A revision to this rule is being proposed to require that products installed in a public drinking water distribution system be certified to the specifications of National Sanitation Foundation (NSF)/American National Standard Institute (ANSI) Standard 61. This standard is in widespread use across the industry and is intended to prevent harmful contaminants leaching from these products into drinking water. This amendment will codify a requirement that has already been applied in practice by the Department for many years. The Department held a public hearing on the proposed amendments on May 13, 2019.

8. SHADY SIDE FARM, LLC V. ADEM, EMC DOCKET NO. 19-05 (NPDES-RELATED MATTER)

The Commission will consider the *Joint Motion to Suspend Administrative Appeal*, submitted by Petitioner, Shady Side Farm, LLC and Respondent, ADEM. The Parties are jointly requesting that this administrative appeal be held in abeyance to give the Parties the opportunity to resolve this matter without a hearing. The subject of this appeal is ADEM Notice of Violation - Need to Apply, issued on April 18, 2019 to Shady Side Farms, LLC, Shady Side Farm, FID 61643, Chambers County.

9. OTHER BUSINESS

10. FUTURE BUSINESS SESSION

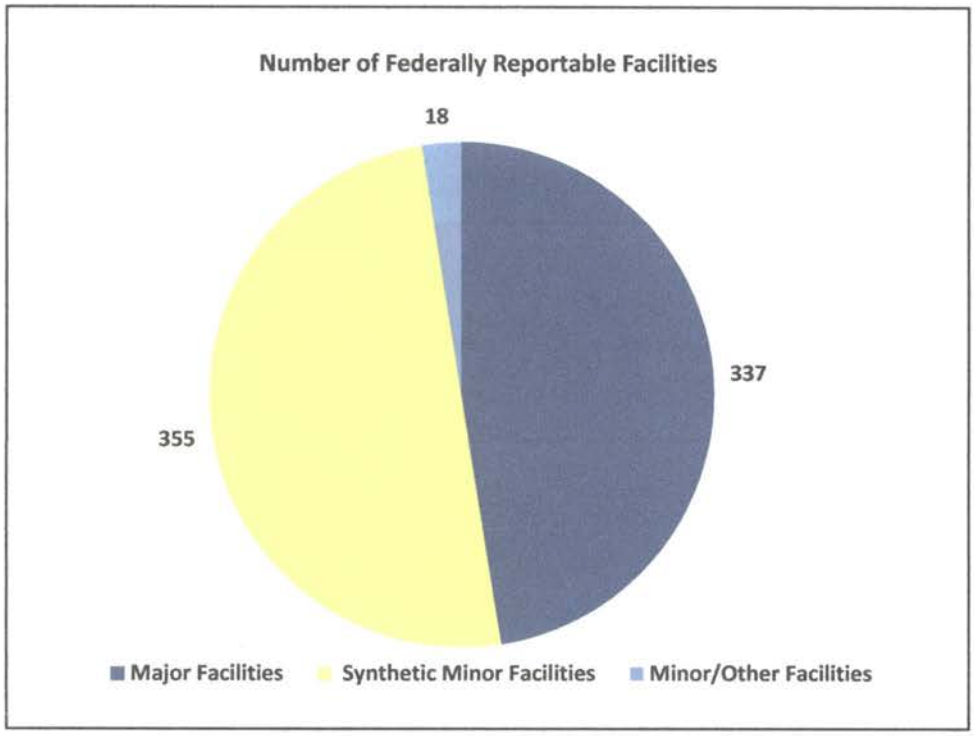
PUBLIC COMMENT PERIOD

BRIEF STATEMENTS BY MEMBERS OF THE PUBLIC REGISTERED TO SPEAK

Members of the public that wish to make a brief statement at a Commission meeting may do so by first signing in on a register maintained by the Commission office prior to each regularly scheduled meeting. The register will close ten minutes prior to convening each meeting of the Commission. Following completion of all agenda items, the Commission Chair will call on members of the public wishing to make a statement in the order their names appear on the register. Speakers are encouraged to limit their statement to matters that directly relate to the Commission's functions. Speakers will be asked to observe a three minute time limit. While an effort will be made to hear all members of the public signed on the register, the Commission may place reasonable limitations on the number of speakers to be heard. (Guideline 11, Guidelines for Public Comment).

The Guidelines for Public Comment are used in the application of ADEM Administrative Code 335-2, Environmental Management Commission Regulations, Rule 335-2-3-.05, Agenda and Public Participation. The Guidelines for Public Comment serve to educate and inform the public as to how the Commission interprets and intends to apply the Rule. The revised Rule 335-2-3-.05 was effective October 7, 2016.

Attachment 2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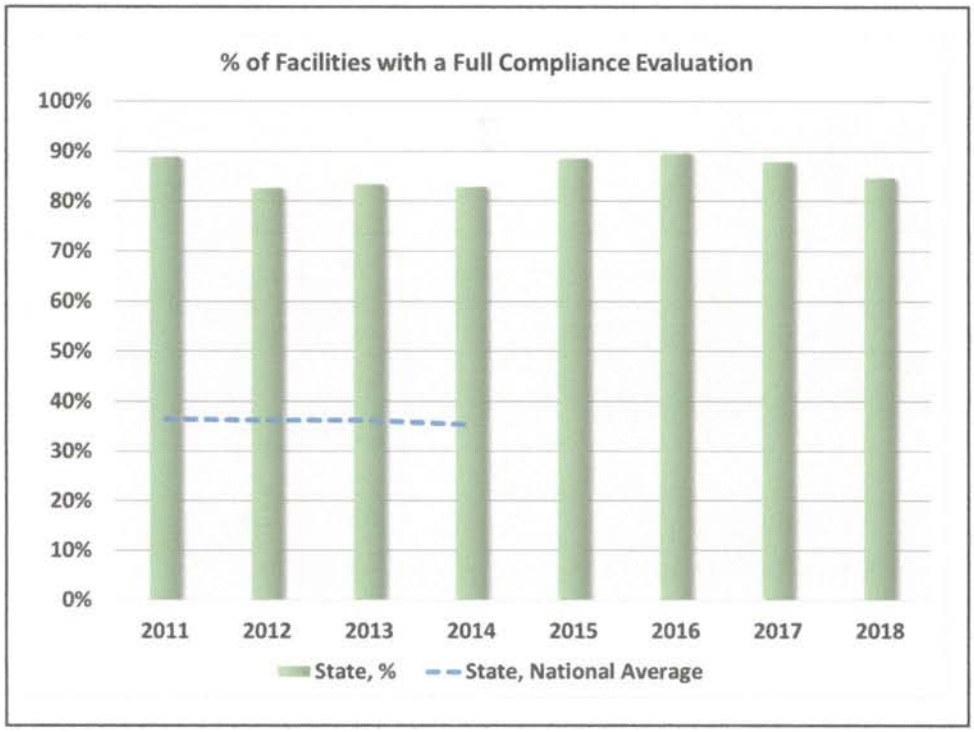
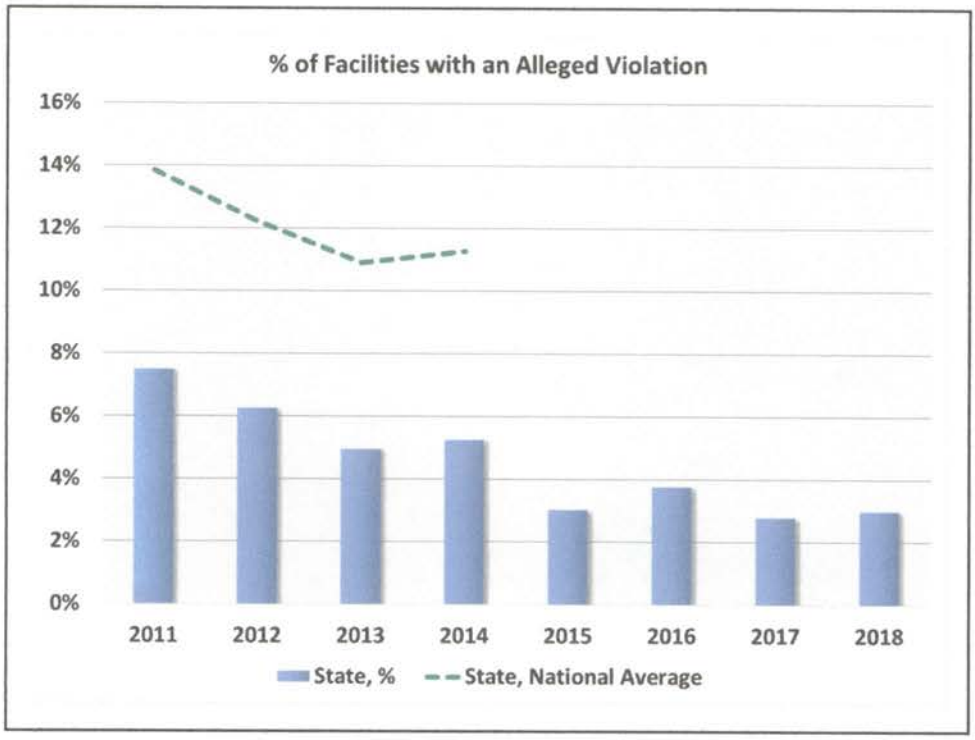
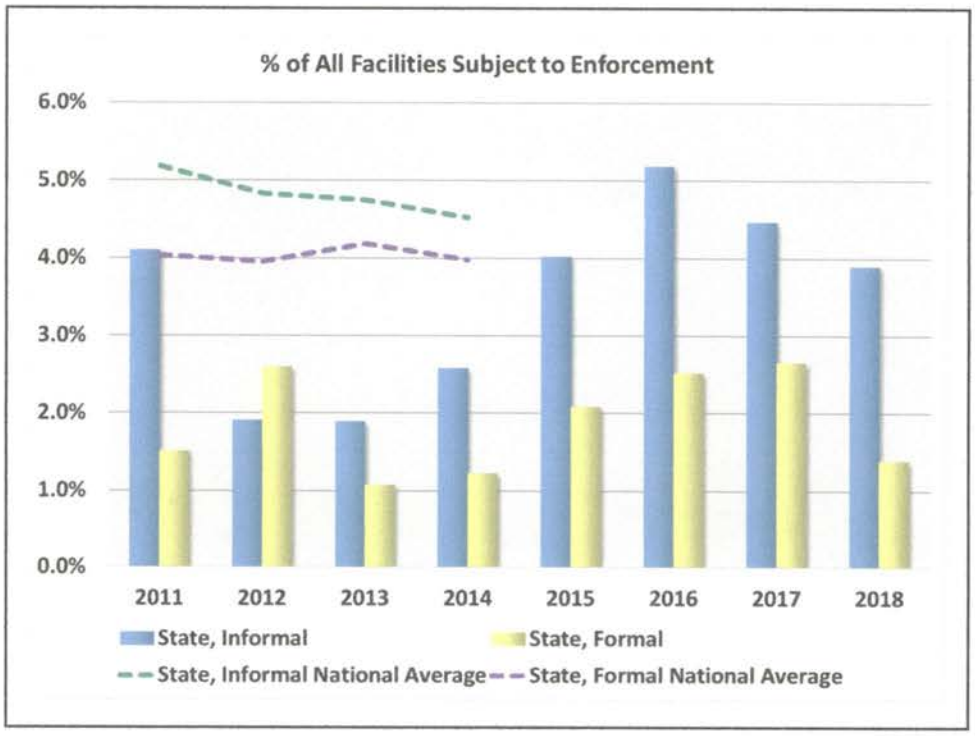
355
Major Facilities
Synthetic Minor Facilities
Minor/Other Facilities


% of Facilities with a Full Compliance Evaluation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2011
2012
2013
2014
2015
2016
2017
2018
State, %
State, National Average


% of Facilities with an Alleged Violation
16%
14%
12%
10%
8%
6%
4%
2%
0%
2011
2012
2013
2014
2015
2016
2017
2018
State, %
State, National Average


% of All Facilities Subject to Enforcement
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2011
2012
2013
2014
2015
2016
2017
2018
State, Informal
State, Formal
State, Informal National Average
State, Formal National Average

Attachment 3

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

WHEREAS, the Alabama Department of Environmental Management gave notice of a public hearing on the proposed revisions to ADEM Admin. Code 335-13 of the Department's Land Division – Solid Waste Program Rules in accordance with Ala. Code § 22-22A-8 (2006 Rplc. Vol.) and Ala. Code § 41-22-4 (2000 Rplc. Vol.); and

WHEREAS, a public hearing was held before a representative of the Alabama Department of Environmental Management designated by the Environmental Management Commission for the purpose of receiving data, views and arguments on the amendment of such proposed rules; and

WHEREAS, the Alabama Department of Environmental Management has reviewed the oral and written submissions introduced into the hearing record, and has prepared a concise statement of the principal reasons for and against the adoption of the proposed rules incorporating therein its reasons for the adoption of certain revisions to the proposed rules in response to oral and written submissions, such revisions, where appropriate, having been incorporated into the proposed rules attached hereto; and

WHEREAS, the Environmental Management Commission has considered fully all oral and written submissions respecting the proposed amendments and the Reconciliation Statement prepared by the Alabama Department of Environmental Management.

NOW THEREFORE, pursuant to Ala. Code. §§ 22-27-2, 22-27-7, 22-27-9, 22-27-12 (2006 Rplc. Vol.), and Ala. Code. § 41-22-5 (2000 Rplc. Vol.), as duly appointed members of the Environmental Management Commission, we do hereby adopt and promulgate these revisions to division 335-13 [335-13-1-.03/Definitions (Amend); 335-13-4-.12/Plans and Operational Reports (Amend); 335-13-4-.21/General Operational Standards for Landfill Units (Amend); 335-13-4-.22/Specific Requirements for Municipal Solid Waste Landfills (Amend); 335-13-4-.23/Specific Requirements for Inert-Construction/Demolition Landfills and Industrial Landfills (Amend); 335-

13-4-.27/Groundwater Monitoring and Corrective Action (Amend); 335-13-5-.02/Permit Application (Amend); 335-13-5-.03/Public Notice (Amend); 335-13-14-.07/Permitting Requirements (Amend); 335-13-15-.09/Permit Application (Amend)] of the Department's Land Division – Solid Waste Program rules, administrative code attached hereto, to become effective forty-five days, unless otherwise indicated, after filing with the Alabama Legislative Services Agency.

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

ADEM Admin. Code division 335-13 – Solid Waste Program

IN WITNESS WHEREOF, we have affixed our signatures below on this 21st day of June 2019.

APPROVED:

DISAPPROVED:

ABSTAINED:

This is to certify that this Resolution is a true and accurate account of the actions taken by the Environmental Management Commission on this 21st day of June 2019.

Samuel L. Miller, Chair
Environmental Management Commission
Certified this 21st day of June 2019

335-13-1-.03 Definitions. For the purpose of these rules and regulations, the following words and phrases shall have the meanings ascribed to them in this rule and as ascribed by law unless the context of the regulations indicate differently.

(1) Act - the "Solid Wastes and Recyclable Materials Management Act", Act No. 151, Regular Session 2008 as amended (formerly the "Solid Waste Disposal Act, Act No. 771 Regular Session, 1969, as amended by Act No. 2247 Regular Session, 1971) Code of Alabama 1975, § 22-27-1 et. seq.

(2) Active Life - the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with the applicable requirements of rule 335-13-4-.20.

(3) Active Portion (or Active Footprint) - that part of a facility or unit that has received, is receiving, or is authorized and maintained as capable to receive wastes, and that has not been closed in accordance with the applicable requirements of rule 335-13-4-.20.

(4) Adjacent Property Owner - an owner whose property is adjacent to a proposed site.

(5) Agency - any controlling agency, public or private, elected, appointed or volunteer utilizing methods approved by the Health Department or the Department for the purpose of controlling and supervising the collection or management of solid wastes or recyclable materials.

(6) Airport - public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(7) Ambient - normal atmospheric conditions.

(8) Annular Space of a Well - the space between the bore hole and the casing.

(9) Aquifer - a geologic formation, group of formations or part of a formation capable of yielding a significant amount of groundwater to wells, springs or waters of the State.

(10) Areas Susceptible To Mass Movement - those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the landfill unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

(11) Ashes - the solid residue from burning of wood, coal, coke or other combustible material used for heating, the burning or incineration of solid wastes, or for the production of electricity at electric generating plants.

(12) ASTM International - American Society for Testing and Materials International. A not-for-profit standards development company with headquarters located at 100 Barr Harbor Drive (PO Box C700) in West Conshohocken, Pennsylvania, 19428-2959, which develops and publishes technical standards for materials, products, systems, and services..

(13) Beach - for this definition, refer to Division 8 of the ADEM Administrative Code.

(14) Bird Hazard - an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

(15) Bladeable - the physical condition of a sludge or similar waste. Physical conditions include, but are not limited to, the absence of free liquids and of a consistency that can be easily managed by heavy equipment normally utilized at a landfill unit.

(16) Bore Hole - a man-made hole in a geological formation which has been drilled, jetted, driven or made by other similar techniques.

(17) CCR unit – any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

(18) Cell - a volume of compacted solid waste that is covered by means of compacted earth or some other approved alternative cover usually on a daily or weekly basis in a landfill unit.

(19) Certification - a statement of professional opinion based upon knowledge and belief.

(20) CFR - Code of Federal Regulations.

(21) Closure - the process by which a landfill unit permanently ceases to accept waste, to include those actions taken by the permittee or owner of the facility to prepare the site for post-closure monitoring and maintenance or to make it suitable for other uses.

(22) Coal Combustion By-products - fly ash, bottom ash, boiler slag, or flue gas emission control by-products which result primarily from the combustion of coal or other fossil fuels at electric generating plants.

(23) Coastal Area - for this definition, refer to Division 8 of the ADEM Administrative Code.

(24) Coastal Waters - those waters adjacent to the shoreline, which contain a measurable quantity or percentage of seawater, including but not limited to, sounds, bays, lagoons, bayous, ponds and estuaries.

(25) Commercial Solid Waste - all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

(26) Composite Liner - a system consisting of two components; the upper component must consist of a minimum 40 mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. FML components consisting of High Density Polyethylene (HDPE) shall be at least 60 mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.

(27) Composting or Compost Plant - an officially controlled method or operation whereby putrescible solid wastes are broken down through microbic action to a material offering no hazard or nuisance factors to public health or well-being.

(28) Construction/Demolition-Inert Landfill Unit (C/DLF) - a discrete area of land or an excavation that receives construction/demolition waste, and/or rubbish and/or water treatment (alum) sludge, foundry waste meeting rule 335-13-4-.26(3), and that is not a land application unit, surface impoundment, or injection well as those terms are defined in this rule.

(29) Construction/Demolition Waste - waste building materials, packaging, and rubble resulting from construction, remodeling, repair, or demolition operations on houses, commercial buildings, and other structures. Such wastes include, but are not limited to, masonry materials, sheet rock, roofing waste, insulation (not including asbestos), scrap metal, and wood products. Uncontaminated concrete, soil, brick, waste asphalt paving, ash resulting from the combustion of untreated wood, rock, and similar materials are excluded from this definition.

(30) Contingency Plan - a document setting out an organized, planned and coordinated course of action to be followed in case of a fire, explosion or release of solid waste which could threaten human health or the environment.

(31) Cover - soil or other suitable natural or manufactured material specifically marketed as such, or a combination of both, acceptable to the Department that is used to cover compacted solid waste in a landfill unit.

(32) Decontamination - a process of reducing or eliminating the presence of harmful substances, such as infectious agents, so as to reduce the likelihood of disease transmission from those substances.

(33) Department - the Alabama Department of Environmental Management as established by Code of Alabama 1975, § 22-22A-4.

(34) Destruction or Adverse Modification - a direct or indirect alteration of critical habitat which appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat.

(35) Director - the Director of the Alabama Department of Environmental Management, appointed pursuant to Code of Alabama 1975, § 22-22A-4, or his or her designee.

(36) Discarded Material - material thrown away, abandoned, disposed of, or otherwise given up without intent to reuse, recycle or reclaim.

(37) Discharge - the accidental or intentional spilling, leaking, pumping, emitting, emptying, or dumping of solid waste, including leachate, into or on any land or water.

(38) Disease Vector - an organism that is capable of transmitting a disease from one host to another.

(39) Displacement - the relative movement of any two sides of a fault measured in any direction.

(40) Disposal - the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that the waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including, but not limited to, ground-waters.

(41) Disposal Area – that portion of the facility that is designated for disposal, as defined in 335-13-1-.03.

(4~~1~~2) Drill Cuttings - solid materials generated by subsurface drilling operations.

(4~~3~~2) Dune - see definition of primary dune system.

(4~~4~~3) Endangered or Threatened Species - any species listed as such pursuant to Section 4 of the Endangered Species Act of 1973, as amended.

(4~~5~~4) Electric Generating Plants - an industrial site, or that portion of an industrial site, that produces electricity, to be used either on-site or off-site.

(4~~6~~5) Engineer - a person currently registered as a professional engineer with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors.

(4~~7~~6) Explosive Gas - a gas that is explosive under ordinary conditions as used herein generally refers to methane (CH_4).

(4~~8~~7) Facility - all contiguous land, structures and other appurtenances used for the processing, treatment, storage or disposal of solid waste, or the recovery of recyclable materials from solid waste, whether or not authorized or

permitted, including, but not limited to, waste disposal areas and waste disposed therein.

(498) Facility Structures - any buildings and sheds or utility or drainage lines on the facility.

(5049) Fault - a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(510) Financial Assurance - a financial arrangement by the owner or operator of a municipal solid waste landfill which guarantees the availability of funds which may be used to close, provide post-closure care, or conduct corrective action at that facility if the owner or operator fails to properly execute his or her responsibilities under this article and any rules promulgated by the Department for closure, post-closure care, or corrective action and the terms of any permit issued for operation of that facility.

(521) Floodplain - the lowland and relatively flat areas adjoining inland and coastal waters, including flood prone areas of offshore islands, which are inundated by the 100-year flood.

(532) Foundry Waste - waste, including but not limited to, slag, sand, baghouse dust, etc. generated from foundry smelting and metal casting processes.

(543) Free Liquids - liquids which readily separate from the solid portion of a waste under ambient temperature and pressure as determined by the Paint Filter Test referenced in USEPA Publication SW-846, Method 9095.

(554) Garbage - putrescible animal and vegetable waste resulting from the handling, preparation, cooking and consumption of food, including, but not limited to, waste from markets, storage facilities, handling and sale of produce and other food products and excepting such materials that may be serviced by garbage grinders and handled as household sewage.

(565) Gas Condensate - the liquid generated as a result of the gas collection and recovery process at the landfill unit.

(576) Generation - the act or process of producing solid waste. Solid waste shall be considered to be generated at the point that waste materials are first discarded or collected, regardless of any subsequent materials recovery or recycling.

(587) Generator - any person who utilizes any process or conducts any activity which results in the production of solid waste.

(598) Groundwater - water below the land surface in the zone of saturation.

(6059) Hazardous constituents – those substances listed in 335-14-2 Appendix VIII and/or 335-14-5 Appendix IX and include hazardous

constituents released from solid waste, hazardous waste, or hazardous waste constituents that are reaction by-products.

(610) Hazardous Waste - those wastes defined in, and regulated under, the Alabama Hazardous Wastes Management and Minimization Act of 1978, as amended.

(621) Health Department - an approved county or district health department, including the Alabama State Department of Public Health and the affected state and county health department.

(632) Health Officer - the State or affected county health officer or his or her designee.

(643) Holocene - the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch, at 11,700 years before present, to the present.

(654) Household Waste - any solid waste, including, but not limited to, garbage, trash, and sanitary waste in septic tanks derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas. Sanitary waste in septic tanks shall be considered as household waste only when it is disposed in a landfill or unauthorized dump and its inclusion as a household waste shall in no way prohibit or supersede the authority of the Department or the Health Department to regulate onsite sewage systems or the management of sanitary waste in septic tanks.

(665) Incinerator or Combustion Unit - a device designed to burn that portion of garbage and rubbish which will be consumed at temperatures generally ranging 1600 degrees Fahrenheit or over. The unburned residue from an incinerator, including metal, glass, and the like shall be called ashes.

(676) Industrial Landfill (ILF) Unit - a discrete area of land or an excavation that receives industrial solid waste and may in addition receive construction/demolition waste and/or rubbish and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this rule.

(687) Industrial Solid Waste - solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Chapters 22 to 30, inclusive, of Title 22, Code of Alabama 1975, and the regulations promulgated thereunder.

(698) Infectious Agent - any organism (such as a virus or a bacterium) that is capable of causing disease or adverse health impacts in humans by invasion and multiplication in body tissues, fluids or secretions.

(7069) Injection Well - a bored, drilled, or driven shaft or dug hole which is used for the injection of pollutants.

(71~~0~~) Innocent Landowner - an owner of real property upon which there is located an unauthorized dump and who meets all of the following conditions:

(a) The solid waste was disposed of on the property after the owner acquired title to the property or the waste was disposed of before the owner acquired title to the property and the owner lacked actual knowledge of the waste after conducting reasonable due diligence or title was acquired by bequest or devise.

(b) The owner did not have knowledge that the waste was being disposed of on the property or the owner took steps, including, but not limited to, posting signs to prevent disposal on the property.

(c) The owner did not participate in or consent to the disposal of solid waste on the property.

(d) The owner did not receive any financial benefit from the disposal of solid waste on the property.

(e) Title to the property was not transferred to the owner for the purpose of evading liability for operating an unauthorized dump.

(f) The person or persons responsible for disposing of the solid waste on the property, in doing so, was not acting as an agent for the owner.

(~~71~~72) Karst Terrains - areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

(73~~2~~) Land Application Unit - an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

(~~73~~74) Landfill (LF) - a method of compaction and earth cover of solid wastes other than those containing garbage or other putrescible wastes, including, but not limited to, tree limbs and stumps, demolition materials, incinerator residues, and like materials not constituting a health or nuisance hazard, where cover need not be applied on a per day used basis.

(75~~4~~) Landfill (LF) Unit - this term shall include MSWLF, C/DLF, ILF units.

(76~~5~~) Land Surveyor - a person currently registered as a land surveyor with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors.

(77~~6~~) Lateral Expansion - a horizontal expansion of the waste boundaries of an existing landfill unit.

(78) Leachate - any liquid, including any soluble, suspended or miscible components in the liquid, that has percolated through or emerged from solid waste other than construction/demolition waste and or rubbish.

(798) Leachate Recirculation - the recycling or reintroduction of leachate into or on a landfill unit constructed with liners and leachate collection systems.

(8079) Lift - the compacted vertical thickness of a horizontal series of cells which have been accumulated and covered with earth or some other approved alternative cover. The cover may be either daily, weekly, intermediate, or final as required.

(810) Liquid Waste - any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846), and is not considered bladeable.

(821) Lithified Earth Material - all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

(832) Lower Explosive Limit (LEL) - the lowest percent by volume of a mixture of explosive gases which will propagate a flame in air at 25°C and atmospheric pressure. For methane (CH_4) the LEL is considered to be 5 percent.

(843) Materials Recovery Facility - a solid waste management facility that provides for the extraction from solid waste of recyclable materials, materials suitable for use as a fuel or soil amendment, or any combination of those materials. A materials recovery facility shall be deemed to be a solid waste treatment facility.

(854) Maximum Contaminant Level (MCL) – the maximum permissible level of a contaminant allowed in the saturated zone unless occurring naturally or found to already exist during background sampling.

(865) Maximum Horizontal Acceleration in Lithified Earth Material - the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

(876) Medical Waste - any infectious solid or liquid waste from a medical waste generator, as defined in chapter 335-17-1.

(887) Municipal Solid Waste Landfill (MSWLF) Unit - a discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile. A municipal

solid waste landfill may also receive other types of solid wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste, industrial solid waste, construction/demolition waste, and rubbish. A municipal solid waste landfill is a sanitary landfill. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion.

(8~~9~~8) Off-site - not a part of what is defined as on-site.

(9089) On-site - the same or geographically contiguous property which may be divided by public or private right-of-way. Non-contiguous properties owned by the same person or entity connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

(9~~1~~0) One Hundred Year Flood - a flood that has a one percent or greater chance of recurring in any given year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period.

(9~~2~~1) Open Burning - the combustion of any material without the following characteristics:

(a) Control of combustion air to maintain adequate temperature for efficient combustion.

(b) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and

(c) Control of emission of the gaseous combustion products.

(9~~3~~2) Operating Record - a collection of documents relating to the permitting or operation of any landfill unit as listed in rule 335-13-4-.29.

(9~~4~~3) Operator - the person(s) having direct supervision over and responsibility for the daily operation of a landfill unit or part of a landfill unit.

(9~~5~~4) Owner - the person(s) who owns a facility or part of a facility.

(9~~6~~5) Partial Closure - the closure of a discrete part of a facility in accordance with the applicable closure requirements of rule 335-13-4-.20. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell or a pit, while other parts of the same facility continue in operation or will be placed in operation in the future.

(9~~7~~6) Permit - written authorization granted to a person by the Department to operate a solid waste management facility for the disposal of solid waste.

(9~~8~~7) Permittee - any person possessing a valid permit issued by the Department to dispose of solid waste. This person is responsible for the overall operation of a solid waste facility.

(9~~8~~) Person - any individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, agent, agency, association, State, municipality, commission, political subdivision of a state, any interstate body, or any other private or public legal entity.

(100~~99~~) Personnel - all persons who work at or supervise the operations of a solid waste facility, and whose actions or inactions may responsible for achieving compliance with the requirements of this Division.

(101~~0~~) Petroleum Contaminated Waste (PCW) - any material, including but not limited to soil, debris, absorbent pads/booms, oil dry, etc., that has been exposed to petroleum products in such a manner that the petroleum product can be detected by a total petroleum hydrocarbon (TPH) analysis using Standard Method 503 D & E, EPA Methods 9071 or 418.1 (Spectrophotometric, Infrared), and that analysis exceeds 100 ppm TPH.

(102~~1~~) Poor Foundation Conditions - those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of a landfill unit.

(10~~2~~3) Post Closure - the activities, including monitoring and maintenance at the site, following completion of closure activities if solid waste will remain at the site after closure.

(10~~3~~4) Practice - any operating method, technique or procedure for the management of solid waste.

(105~~4~~) Primary Dune System - for this definition, refer to Division 8 of the ADEM Administrative Code.

(106~~5~~) Private Solid Waste Management Facility - a solid waste management facility that is operated exclusively by and for a private solid waste generator for the purpose of accepting solid waste generated on-site or by the permittee.

(107~~6~~) Product - any material which is an intended output or result of a fabrication, manufacturing or production process, and is sold and distributed in the stream of commerce for consumption, use, or further processing into another desired commodity. A product must be managed as an item of value in a controlled manner and is not to be managed as a discarded material.

(108~~7~~) Proposed Site - total acreage as identified by the legal survey included in the application submitted to the Department.

(109~~8~~) Public Solid Waste Management Facility - a solid waste management facility that accepts solid waste from the public generally or for a fee, or any solid waste management facility that is not a private solid waste management facility.

(110~~09~~) Qualified Groundwater Scientist - a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective-action.

(111~~0~~) Recovered Materials - those materials which have known recycling potential; which can be feasibly recycled; which have been diverted or removed from the solid waste stream for recycling, whether or not requiring subsequent separation and processing; and which have a substantial portion that are consistently used in the manufacture of products which may otherwise be produced from raw or virgin materials. Recovered materials shall not include solvents or materials, except sawdust, bark, and paper materials that are destined for incineration, energy recovery, or any use which constitutes disposal. Recovered materials shall only be those materials for which during the calendar year (commencing on January 1), the amount of material recycled or diverted from the solid waste stream for recycling and transferred to a different site for recycling equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period.

(112~~1~~) Recovered Materials Processing Facility - a facility primarily engaged in the storage, processing, and resale or reuse of recovered materials. A recovered materials processing facility is not a solid waste management facility; however, any solid waste resulting from the operation of a facility shall be subject to all applicable laws and regulations relating to solid waste and shall be deemed to be generated for purposes of reporting pursuant to solid waste reduction goals, at the point of collection of the recovered materials from which the solid waste resulted.

(113~~2~~) Recyclable Materials - those materials which are capable of being recycled, whether or not the materials have been diverted or removed from the solid waste stream.

(114~~3~~) Recycling - any process by which materials are collected, separated, stored, recovered, or processed and reused or returned to use in the form of raw materials or products, but does not include the use of materials as a fuel, or for any use which constitutes disposal.

(115~~4~~) Relevant Point of Compliance - that point within the first saturated zone at which groundwater quality must be in compliance with water quality standards set forth by rule 335-13-4-.27. Groundwater monitoring wells are to be located in order to yield samples that are representative of the quality of groundwater passing the relative point of compliance.

(116~~5~~) Representative Sample - a sample of a universe or whole (e.g., waste pile, lagoon, and groundwater) which can be expected to exhibit the average properties of the universe or whole. See EPA publication SW-846, Test Methods

for Evaluating Solid Waste, Physical/Chemical Methods, Chapter 9 for a discussion and examples of representative samples.

(1176) Rubbish - nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600 degree F. Uncontaminated concrete, soil, brick, waste asphalt paving, ash resulting from the combustion of untreated wood, rock, yard trimmings, leaves, stumps, limbs and similar materials are excluded from this definition.

(1187) Run-Off - any rainwater, leachate, or other liquid that drains over land from any part of a facility.

(1198) Run-On - any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

(12019) Salvaging - the controlled removal for reuse of material from a solid waste landfill unit.

(1210) Sanitary Landfill - a controlled area of land upon which solid waste is deposited and is compacted and covered with compacted earth each day as deposited, with no on-site burning of wastes, and so located, contoured and drained that it will not constitute a source of water pollution as determined by the Department. See definition of "Municipal Solid Waste Landfill Unit."

(1221) Sanitary Sewer - any device or system used in the treatment of municipal sewage or industrial waste of a liquid nature. This includes sewers, pipes or other conveyances only if they convey wastewater to a facility providing treatment.

(1232) Saturated Zone - that part of the earth's crust in which all voids are filled with water.

(1243) Scavenging - the unauthorized removal of solid waste from a landfill unit permitted under these regulations.

(1254) Seismic Impact Zone - an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 250 years.

(1265) Service Area - the geographical area serviced by a solid waste facility from which solid waste is generated and collected, including any interim points, (i.e., transfer stations) at which the solid waste is repacked or reloaded onto vehicles or other methods of transport for delivery to that facility. For public solid waste management facilities, the service area is established as part of the local

host government approval process, as described in Code of Alabama 1975, §22-27-48 and 48.1.

(127~~6~~) Sludge - any nonhazardous, solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

(127~~8~~) Solid Waste - any garbage, rubbish, construction or demolition debris, ash, or sludge from a waste treatment facility, water supply plant, or air pollution control facility, and any other discarded materials, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, or agricultural operations or community activities, or materials intended for or capable of recycling, but which have not been diverted or removed from the solid waste stream. The term "solid waste" does not include recovered materials, solid or dissolved materials in domestic sewage, solid or dissolved material in irrigation return flows, or industrial discharges which are point sources subject to the National Pollutant Discharge Elimination System permits under the Federal Water Pollution Control Act, as amended, or the Alabama Water Pollution Control Act, as amended, or source, special, nuclear, or by-product materials as defined by the Atomic Energy Act of 1954, as amended. Also excluded from this definition are land applications of crop residues, animal manure, and ash resulting exclusively from the combustion of wood during accepted agricultural operations, waste from silvicultural operations, or refuse as defined and regulated pursuant to the Alabama Surface Mining Act of 1969 (Article 1, Chapter 16, Title 9, Sections 9-16-1 to 9-16-15, Code of Alabama 1975).

(129~~8~~) Solid Waste Boundary - the outermost perimeter of the solid waste, projected in the horizontal plane, as it would exist at completion of the disposal activity.

(1302~~9~~) Solid Waste Disposal Facility - any landfill or part of a facility where final disposition of solid waste occurs and at which waste may remain after closure.

(131~~0~~) Solid Waste Management - the systematic control of solid waste including its storage, processing, treatment, recovery of materials from solid waste, or disposal.

(132~~1~~) Solid Waste Management Facility - any solid waste volume reduction plant, transfer station, material recovery facility, or other facility, the purpose of which is the storage, treatment, utilization, processing, disposal, or recovery of materials from solid waste, or any combination thereof.

(133~~2~~) Special Waste - those wastes requiring specific processing, handling or disposal techniques as determined necessary by the Department which are different from the techniques normally utilized for handling or disposal. Examples of such waste types may include, but are not limited to: mining waste, fly ash, bottom ash, sludges, friable asbestos, industrial waste, liquid waste, large

dead animals or large quantities of dead animals and residue, medical waste, foundry waste, petroleum contaminated wastes, municipal solid waste ash, or contaminated soil and water from the cleanup of a spill.

(13~~43~~) Spill - the unplanned, accidental or unpermitted discharge, deposit, injection, leaking, pumping, pouring, emitting, dumping, placing or releasing of solid or medical waste, or materials which when spilled become solid or medical waste, into or on the land, the air or the water.

(13~~54~~) State - the State of Alabama.

(13~~65~~) State Health Department - the Alabama Department of Public Health as defined by § 22-1-1, Code of Alabama 1975.

(13~~76~~) State Health Officer - the Health Officer for the State of Alabama as set out in § 22-2-8, Code of Alabama 1975, or his or her designee provided by law.

(13~~87~~) Structural Components - liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the landfill unit that is necessary for protection of human health and the environment.

(13~~98~~) Surface Impoundment or Impoundment - a facility or part of a facility that is a natural topographic depression, human-made excavation, or diked area formed primarily of earthen materials (although it may be lined with human-made materials), that is designed to hold an accumulation of liquid wastes or wastes containing free liquids and that is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds and lagoons.

(14~~039~~) Twenty-Four Hour, Twenty-Five Year Storm (24 hour, 25 year Storm) - the maximum 24 hour precipitation event with a probable reoccurrence interval of once in twenty-five years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U. S.", May 1961, and subsequent amendments or equivalent regional or rainfall probability information developed therefrom.

(14~~10~~) Unauthorized Dump - any collection of solid wastes either dumped or caused to be dumped or placed on any public or private property, whether or not regularly used, and not having a permit from the Department. Abandoned automobiles, large appliances or similar large items of solid waste shall be considered as forming an unauthorized dump within the meaning of this Division. The careless littering of a relatively few, smaller individual items such as tires, bottles, cans and the like shall not be considered an unauthorized dump, unless the accumulation of the solid waste poses a threat to human health or the environment. An unauthorized dump shall also mean any solid waste disposal site which does not meet the regulatory provisions of this Division.

(1421) Unstable Area - a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

(1432) Uppermost Aquifer - the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

(1443) Washout - the carrying away of solid waste or earth cover by waters of the base flood.

(1454) Waste Management Unit Boundary - a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.

(1465) Waste Pile or Pile - any noncontainerized accumulation of solid, non-flowing waste that is used for treatment or storage.

(1476) Waters of the State (Waters) - all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce.

(1487) Wetlands - those areas as defined by the U.S. Army Corps of Engineers regulations.

(1498) Wood Ash Waste – solid waste resulting from the burning of untreated wood with minimal amounts (<10% of total fuel based on a mass input basis) of other non-coal permitted solid fuels. Ash resulting exclusively from the combustion of non-processed and untreated wood is excluded from the definition of wood ash waste.

Author: Russell A. Kelly; Phillip D. Davis; James L. Bryant, Eric L. Sanderson, S. Scott Story, Heather M. Jones.
Statutory Authority: Code of Alabama 1975, §§ 22-27-2, 22-27-7, 22-27-9, and 22-27-12.
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335-13-4-.12 Plans and Operational Reports.

(1) Compliance. Plans and operational reports for construction, operation, maintenance, closure, and post-closure care of landfill units shall be prepared and kept on site and shall comply with 335-13-5-.02(1) and this chapter.

(2) Plan Requirements. These plans and reports shall include the following as determined necessary by the Department:

(a) Sufficient control points on-site to provide for accurate horizontal and vertical control for facility construction, operation and closure and post-closure.

(b) Detail presentation of geological and hydrogeological units in the disposal site, with typical sections of disposal method and plan and profile sheets on all areas or trenches.

(c) Boundary plat and legal property description prepared, signed, and sealed by a land surveyor of the proposed boundary of the facility and disposal area of the facility.

(d) Initial and final topographical maps at contour intervals of five feet or as otherwise specified by the Department.

(e) Existing and proposed surface drainage pattern to include control structures designed to handle run-on and run-off. Design calculations for sediment control basins, etc. should be provided.

(f) Buffer zones, screening and other aesthetic control measures. Buffer zones around the perimeter of the landfill unit shall be a minimum of 100 feet in width measured in a horizontal plane. No disposal or storage practices for waste shall take place in the buffer zone. Roads, access control measures, earth storage, and buildings may be placed in the buffer zone.

(g) Details of plans for ~~temporary and~~ permanent all weather access roads.

(h) A summary of 335-13-4-.01 standards and conclusions of action to be taken and implemented into facility design.

(i) Location of any areas of the facility used for disposal of solid wastes.

(j) Presentation of special engineering features or considerations which must be included or maintained in facility construction, operation, maintenance and closure. Items required in 335-13-4-.12 through 335-13-4-.20 shall be included.

(k) Quality assurance/quality control (QA/QC) plan for all components of the liner, leachate collection, and cap systems.

(l) Location of all explosive gas wells and/or monitoring points.

Author: Russell A. Kelly; S. Scott Story.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.

History: Effective: November 18, 1981. **Amended:** Effective: July 21, 1988; **Amended:** Effective: November 2, 1993; **Amended:** Effective: July 26, 1996; **Amended:** Filed: April 24, 2018 Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-4-.21 General Operational Standards for Landfill Units. Any person or agency operating or planning to operate a landfill unit shall operate and maintain the facility consistent with this Division. General requirements for operating and maintaining an acceptable landfill unit shall be:

(1) General Operation.

(a) The operation and use of the landfill unit shall be as stipulated in the permit.

(b) Waste accepted at the facility shall be strictly controlled so as to allow only waste stipulated on the permit or otherwise as may be approved by the Department. The permittee of any facility permitted under these rules must have in the operating record a plan describing procedures the permittee will implement for detecting and preventing the disposal of free liquids, regulated hazardous wastes, regulated medical wastes, and regulated PCB wastes at the facility. This plan must include at a minimum:

1. Random inspections of incoming loads to ensure that incoming loads do not contain free liquids, regulated hazardous wastes, regulated medical wastes, or regulated PCB wastes.

2. Inspection of suspicious loads.

3. Records of all inspections to include the origin of waste suspected to be regulated hazardous, regulated medical, or regulated PCB waste, if known; transporters, to include transfer stations and all handlers of the waste en route to the disposal site; and any certifications from generators provided to the permittee or facility personnel. These records must be maintained on file in the operating record of the facility.

4. Training of facility personnel to recognize free liquids, regulated hazardous wastes, regulated medical wastes, and regulated PCB wastes.

5. Procedures for notifying the proper authorities if free liquids, regulated hazardous wastes, regulated medical wastes, or regulated PCB wastes are discovered at the facility.

6. Methods to identify all industrial users of the facility, producers of special wastes, and transporters of these wastes.

(c) Prior to disposal of industrial waste and/or medical waste, the permittee shall obtain from each generator a written certification that the material to be disposed does not contain free liquids, regulated hazardous wastes, regulated medical wastes, or regulated PCB wastes.

1. This certification may be based on laboratory analysis of the waste on a case-by-case basis, or documentation supporting the generator's knowledge of the wastestream(s), or as may be required by the Department.

2. Copies of the certification shall be submitted to the Department for disposal approval and for any specific requirements prior to disposal. After submittal of the required certification, the Department shall have five (5) working days to respond. If no response is given, the permittee may dispose of the material as proposed.

3. In the case of one-time emergency disposal requests, the permittee shall submit the required certification no later than five (5) days after the disposal of waste.

4. Certification shall be renewed or revised biennially (every two years) or at such time that operational changes at the point of generation could render the waste hazardous, whichever is more frequent and submitted to the Department for approval.

5. Copies of these certifications and approvals shall be maintained on file in the operating record of the facility and shall be made available for the Department upon request.

6. The above requirements notwithstanding and, as may otherwise be required, pursuant to Division 13 rules, generators will not be required to submit certification to the Department provided that:

(i) The waste will be disposed of at a non-commercial industrial waste landfill which has been permitted by the Department, and is owned either exclusively or mutually by the generator(s) of the waste, and which disposes of waste generated only by the owner(s);

(ii) The wastestream(s) to be disposed of are specifically described in the Solid Waste Landfill Permit issued by the Department or in the final application as referenced by the permit for the site designated to receive the waste;

(iii) The required certification, as described above, is maintained on-site by the owner(s) of the landfill; and

(iv) The required certification, as described above, is made available for inspection by the Department upon request.

(d) The landfill unit shall be operated in such a manner that there will be no water pollution or unauthorized discharge.

1. Any discharge resulting from a landfill unit or practice may require:

(i) A National Pollutant Discharge Elimination System (NPDES) permit under the Alabama Water Pollution Control Act as issued by the Department.

(ii) A dredge or fill permit from the Army Corps of Engineers as required under Section 404 of the Clean Water Act, as amended; or

(iii) That a non-point source of surface waters does not violate an area wide or statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.

2. The groundwater shall not be contaminated as specified by this Division.

(e) The ~~facility~~historic and certified disposal areas shall be identified with a sufficient number of permanent markers which are at least visible from one marker to the next.

(f) Measuring or weighing devices shall be required for all municipal solid waste landfill units accepting solid waste. All solid waste shall be properly measured or weighed prior to disposal unless otherwise approved by the Department.

(g) Deep rooted vegetation (with roots that may grow below the six inch erosion layer) shall be prohibited as vegetative cover.

(2) Open Burning.

(a) Open burning of solid waste at any landfill unit is prohibited unless approved by the Department as follows:

1. Clearing debris at the landfill unit such as trees and stumps may be burned if prior approval is received from the Department and the Alabama Forestry Commission.

2. Emergency clean-up debris resulting from catastrophic incidents may be burned at a permitted landfill unit if consistent with the intent of this Division and air pollution control requirements. Prior approval must be received from this Department and other appropriate agencies.

3. If approved, the burning shall not occur over previously filled areas or within 200 feet of existing disposal operations unless otherwise specified by the Department and such burning shall not cause a public nuisance or pose a threat to public health.

(b) The person or agency requesting permission to burn solid waste shall apply in writing to the Department, outlining why a burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation.

Author: Russell A. Kelly; S. Scott Story; Heather M. Jones.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-4, 22-27-7, 22-27-47, 22-27-48.
History: Effective: November 18, 1981. **Amended:** Effective: March 31, 1988 (Emergency Regulations). **Amended:** Effective: July 21, 1988. **Amended:** Effective: October 2, 1990. **Amended:** Effective: November 2, 1993. **Amended:** Effective: July 26, 1996. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-4-.22 Specific Requirements for Municipal Solid Waste Landfills. The following requirements in conjunction with 335-13-4-.21 shall be for operating and maintaining an acceptable MSWLF:

(1) Daily Operation.

(a) All waste shall be covered as follows:

1. A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each day's operation or as otherwise approved by the Department to control disease vectors, fires, odors, blowing litter, and scavenging.

2. In the event that erosion develops on previously covered disposal areas, or when covered waste otherwise becomes exposed, cover must be re-applied to comply with the minimum cover requirements of subparagraph (1)(a)1. of this section.

3. Final closure shall be carried out in accordance with rule 335-13-4-.20 of this Division.

(b) All waste shall be confined to as small an area as possible and spread to a depth not exceeding two feet prior to compaction, and such compaction shall be accomplished on a face slope not to exceed 4 to 1 (25%) or as otherwise approved by the Department.

(c) All waste shall be thoroughly compacted with adequate landfill equipment before the daily cover is applied. A completed daily cell shall not exceed eight feet in vertical thickness measured perpendicular to the slope of the preceding cell.

(d) The site shall be operated in accordance with approved plans and permits.

(e) Adequate personnel shall be provided to ensure continued and smooth operation of the facility.

(f) Adequate equipment shall be provided to ensure continued operation in accordance with permit and regulations.

(g) Provisions shall be made for disposal activities in adverse weather conditions.

(h) The site shall be adequately secured using artificial barriers, natural barriers, or both to prevent entry of unauthorized vehicular traffic.

(i) A sign outlining instructions for use of the site shall be posted at the entrance and shall include:

1. Name of facility,

2. Name of permittee and/or operating agency or person,

3. Days and hours of operation,

4. Disposal fees, and

5. Types of waste accepted if the site is available to the general public or commercial haulers.

(j) Special provisions shall be made for handling large dead animals or highly putrescible waste. Immediately covering the waste with a minimum of 12 inches of cover in a designated area of the facility shall be included in these provisions.

(k) Bulk or noncontainerized liquid waste, or containers capable of holding liquids, shall not be accepted at a landfill unit unless:

1. The liquid is household waste other than septic waste;

2. The liquid is leachate or gas condensate derived from the MSWLF unit, and the MSWLF unit is designed with a minimum composite liner and leachate collection system or approved equivalent liner and leachate collection system; or

3. The containers:

(i) Are similar in size to that normally found in household waste;

(ii) Are designed to hold liquids for use other than storage; or

(iii) Contain household wastes.

(l) Empty containers larger in size than normally found in household waste must be rendered unsuitable for holding liquids prior to disposal in the landfill unit unless otherwise approved by the Department.

(m) MSWLF units containing sewage sludge and failing to satisfy the criteria in this Division violate Sections 309 and 405(e) of the Clean Water Act.

(2) Routine Maintenance.

(a) Scavenging shall be prohibited and salvaging operations shall be controlled.

(b) Litter shall be controlled within the permitted facility.

(c) An all-weather access road shall be provided to the dumping face.

(d) Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by the Department or the State Health Department, additional disease vector control measures shall be conducted.

(e) Environmental monitoring and treatment structures shall be clearly marked and identified, protected and maintained in good repair and shall be easily accessible.

(f) Completed sites or portions of sites shall be properly closed as provided by this Division and approved facility plans.

(g) Records shall be maintained on the daily volume of waste received at MSWLFs. A quarterly report utilizing a format approved by the Department which

summarizes the daily volumes shall be submitted to the Department and maintained on file in the operating record of the facility by the permittee.

(3) Additional Requirements.

(a) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.

(b) Notwithstanding this rule, additional requirements for operating and maintaining a MSWLF may be imposed by the Department, as deemed necessary, to comply with the Act and this Division.

Author: Russell A. Kelly; S. Scott Story; Heather M. Jones.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: Effective: November 18, 1981. **Amended:** Effective: July 21, 1988. **Amended:** Effective: October 2, 1990. **Amended:** Effective: November 2, 1993. **Amended:** Effective: July 26, 1996. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-4-.23 Specific Requirements for Inert- Construction/Demolition Landfills and Industrial Landfills. The following requirements in conjunction with 335-13-4-.21 shall be for operating and maintaining an acceptable C/DLF or ILF:

(1) Operation.

(a) All waste shall be covered as follows:

1. A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each week's operation or as otherwise specified by the Department to control disease vectors, fires, odors, blown litter and scavenging.

2. In the event that erosion develops on previously covered disposal areas, or when covered waste otherwise becomes exposed, cover must be re-applied to comply with the minimum cover requirements of subparagraph (1)(a)1. of this section.

3. Final closure shall be carried out in accordance with 335-13-4-.20 of this Division.

(b) All waste shall be thoroughly spread in layers two feet or less in thickness and thoroughly compacted weekly with adequate landfill equipment prior to placing additional layers of waste or placing the weekly cover as specified in 335-13-4-.23(1)(a)1., unless otherwise approved by the Department. Waste, such as construction/demolition waste and other types of waste, which cannot be managed by landfill equipment in this manner shall be managed in a manner approved by the Department.

(c) All waste shall be confined to as small an area as possible and placed onto an appropriate slope not to exceed 4 to 1 (25%) or as approved by the Department.

(d) The facility shall be operated in accordance with approved plans and permits.

(e) The site shall be adequately secured to prevent entry except by authorized person(s) unless an operator is on site.

(f) If the site is available to the public or commercial haulers, a sign shall be posted at the landfill stating:

1. Name of permittee,

2. Owner and/or operator,

3. Name of landfill,

4. Days and hours of operation,

5. Waste types accepted, and

6. Disposal fees for use of the landfill.

(g) Provisions shall be made for disposal activities in adverse weather conditions.

(h) Adequate personnel shall be provided to ensure continued and smooth operation of the site.

(i) Adequate equipment shall be provided to ensure continued operation in accordance with permit and regulations.

(j) Bulk or non-containerized liquid waste, or containers capable of holding liquids, shall not be accepted at a C/DLF or ILF unless:

1. The liquid is leachate or gas condensate derived from the C/DLF or ILF unit, and

2. The C/DLF or ILF unit is designed with a minimum single liner and leachate collection system or approved equivalent liner and leachate collection system.

(k) Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to disposal in the landfill unit unless otherwise approved by the Department.

(2) Routine Maintenance.

(a) Scavenging shall not be permitted, and salvaging operations shall be controlled.

(b) Litter shall be controlled within the permitted facility.

(c) Completed sites or portions of sites shall be properly closed as provided by this Division and approved facility plans.

(d) An all-weather access road shall be provided to the dumping face.

(e) Environmental monitoring and treatment structures shall be protected and maintained in good repair and easily accessible.

(f) Records shall be maintained on the daily volume of waste received at C/DLFs and ILFs. A quarterly report utilizing a format approved by the Department which summarizes the daily volumes shall be submitted to the Department and maintained on file in the operating record of the facility by the permittee.

(g) Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by the Department or the State Health Department, additional disease vector control measures shall be conducted.

(3) Additional Requirements.

(a) Notwithstanding this rule, certain requirements for operating and maintaining a C/DLF or ILF may be enhanced or reduced by the Department as deemed necessary to comply with the Act and this Division. Any action by the Department to enhance or reduce the requirement(s) must be done in writing from the Department.

(b) [Reserved]

(c) Industrial landfills which accept coal combustion residuals must also adhere to the applicable requirements of ADEM Admin. Code 335-13-15.

Author: Russell A. Kelly, Eric L. Sanderson; Heather M. Jones.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: Effective: November 18, 1981. **Amended:** Effective: July 21, 1988. **Amended:** Effective: October 2, 1990. **Amended:** Effective: November 2, 1993. **Amended:** Effective: July 26, 1996. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-4-.27 Groundwater Monitoring and Corrective Action. The requirements for groundwater monitoring and corrective action at MSWLFs, C/DLFs, and ILFs are presented in the following paragraphs:

(1) Applicability.

(a) The requirements in this rule shall apply to all MSWLF units and, when determined necessary by the Department to protect public health and the environment, the requirements in this rule or any part thereof shall apply to C/DLF units and/or ILF units, except as provided in subparagraph (b) of this paragraph.

(b) Groundwater monitoring requirements under paragraphs (2) through (4) of this rule may be suspended by the Department for a LF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that LF unit to the first saturated zone, as defined in 335-13-1-.03, during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified groundwater scientist, as defined in 335-13-1-.03, and approved by the Department, and must be based upon:

1. Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and

2. Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.

(c) Owners and operators of LF units must comply with the groundwater monitoring requirements of this rule according to the following schedule.

1. All LF units must be in compliance with the groundwater monitoring requirements specified in paragraphs (2) through (4) of this rule.

2. New LF units must be in compliance with the groundwater monitoring requirements specified in paragraphs (2) through (4) of this rule before waste can be placed in the unit.

(d) Once established at a LF unit, groundwater monitoring shall be conducted throughout the active life and post-closure care period of that LF unit as specified in 335-13-4-.20.

(e) The Department may establish alternative schedules for demonstrating compliance with Department notification (and placement of notification in operating record) requirements of this rule.

(2) Groundwater Monitoring Requirements.

(a) A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the first saturated zone (as defined in 335-13-1-.03~~(12)~~) that:

1. Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include

sampling of wells that are not hydraulically upgradient of the waste management area where:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

(ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

2. Represent the quality of groundwater passing the relevant point of compliance specified by the Department under subparagraph (a)3. of this paragraph.

(i) The downgradient monitoring system must be installed at the relevant point of compliance specified by the Department under subparagraph (a)3. of this paragraph that ensures detection of groundwater contamination in the first saturated zone.

(ii) When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Department under subparagraph (a)3. of this paragraph that ensures detection of groundwater contamination in the uppermost aquifer.

3. The relevant point of compliance shall be no more than 150 meters (492 feet) from the waste management unit boundary and shall be located on land owned by the owner of the landfill unit. In determining the relevant point of compliance, the following factors shall be considered, at a minimum:

(i) The hydrogeologic characteristics of the facility and surrounding land;

(ii) The volume and physical and chemical characteristics of the leachate;

(iii) The quantity, quality, and direction of groundwater flow;

(iv) The proximity and withdrawal rate of the groundwater users;

(v) The availability of alternative drinking water supplies;

(vi) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;

(vii) Public health, safety, and welfare effects; and

(viii) Practicable capability of the owner or operator.

(b) The Department may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of subparagraph (a) of this paragraph and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit. This approval will be based on the following factors:

1. Number, spacing, and orientation of the MSWLF units;

2. Hydrogeologic setting;

3. Site history;

4. Engineering design of the MSWLF units; and

5. Type of waste accepted at the MSWLF units.

(c) Well design and construction

1. Groundwater monitoring wells shall be designed and constructed in accordance with the following reference: "Design and Installation of Groundwater Monitoring Wells in Aquifers", ASTM Subcommittee D18.21 on Groundwater Monitoring, or otherwise as specifically approved by the Department.

2. Plans for groundwater monitoring well location, design, construction and/or abandonment shall be submitted to the Department for review and approval prior to installation.

3. The monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole.

(i) This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples.

(ii) The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

4. The owner or operator must notify the Department that the design, installation, development, and/or abandonment of any monitoring wells, piezometers and other measurement, sampling, and analytical devices has been documented and placed in the operating record; and

(d) Monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(e) Abandoned wells and bore holes shall be abandoned in accordance with the following procedures in order to prevent contamination of groundwater resources. A plan of abandonment must be submitted and approved by the Department prior to implementing abandonment of any well.

1. A well shall be measured for depth prior to sealing to ensure that it is free from any obstructions that may interfere with sealing operations.

2. Where feasible, wells shall be completely filled with neat cement. If the well cannot be completely filled, the sealing materials for the top 20 feet must be neat cement and no material that could impart taste, odor, or toxic components to water may be used in the sealing process.

3. Liner pipe shall be removed from each well in order to ensure placement of an effective seal. If the liner pipe cannot be readily removed, it shall be perforated to ensure that proper sealing is obtained.

4. Concrete, cement grout, or neat cement shall be used as primary sealing materials and shall be placed from the bottom upwards using methods that will avoid segregation or dilution of material.

5. Complete, accurate records of the abandonment procedure shall be kept for each well abandoned. The record of abandonment shall include, at a minimum, the depth of each layer of all sealing and backfilling materials, the quantity of sealing materials used, measurements of static water levels and depths, and any changes made in the well during the sealing. A copy of these records shall be submitted to the Department and a copy placed in the operating record.

(f) The number, spacing, and depths of monitoring systems shall be:

1. Determined based upon site-specific technical information that must include thorough characterization of:

(i) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

(ii) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to: thickness, stratigraphy, lithology, hydraulic conductivity, porosity and effective porosity.

2. Certified by a qualified groundwater scientist and approved by the Department. Within 14 days of the Department's approval, the owner or operator must notify the Department that the certification has been placed in the operating record.

(g) The groundwater monitoring program must include consistent sampling and analytical methods that are:

1. Designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells which have been installed in compliance with subparagraph (a) of this paragraph.

(i) The groundwater monitoring program, and subsequent documentation, must be submitted to the Department for approval and appropriate copies placed in the operating record.

(ii) The program must include procedures and techniques for:

(I) Sample collection;

(II) Sample preservation and shipment;

(III) Analytical procedures;

(IV) Chain of custody control; and

(V) Quality assurance and quality control.

2. Appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples.

(h) Groundwater samples shall not be field-filtered prior to laboratory analysis.

(i) The sampling procedures and frequency must be protective of human health and the environment.

1. Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled.

2. Groundwater elevations in wells which monitor the same waste management area must be measured within a 48 hour period to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

3. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled.

(j) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the LF unit, as determined under subparagraphs (3)(a) or (4)(a) of this rule. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the LF unit if it meets the requirements of subparagraph (a)1. of this paragraph.

(k) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to subparagraph (l) of this paragraph. The sampling procedures shall be those specified under subparagraph (3)(b) of this rule for detection monitoring, subparagraphs (4)(b) and (4)(d) of this rule for assessment monitoring, and subparagraph (5)(b) of this rule for corrective action.

(l) The owner or operator must specify in writing to the Department and place in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.

1. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

2. An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

3. A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

4. A control chart approach that gives control limits for each constituent.

5. Another statistical test method that meets the performance standards of subparagraph (m) of this paragraph. The owner or operator must place a justification for this alternative in the operating record and submit it to the Department for approval to use this alternative test. The justification must demonstrate that the alternative method meets the performance standards of subparagraph (m) of this paragraph.

(m) Any statistical method chosen under subparagraph (l) of this paragraph shall comply with the following performance standards, as appropriate:

1. The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

2. If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

3. If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

4. If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

5. The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

6. If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability, as well as temporal correlation in the data.

(n) The owner or operator must determine and certify in writing to the Department if there is a statistically significant increase (SSI) over background values for each parameter or constituent required in the groundwater monitoring program.

1. In determining whether an SSI has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well to the background value of that constituent, according to the statistical procedures and performance standards specified under this rule.

2. Within 30 days after completing sampling and receiving analytical results, the owner or operator must determine whether there has been an SSI over background at each monitoring well.

3. If an SSI over background groundwater quality is detected, the owner/operator must notify the Department within 14 days of this event.

(3) Detection Monitoring.

(a) Detection monitoring is required at LF units for all groundwater monitoring wells defined under subparagraphs (2)(a)1.(i) and (ii) of this rule.

1. At a minimum, a detection monitoring program for MSWLF units must include monitoring for the constituents listed in Appendix I of this ~~C~~chapter.

2. Detection monitoring programs for C/DLFs or ILFs ~~must~~ may include monitoring for constituents listed in Appendix I of this chapter, or an alternative list, as specified by the Department.

3. The Department may delete any of the detection monitoring parameters for a LF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.

4. The Department may establish an alternative list of indicator parameters for a MSWLF unit, in addition to the Appendix I constituents, if the additional parameters provide a reliable indication of releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Department shall consider the following factors:

(i) The types, quantities, and concentrations of constituents in waste managed at the ~~MSW~~LF[JHM1] unit;

(ii) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the ~~MSW~~LF unit;

(iii) The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and

(iv) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(b) Frequency.

1. The monitoring frequency for all constituents listed in Appendix I, or in the alternative list approved in accordance with subparagraph (a)4. of this paragraph, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. The owner or operator must submit a semi-annual report to the Department to coincide with and report the results of the semi-annual sampling event within ninety (90) days of the date of sampling. The report shall be certified by a qualified groundwater scientist.

(i) A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with subparagraph (a) of this paragraph, during the first semiannual sampling event.

(ii) At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.

2. The Department may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with subparagraph (a) of this paragraph, during the active life (including closure) and the post-closure care period.

(i) The alternative frequency during the active life (including closure) shall be no less than annual.

(ii) The alternative frequency shall be based on consideration of the following factors:

(I) Lithology of the aquifer and unsaturated zone;

(II) Hydraulic conductivity of the aquifer and unsaturated zone;

(III) Groundwater flow rates;

(IV) Minimum distance between upgradient edge of the LF unit and downgradient monitoring well screen (minimum distance of travel); and

(V) Resource value of the aquifer.

(c) If the owner or operator determines, pursuant to subparagraph (2)(l) of this rule, that there is an SSI over background for one or more of the constituents listed in Appendix I, or in the alternative list approved in accordance with subparagraph (a) of this paragraph, at any monitoring well at the boundary specified under subparagraph (2)(a)1.(ii) of this rule, the owner or operator:

1. Must, within 14 days of this finding, place a notice in the operating record, and submit a copy of this notice to the Department, indicating which constituents have shown statistically significant changes from background levels, and notify the Department that this notice was placed in the operating record; and

2. Must establish an assessment monitoring program meeting the requirements of subparagraphs (4)(a) through (j) of this rule within 90 days except as provided for under subparagraph (2)(c)3. of this rule.

3. May demonstrate that a source other than a LF unit caused the contamination or that the SSI resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

(i) A report documenting this demonstration must be certified by a qualified groundwater scientist, approved by the Department and be placed in the operating record.

(ii) If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this rule. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in subparagraphs (4)(a) through (j) of this rule.

(4) Assessment Monitoring.

(a) Assessment monitoring is required whenever an SSI over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with subparagraph (3)(a)4 of this rule.

(b) Frequency.

1. Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this Chapter.

(i) A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event.

(ii) For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.

2. The Department may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Department may delete any of the Appendix II monitoring parameters for a LF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit. The Department may establish an alternative list of parameters for a facility required to conduct groundwater monitoring, in addition to the Appendix II constituents, if the addition of the parameters is warranted based on waste handling practices at the facility. In determining alternative parameters, the Department shall consider the factors listed in 335-4-.27(3)(a)4.(i) through (iv).

(c) The Department may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, during the active life (including closure) and post-closure care of the unit considering the following factors:

1. Lithology of the aquifer and unsaturated zone;

2. Hydraulic conductivity of the aquifer and unsaturated zone;

3. Groundwater flow rates;

4. Minimum distance between upgradient edge of the ~~MSW~~LF unit and downgradient monitoring well screen (minimum distance of travel);

5. Resource value of the aquifer; and

6. Nature (fate and transport) of any constituents detected in response to this rule.

(d) After obtaining the results from the initial or subsequent sampling events required in subparagraph (b) of this paragraph, the owner or operator must:

1. Within 14 days, place a notice in the operating record identifying the Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, that have been detected and notify the Department that this notice has been placed in the operating record;

2. Within 90 days, and on at least a semiannual basis thereafter,

(i) Resample all wells specified by subparagraph (2)(a) of this rule with a minimum of one sample from each well (background and downgradient) being collected and analyzed during these sampling events,

(ii) Conduct analyses for all constituents in Appendix I or in the alternative list approved in accordance with subparagraph (3)(a)~~4.~~ of this rule, and for those constituents in Appendix II, or in the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, that are detected in response to subparagraph (b) of this paragraph, and

(iii) Record their concentrations in the facility operating record.

The Department may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with subparagraph (3)(a)~~4.~~ of this rule, during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in subparagraph (c) of this paragraph;

3. Establish background concentrations for any constituents detected pursuant to subparagraph (b) or subparagraph (d)2. of this paragraph; and

4. Establish groundwater protection standards for all constituents detected pursuant to subparagraph (b) or subparagraph (d)2. of this paragraph. The groundwater protection standards shall be established in accordance with subparagraphs (h) or (i) of this paragraph.

(e) If the concentrations of all Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, are shown to be at or below background values, using the statistical procedures in subparagraph (2)(l) of this rule, for two consecutive sampling events, the owner or operator must notify the Department of this finding and may return to detection monitoring.

(f) If the concentrations of any Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, are above background values, but all concentrations are below the groundwater protection standard established under subparagraphs (h) or (i) of this paragraph, using the statistical procedures in subparagraph (2)(l) of this rule, the owner or operator must continue assessment monitoring in accordance with this rule.

(g) If one or more Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, are detected at statistically significant levels above the groundwater protection standard established under subparagraphs (h) or (i) of this paragraph in any sampling event, within 14 days of this finding, the owner or operator must:

1. Place a notice in the operating record identifying the Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, that have exceeded the groundwater protection standard and

2. Notify the Department and all appropriate local government officials that the notice has been placed in the operating record.

3. And must, either:

(i) Characterize the nature and extent of the release by installing additional monitoring wells as necessary,

(ii) Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with subparagraph (d)2. of this paragraph,

(iii) Notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site as indicated by sampling of wells in accordance with subparagraphs (g)3.(i) and (ii) of this paragraph, and

(iv) Initiate an assessment of corrective measures as required by subparagraphs (5)(a) through (d) of this rule within 90 days;

4. Or may demonstrate that a source other than a LF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Department and placed in the operating record. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to subparagraphs (a) through (j) of this paragraph, and may return to detection monitoring if the Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, are at or below background as specified in subparagraph (e) of this paragraph. Until a successful demonstration is made, the owner or operator must comply with subparagraph (g) of this paragraph, including initiating an assessment of corrective measures.

(h) The owner or operator must establish a groundwater protection standard for each Appendix II constituent, or each constituent in the alternative list approved in

accordance with subparagraph (4)(b)2. of this rule, detected in the groundwater. The groundwater protection standard shall be:

1. For constituents for which a maximum contaminant level (MCL) has been promulgated under Section 1412 of the Safe Drinking Water Act (codified) under 40 CFR 141, the MCL for that constituent;

2. For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with subparagraph (2)(a)1. of this rule; or

3. For constituents for which the background level is higher than the MCL identified under subparagraph (h)1. of this paragraph or health based levels identified under subparagraph (i)1. of this paragraph, the background concentration.

(i) The Department may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:

1. The level is derived in a manner consistent with EPA guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);

2. The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR 792) or equivalent;

3. For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range; and

4. For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this rule, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(j) In establishing groundwater protection standards under subparagraph (i) of this paragraph, the Department may consider the following:

1. Multiple contaminants in the groundwater;

2. Exposure threats to sensitive environmental receptors; and

3. Other site-specific exposure or potential exposure to groundwater.

(5) Corrective Action Requirements.

(a) Within 90 days of finding that any of the constituents listed in Appendix II or in the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, have been detected at a statistically significant level exceeding the groundwater protection standards defined under subparagraphs (4)(h) or (i) of this rule, the owner or

operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.

(b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in subparagraphs (4)(a) through (j) of this rule.

(c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under subparagraphs (c) through (i) of this paragraph, addressing at least the following:

1. The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

2. The time required to begin and complete the remedy;

3. The costs of remedy implementation; and

4. The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

(d) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

(e) Based on the results of the corrective measures assessment conducted under subparagraphs (5)(a) through (d) of this paragraph, the owner or operator must select a remedy that, at a minimum, meets the standards listed in this paragraph. The owner or operator must notify the Department, within 14 days of selecting a remedy, that a report describing the selected remedy has been placed in the operating record and how it meets the standards in this paragraph. Remedies must:

1. Be protective of human health and the environment;

2. Attain the groundwater protection standard as specified pursuant to subparagraphs (4)(h) or (i) of this rule;

3. Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, into the environment that may pose a threat to human health or the environment; and

4. Comply with standards for management of wastes as specified in subparagraph (m) of this paragraph.

(f) In selecting a remedy that meets the standards of subparagraph (e) of this paragraph, the owner or operator shall consider the following evaluation factors:

1. The long- and short-term effectiveness and protectiveness of the potential remedy(ies), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

(i) Magnitude of reduction of existing risks;

(ii) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;

(iv) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;

(v) Time until full protection is achieved;

(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

(vii) Long-term reliability of the engineering and institutional controls; and

(viii) Potential need for replacement of the remedy.

2. The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

(i) The extent to which containment practices will reduce further releases;

(ii) The extent to which treatment technologies may be used.

3. The ease or difficulty of implementing a potential remedy(ies) based on consideration of the following types of factors:

(i) Degree of difficulty associated with constructing the technology;

(ii) Expected operational reliability of the technologies;

(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(iv) Availability of necessary equipment and specialists; and

(v) Available capacity and location of needed treatment, storage, and disposal services.

4. Practicable capability of the owner or operator, including a consideration of the technical and economic capability.

5. The degree to which community concerns are addressed by a potential remedy(ies).

(g) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in this paragraph. The owner or operator must consider the following factors in determining the schedule of remedial activities:

1. Extent and nature of contamination;

2. Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under subparagraphs (4)(h) or (i) of this rule and other objectives of the remedy;

3. Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

4. Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

5. Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

6. Resource value of the aquifer including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users;

(iii) Groundwater quantity and quality;

(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(v) The hydrogeologic characteristic of the facility and surrounding land;

(vi) Groundwater removal and treatment costs; and

(vii) The cost and availability of alternative water supplies.

7. Practicable capability of the owner or operator.

8. Other relevant factors.

(h) The Department may determine that remediation of a release of an Appendix II constituent, or a constituent in the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, from a LF unit is not necessary if the owner or operator demonstrates to the Department that:

1. The groundwater is additionally contaminated by substances that have originated from a source other than a LF unit and those substances are present in concentrations such that cleanup of the release from the LF unit would provide no significant reduction in risk to actual or potential receptors; or

2. The constituent(s) is present in groundwater that:

(i) Is not currently or reasonably expected to be a source of drinking water; and

(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under subparagraphs (4)(h) or (i) of this rule; or

3. Remediation of the release(s) is technically impracticable; or

4. Remediation results in unacceptable cross-media impacts.

(i) A determination by the Department pursuant to subparagraph (h) of this paragraph shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

(j) Based on the schedule established under subparagraph (g) of this paragraph for initiation and completion of remedial activities the owner/operator must:

1. Establish and implement a corrective action groundwater monitoring program that:

(i) At a minimum, meets the requirements of an assessment monitoring program under subparagraphs (4)(a) through (j) of this rule;

(ii) Indicates the effectiveness of the corrective action remedy; and

(iii) Demonstrates compliance with groundwater protection standards pursuant to subparagraph (n) of this paragraph.

2. Implement the corrective action remedy selected under subparagraphs (e) through (i) of this paragraph; and

3. Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to subparagraphs (e) through (i) of this paragraph. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:

(i) Time required to develop and implement a final remedy;

(ii) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(iv) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

(v) Weather conditions that may cause hazardous constituents to migrate or be released;

(vi) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

(vii) Other situations that may pose threats to human health and the environment.

(k) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of subparagraph (e) of this paragraph are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under subparagraph (l) of this paragraph.

(l) If the owner or operator determines that compliance with requirements under subparagraph (e) of this paragraph cannot be practically achieved with any currently available methods, the owner or operator must:

1. Obtain certification of a qualified groundwater scientist or approval by the Department that compliance with requirements under subparagraph (e) of this paragraph cannot be practically achieved with any currently available methods;

2. Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

3. Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

(i) Technically practicable; and

(ii) Consistent with the overall objective of the remedy.

4. Notify the Department within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

(m) All solid wastes that are managed pursuant to a remedy required under subparagraphs (e) through (i) of this paragraph, or an interim measure required under subparagraph (j)3. of this paragraph, shall be managed in a manner:

1. That is protective of human health and the environment; and

2. That complies with applicable RCRA requirements.

(n) Remedies selected pursuant to subparagraphs (e) through (i) of this paragraph shall be considered complete when:

1. The owner or operator complies with the groundwater protection standards established under subparagraphs (4)(h) or (i) of this rule at all points within

the plume of contamination that lie beyond the groundwater monitoring well system established under subparagraph (3)(a) of this rule.

2. Compliance with the groundwater protection standards established under subparagraphs (4)(h) or (i) of this rule has been achieved by demonstrating that concentrations of Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in subparagraphs (4)(l) and (m) of this rule. The Department may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents, or the alternative list approved in accordance with subparagraph (4)(b)2. of this rule, have not exceeded the groundwater protection standard(s) taking into consideration:

(i) Extent and concentration of the release(s);

(ii) Behavior characteristics of the hazardous constituents in the groundwater;

(iii) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

(iv) Characteristics of the groundwater.

3. All actions required to complete the remedy have been satisfied.

(o) Upon completion of the remedy, the owner or operator must notify the Department within 14 days that a certification that the remedy has been completed in compliance with the requirements of subparagraph (n) of this paragraph has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified groundwater scientist or approved by the Department.

(p) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under subparagraph (n) of this paragraph, the owner or operator shall be released from the requirements for financial assurance for corrective action under 335-13-4-.28(4).

Author: Russell A. Kelly, Heather M. Jones.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: Effective: November 2, 1993. **Amended:** Effective: July 26, 1996. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-5-.02 Permit Application. Existing and proposed landfill units shall obtain permits to construct and/or operate in accordance with the following:

(1) Application Requirements. Landfill units proposed after the effective date of this Division shall submit the following in order to request a permit:

(a) A completed form designated by the Department;

(b) Documentation of host government approval, as provided in the Code of Alabama 1975, § 22-27-48 and 48.1;

(c) Facility design plans and operational procedures in accordance with Permit Application Procedures for Solid Waste Disposal Facilities as prepared by the Department; and

(d) Technical data and reports to comply with 335-13-4-.01, 335-13-4-.11 through 335-13-4-.24 and this Division,

(e) All technical reports, plans and specifications, plats, geological and hydrological reports required by this Division, prepared under the following:

1. Plans, specifications, operational procedures, letters of final construction certification and other technical data, except as provided in 335-13-5-.02(1)(e)2. and 3. for the construction and operation of a facility shall be prepared by an engineer. The seal or signature and registration number of the design engineer shall be affixed to the plans, specifications and reports.

2. Reports, letters of certification and other documents and technical data concerning the siting standards of 335-13-4-.01 shall be prepared by a person with technical expertise in the field of concern.

3. Legal property descriptions and survey plats shall be by a land surveyor with the seal or signature and registration number of the land surveyor affixed.

(f) The name and mailing address of all property owners whose property, per county tax records, is adjacent to the proposed site shall be submitted as part of a landfill unit's permit application.

(g) In addition to the requirements listed in (a) through (f) above the Department may waive certain requirements of (c) and (d) for those landfill units that will receive for disposal only construction and demolition type waste. A permit application for a C/DLF will be submitted on a form developed by the Department which shall specify the minimum requirements for a complete application. The C/DLF permit application shall also include statements signed by an engineer and a representative of the facility owner/operator certifying

that the information being submitted is accurate and correct. The submittal of false or inaccurate information shall result in the C/DLF permit application being suspended or denied.

(h) CCR Landfills. In addition to the requirements listed in (a) through (f) above, a permit application for an existing CCR landfill shall also include the following:

1. Technical data and reports documenting compliance with the unstable area requirements in 335-13-15-.03(5).

2. A run-on and run-off control system plan developed in accordance with 335-13-15-.05(2)(c), which should include existing and proposed surface drainage patterns and control structures designed to handle run-on and run-off.

3. A detailed description of the groundwater monitoring and analysis program developed in accordance with 335-13-15-.06.

4. Procedures for complying with recordkeeping and notification as required under 335-13-15-.08.

5. Procedures for updating all plans and assessments periodically as required by ADEM Admin. Code 335-13-15.

6. Any additional information that may be required by the Department.

(i) New CCR Landfills and any lateral expansion of a CCR Landfill. In addition to the requirements listed in (a) through (f) and (h) above, applications for new CCR landfills and any lateral expansion of a CCR landfill shall include the following in order to request a permit:

1. Technical data and reports documenting compliance with the following location requirements:

(i) Five foot separation of the base of the CCR unit from the highest measured groundwater level requirement under 335-13-15-.03(1).

(ii) Wetland and endangered species requirements under 335-13-15-.03(2).

(iii) Fault area requirements under 335-13-15-.03(3).

(iv) Seismic impact zones under 335-13-15-.03(4).

2. Design of the liner and leachate collection and removal system as required by 335-13-15-.04(1).

(2) Permit Duration. Solid waste disposal permits obtained in compliance with this Division shall be valid for the design life of the facility or as otherwise determined by the Department, but no longer than a period of ~~five~~ten years. Permits, however, are subject to revocation under 335-13-5-.05 of this Division.

(3) Filing Deadline. Request for extension, renewal, or a new permit for any landfill unit shall be filed with the Department by the operating agency at least 180 days prior to the expiration date for existing permits or the proposed construction date for new facilities.

(4) Modifications. Prior to any change in the permitted service area, increasing the volume of waste received or changing the design or operating procedure as described in 335-13-5-.06(1) and (2) and the current permit, the permittee shall request a modification of the permit as described in 335-13-5-.06(3). A request for modification described in 335-13-5-.06(1) and (2) must be filed with the Department at least 90 days prior to the anticipated change and shall receive approval from the Department prior to the implementation of the proposed change.

(5) Effect of non-compliance.

(a) As determined by the Director, substantial non-compliance with Department regulations or permits at any facility owned or operated by the applicant, including any facility for which the pending permit application is requested, will be grounds for denial of the application, or alternatively, for suspension of further consideration of the application until such non-compliance is corrected.

(b) In addition to the foregoing, the Director may deny a permit application if:

1. The Director determines that a permit could not be issued that would result in compliance with applicable solid waste standards; or

2. The applicant could not comply with the permit as issued.

Author: Russell A. Kelly, Eric L. Sanderson, S. Scott Story.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-5, 22-27-7, and 22-27-48 and 48.1.
History: Effective: November 18, 1981. **Amended:** Effective: March 31, 1988 (Emergency Regulations). **Amended:** Effective: July 21, 1988. **Amended:** Effective: October 2, 1990. **Amended:** Effective: November 2, 1993. **Amended:** Effective: July 26, 1996. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-5-.03 Public Notice.

(1) Notice Requirements.

(a) The Department shall provide notice and an opportunity for a public hearing on any landfill unit permit if determined necessary to meet the requirements of this Division.

(b) The following procedures shall be observed.

1. The Department shall notify interested and potentially interested persons of the proposed landfill unit by publishing a notice in a newspaper of general circulation in the area.

(i) The notice shall be given not less than 35 days prior to the proposed issuance of a permit.

(ii) The notice shall contain the specific type and nature of the landfill unit, the type of waste to be disposed, the person or agency requesting the permit, and the descriptive location of the landfill unit, address and telephone number of the Department, and that interested persons may request a public hearing on the proposed landfill unit.

2. ~~Landowners adjacent to a proposed landfill unit shall receive a copy of the public notice~~The Department shall send by certified mail, a written copy of the public notice to landowners adjacent to the subject landfill unit at the address as indicated on county tax records. The list and addresses of adjacent lawn owners, as provided in the permit application, shall be verified and/or updated and such documentation shall be provided to the Department within 90 days prior to the public notice date. Documentation that notice was sent shall include copies of the signed receipts of certified mail delivery or a copy of any returned certified mail item, that is refused or otherwise undeliverable.

(2) Departmental Action. The Department shall take one of the following actions after the hearing:

(a) Deny the permit, stating in writing the reasons for denial and informing the person requesting the permit of appeal procedures in chapter 335-2-1;

(b) Issue the permit if the application complies with this Division; or

(c) Require additional information, elements of design for the facility, and specify procedures for inclusion into the permit prior to issuance of the permit.

Author: Russell A. Kelly; S. Scott Story.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, and 22-27-7.

History: Effective: November 18, 1981. **Amended:** Effective: July 21, 1988. **Amended:** Effective: November 2, 1993. **Amended:** Effective: July 26, 1996. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-14-.07 Permitting Requirements.

(1) Permit Duration. Composting facility permits obtained under compliance with this Division shall be valid for the design life of the facility or as otherwise determined by the Department, but no longer than a period of ~~five~~ten years. Permits, however, are subject to suspension or revocation under rule 335-13-14-.07(5) of this Chapter.

(2) Filing Deadline. Request for extension, renewal, or a new permit for a composting facility shall be filed with the Department by the operating agency at least 180 days prior to expiration date for existing permits or proposed construction date for new facilities.

(3) Modifications. Prior to any change in the permitted design plans, operational plans and closure plans, the request for modification must be filed with the Department at least 90 days prior to the anticipated change and shall receive approval from the Department prior to the implementation of the proposed change. Any modification subject to local host government review and approval shall constitute a major modification and shall be subject to the requirements of rule 335-13-14-.10

(4) Permit Application Denial.

(a) As determined by the Director, substantial non-compliance with Department regulations or permits at any facility in the State of Alabama owned or operated by the applicant, including any facility for which the pending permit application is requested, will be grounds for denial of the application, or alternatively for suspension of further consideration of the application until such noncompliance is corrected.

(b) In addition to the foregoing, the Director may deny a permit application if:

1. The Director determines that a permit could not be issued that would result in compliance with applicable solid waste standards;

2. The applicant could not comply with the permit as issued; or

3. The applicant is found to have submitted false or inaccurate information.

(c) Upon denial of an application for permit renewal, the applicant shall meet the closure requirements of rule 335-13-14-.09.

(5) Permit Suspension or Revocation.

(a) The Department may suspend or revoke any permit issued under this chapter if any of the following conditions are true:

1. The permittee is determined by the Department to be in violation of any permit condition,

2. The permittee fails to perform the permitted activities in accordance with the approved permit application, operational plan/narrative, or engineering drawings,

3. The permittee fails to apply for a permit modification, as required by the rules,

4. The permittee stops accepting and processing raw material for more than 180 days, or

5. The permittee's operations are determined to create a nuisance or are inconsistent with the requirements of the Act or this Division.

(b) In the event of suspension or revocation of a permit, the Department shall serve notice of such action on the permittee and shall set forth in such notice the reason or reasons for such action.

(c) Upon revocation or suspension of the permit, the permittee shall meet the closure requirements of rule 335-13-14-.09.

Author: Phillip D. Davis, S. Scott Story.
Statutory Authority: Code of Alabama 1975, §§22-27-9 and 22-27-12.
History: Effective: April 3, 2012. **Amended:** Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

335-13-15-.09 Permit Application. All solid waste management of CCR generated from the combustion of coal at electrical utilities and independent power producers shall take place in a CCR unit permitted by the Department. ADEM Admin. Code 335-13- 5 outlines the procedures for obtaining a Solid Waste Disposal Permit for new and existing CCR Landfills, including lateral expansions of such units. The following section establishes the minimum requirements and procedures for obtaining a permit for new and existing surface impoundments, including any lateral expansions of such units. New and existing CCR surface impoundments shall obtain permits for construction, operation, closure and/or post-closure in accordance with the following:

(1) Application Requirements.

(a) Existing CCR Surface Impoundments. Except as provided in 335-13-15-.09(1)(c), for existing CCR surface impoundments, the owner or operator shall submit the following in order to request a permit:

1. A completed form designated by the Department.

2. Boundary plat and legal property description prepared, signed, and sealed by a land surveyor of the proposed boundary of the facility and disposal area of the CCR unit.

3. Technical data and reports documenting compliance with the following location requirements:

(i) Five foot separation of the base of the CCR unit and highest measured groundwater level in compliance with 335-13-15-.03(1).

(ii) Wetland and endangered species requirements under 335-13-15-.03(2).

(iii) Fault area requirements under 335-13-15-.03(3).

(iv) Seismic impact zones under 335-13-15-.03(4).

(v) Unstable area requirements under 335-13-15-.03(5)

4. Detailed presentation of geological and hydrogeological units within the disposal site, with typical sections of disposal method and plan and profile sheets on all areas or trenches.

5. Technical report of the determination of the liner design and type as required by 335-13-15-.04(2).

6. Technical report for the hazardous potential classification as outlined in 335-13-15-.04(4)(a)2. and the Emergency Action Plan (EAP), if necessary, developed under 335-13-15-.04(4)(a)3.

7. For existing CCR surface impoundments that have a height of five feet or more and a storage volume of 20 acre-feet or more, or an existing surface impoundment with a height of 20 feet or more, the application shall include the following:

(i) All the information required by 335-13-15-.04(4)(c)1.(i) through (xii).

(ii) Results of the structural stability assessment as required by 335-13-15-.04(4)(d).

(iii) Results of the safety factor assessment as required by 335-13-15-.04(4)(e).

8. Sufficient control points on-site to provide for accurate horizontal and vertical control for facility construction, operation and closure and post-closure.

9. Topographical maps at contour intervals of not more than five feet for the existing ground surface elevation, initial disposal area elevation, and final disposal area elevation. The maps shall also show buffer zones.

10. Quality assurance/quality control (QA/QC) plan for all components of the final cover system.

11. An operation plan that includes at a minimum:

(i) A CCR fugitive dust control plan developed in accordance with 335-13-15-.05(1).

(ii) An inflow design flood control system developed in accordance with 335-13-15-.05(3).

(ii) A detailed description of the groundwater monitoring and analysis program developed in accordance with 335-13-15-.06.

(iii) Procedures for compliance with recordkeeping and notification as required under 335-13-15-.08.

(iv) Procedures for updating all plans and assessments periodically as required by this chapter.

12. The written closure and post-closure plan developed in accordance with 335-13-15-.07.

13. Any additional information that may be required by the Department.

14. The name and mailing address of all property owners whose property is adjacent to the CCR surface impoundment.

15. Plans, specifications, operational procedures, letters of final construction certification and other technical data required as part of the application, except as provided in 335-13-15-.09(1)(a)2. and 14., shall be certified by a professional engineer. The seal or signature and registration number of the design engineer shall be affixed to the plans, specifications and reports.

(b) New CCR surface impoundments and any lateral expansion of a CCR surface impoundment. For new CCR surface impoundments and any lateral expansion of a CCR surface impoundment, the owner or operator shall submit the following in order to request a permit:

1. Except for the requirements of 335-13-15-.09(1)(a)5., 6., and 7., the requirements for an existing CCR surface impoundment in 335-13-15-.09(1)(a).

2. Technical report for the hazardous potential classification as outlined in 335-13-15-.04(5)(a)2. and the Emergency Action Plan (EAP), if necessary, under 335-13-15-.04(5)(a)3.

3. For new CCR surface impoundments that has a height of five feet or more and a storage volume of 20 acre-feet or more, or a surface impoundment with a height of 20 feet or more, the application shall include the following:

(i) All the information contained in 335-13-15-.04(5)(c)1.(i) through (xii).

(ii) Structural stability assessment as required by 335-13-15-.04(5)(d).

(iii) Safety factor assessment as required by 335-13-15-.04(5)(e).

4. Design for the liner and leachate collection and removal system as required by 335-13-15-.04(3).

5. Quality assurance/quality control (QA/QC) plan for all components of the liner and leachate collection system.

6. Plans, specifications, operational procedures, letters of final construction certification and other technical data required as part of the application, except as provided in 335-13-15-.09(1)(a)2. and 14., shall be certified by a professional engineer. The seal or signature and registration number of the design engineer shall be affixed to the plans, specifications and reports.

(c) For existing CCR surface impoundments that have initiated closure or are otherwise subject to the closure requirements of 335-13-15-.07(2), the owner or operator shall submit all the information as required for an existing CCR surface impoundment in 335-13-15-.09(1)(a), except for the requirements of 335-13-15-.09(1)(a)3., 4. and 5., to request a closure or post-closure permit or a permit for such operations as may be authorized by 335-13-15-.07(4).

(2) In addition to the requirements listed in 335-13-15-.09(1), the permit application shall also include statements signed by a professional engineer and a representative of the facility owner/operator certifying that the information being submitted is accurate and correct The submittal of false or inaccurate information shall result in the permit application being suspended or denied.

(3) Permit Duration. CCR surface impoundment permits obtained in compliance with this chapter shall be valid for the design life of the facility or as otherwise determined by the Department, but no longer than a period of ~~five~~ten years. Permits, however, are subject to revocation under 335-13-15-.12.

(4) Filing Deadline. Requests for an initial permit for an existing surface impoundment shall be filed with the Department within 180 days after the effective date of these rules. Requests for extension, renewal or a new permit for any CCR surface impoundment shall be filed with the Department by the operating agency at least 180 days prior to the expiration date for existing permits or proposed construction date for new facilities.

(5) Modifications. Prior to any change listed in 335-13-15-.13(1) and (2), the permittee shall request a modification of the permit as described in 335-13-15-.13(3). A modification request described in 335-13-15-.13(1) and (2) must be filed with the Department at least 90 days prior to the anticipated change and shall receive approval from the Department prior to the implementation of the proposed change.

(6) Effect of non-compliance.

(a) As determined by the Director, substantial non-compliance with Department regulations or permits at any facility owned or operated by the applicant, including any facility for which the pending permit application is requested, will be grounds for denial of the application, or alternatively, for suspension of further consideration of the application until such non- compliance is corrected.

(b) In addition to the foregoing, the Director may deny a permit application if:

1. The Director determines that a permit could not be issued that would result in compliance with applicable solid waste standards; or

2. The applicant could not comply with the permit as issued.

Author: Eric L. Sanderson; S. Scott Story.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7, and 22-27-12
History: Filed: April 24, 2018; Effective: June 8, 2018; Proposed: February 20, 2019.

Attachment 4

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

WHEREAS, the Alabama Department of Environmental Management gave notice of a public hearing on the proposed revisions to ADEM Admin. Code 335-1 of the Department's Administrative Division – General Administration Rules in accordance with Ala. Code § 22-22A-8 (2006 Rplc. Vol.) and Ala. Code § 41-22-4 (2000 Rplc. Vol.); and

WHEREAS, a public hearing was held before a representative of the Alabama Department of Environmental Management designated by the Environmental Management Commission for the purpose of receiving data, views and arguments on the amendment of such proposed rules; and

WHEREAS, the Alabama Department of Environmental Management did not receive any written or oral comments at the public hearing or during the public comment period.

NOW THEREFORE, pursuant to Ala. Code. §§ 22-22A-5, 22-22A-6, 22-22A-8 (2006 Rplc. Vol.), and Ala. Code. § 41-22-5 (2000 Rplc. Vol.), as duly appointed members of the Environmental Management Commission, we do hereby adopt and promulgate these revisions to division 335-1 [rules 335-1-6-.07/Payment of Fees (Amend)]; of the Department's Administrative Division – General Administration rules, administrative code attached hereto, to become effective forty-five days, unless otherwise indicated, after filing with the Alabama Legislative Services Agency.

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

ADEM Admin. Code division 335-1 – General Administration

IN WITNESS WHEREOF, we have affixed our signatures below on this 21st day of June 2019.

APPROVED:

DISAPPROVED:

ABSTAINED:

This is to certify that this Resolution is a true and accurate account of the actions taken by the Environmental Management Commission on this 21st day of June 2019.

Samuel L. Miller, Chair
Environmental Management Commission
Certified this 21st day of June 2019

335-1-6-.07 Payment of Fees.

(1) Payment of permit application/registration fees required under subparagraphs (1)(a) and (1)(b) or paragraph (2) of rule 335-1-6-.04 shall be included with the permit application/registration. No permit application shall be processed without payment of such fees.

(2) Any fee required under subparagraph (1)(c) of rule 335-1-6-.04 shall be billed to the applicant. Payment of such fee shall be made within thirty days of the invoice date. No final decision regarding the permit application shall be made until after payment of such fee. Failure to make payment as provided herein shall constitute cause for non-processing/denial of the permit application.

(3) Payment of fees required under rule 1-6-.05 shall be made within thirty days of the date of the invoice which the Department shall send to the person making the application or request or requiring the certificate.

(4) Payment of fees required under rule 335-1-6-.06 shall be included with the application for such license, variance or certification. No application shall be processed without payment of such fees.

(5) All fees paid pursuant to the requirements of this chapter shall be non-refundable.

(6) All fees and remittances shall be made payable to the Alabama Department of Environmental Management.

Author: Marilyn Elliott, Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, § 22-22A-5.
History: Effective: February 13, 1985; **Amended:** Effective: January 16, 1997; **Amended:** Effective: March 31, 1999; **Amended:** Effective: January 9, 2002; **Amended:** Effective: May 16, 2002; **Amended:** Effective: October 4, 2002; **Amended:** Effective: August 4, 2004; **Amended:** Effective: January 10, 2006; **Amended:** Effective: July 11, 2006; **Amended:** Effective: November 14, 2006; **Amended:** Effective: January 22, 2008; **Amended:** Effective: January 19, 2010; **Amended:** Effective: November 29, 2011; **Amended:** Effective: May 27, 2014; **Amended:** Effective: February 4, 2016; **Amended:** Filed: April 24, 2018; Effective: June 8. 2018. **Amended:** Filed: June 25, 2019; Effective: August 9, 2019.

FEE SCHEDULE E
SOLID WASTE PERMITS/REGISTRATION

Type of Activity	Initial Issuance	Modification	Reissuance
Medical Waste Transfer Facility	$2,035	$725	$1,330
New Technology Review	$10,205	------	------
Commercial Treatment Facility	$16,460	$7,280	$9,180
Commercial Transportation of Medical Waste	$3,490	$1,460	$2,035
Storage of Untreated Medical Waste	$2,630	$665	$1,960
Municipal Solid Waste Landfill/ CCR Unit	$83,880	------	$ $37,270
Minor Mod. (1)*	------	$3,275	------
Major Mod. (2)*	------	$32,615	------
Construction/Demolition Waste Landfill	$7,145	------	$ $5,400
Minor Mod. (1)*	------	$1,460	------
Major Mod. (2)*	------	$2,915	------
Industrial Waste Landfill	$12,670	------	$ $8,150
Minor Mod. (1)*	------	$1,460	------
Major Mod. (2)*	------	$4,375	------
Compost Facility	$4,860		$ $3,670
Minor Mod.	------	$1,225	------
Major Mod	------	$1,945	------
Additive Fees			
Geological Review	$4,865	$3,275	$3,275
Solid Waste Disposal Notification	$215	$215	$215
Variance Request	$1,460	$1,460	$1,460

(1)*. These are modifications as included in ADEM Admin. Code rule 335-13-5-.06(2).

(2)*. These are modifications as included in ADEM Admin. Code rule 335-13-5-.06(1).

Attachment 5

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

WHEREAS, the Alabama Department of Environmental Management gave notice of a public hearing on the proposed revisions to ADEM Admin. Code 335-7 of the Department's Water Division – Water Supply Program Rules in accordance with Ala. Code § 22-22A-8 (2006 Rplc. Vol.) and Ala. Code § 41-22-4 (2000 Rplc. Vol.); and

WHEREAS, a public hearing was held before a representative of the Alabama Department of Environmental Management designated by the Environmental Management Commission for the purpose of receiving data, views and arguments on the amendment of such proposed rules; and

WHEREAS, the Alabama Department of Environmental Management has reviewed the oral and written submissions introduced into the hearing record, and has prepared a concise statement of the principal reasons for and against the adoption of the proposed rules incorporating therein its reasons for the adoption of certain revisions to the proposed rules in response to oral and written submissions, such revisions, where appropriate, having been incorporated into the proposed rules attached hereto; and

WHEREAS, the Environmental Management Commission has considered fully all oral and written submissions respecting the proposed amendments and the Reconciliation Statement prepared by the Alabama Department of Environmental Management.

NOW THEREFORE, pursuant to Ala. Code. §§ 22-22A-5, 22-22A-6, 22-22A-8 (2006 Rplc. Vol.), and Ala. Code. § 41-22-5 (2000 Rplc. Vol.), as duly appointed members of the Environmental Management Commission, we do hereby adopt and promulgate these revisions to division 335-7 [335-7-2-.10/Special Monitoring and Analytical Requirements for Unregulated Contaminants (Amend)] of the Department's Water Division – Water Supply Program rules, administrative code attached hereto, to become effective forty-five days, unless otherwise indicated, after filing with the Alabama Legislative Services Agency.

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

ADEM Admin. Code division 335-7 – Water Supply Program

IN WITNESS WHEREOF, we have affixed our signatures below on this 21st day of June 2019.

APPROVED:

DISAPPROVED:

ABSTAINED:

This is to certify that this Resolution is a true and accurate account of the actions taken by the Environmental Management Commission on this 21st day of June 2019.

Samuel L. Miller, Chair
Environmental Management Commission
Certified this 21st day of June 2019

335-7-2-.10 Special Monitoring and Analytical Requirements for Unregulated Contaminants.

(1) All community and NTNC water systems shall monitor for the following:

Unregulated/Miscellaneous SOCs		
Aldicarb	Carbaryl	Metolachlor
Aldicarb Sulfone	Dicamba	Metribuzin
Aldicarb Sulfoxide	Dieldrin	Propachlor
Aldrin	3-Hydroxycarbofuran	
Butachlor	Methomyl	

Unregulated VOCs		
Bromobenzene	o-Chlorotoluene	Isopropylbenzene
Bromochloromethane	p-Chlorotoluene	p-Isopropyltoluene
Bromodichloromethane	Dibromomethane	Methyl Tertiary Butyl Ether (MTBE)
Bromoform	m-Dichlorobenzene	
Bromomethane	Dichlorodifluoromethane	Naphthalene
n-Butylbenzene	1,1-Dichloroethane	n-Propylbenzene
sec-Butylbenzene	1,3-Dichloropropane	1,1,2,2-Tetrachloroethane
tert-Butylbenzene	2,2-Dichloropropane	1,2,3-Trichlorobenzene
Chlorodibromomethane	1,1-Dichloropropene	1,2,4-Trichlorobenzene
Chloroethane	1,3-Dichloropropene	1,2,3-Trichloropropane
Chloroform	Fluorotrichloromethane	1,2,4-Trimethylbenzene
Chloromethane	Hexachlorobutadiene	1,3,5-Trimethylbenzene

(2) The following are the monitoring requirements for the unregulated contaminants:

(a) All community and NTNC water systems shall sample for unregulated SOCs at the same sampling point and at the same time as the initial samples are collected for the analysis of the regulated SOCs.

(b) All community and NTNC water systems shall collect one sample at each sampling point for the unregulated inorganic chemicals at the same time as samples are collected for the analysis of the regulated inorganic chemicals.

(c) The monitoring frequency and analytical requirements for the unregulated and regulated VOCs shall be the same.

(d) Any water system required to monitor by this rule shall notify persons served by the system of the availability of the results of sampling. Results of such monitoring and notice shall be provided to the Department within 30 days of completion.

(e) The Department may increase monitoring where necessary to detect variations within a water system.

(f) In addition to the contaminants listed at paragraph (1) of this rule, the Department may require monitoring for other contaminants of concern in drinking water for which health advisories or toxicity values have been issued, at locations and frequencies as determined by the Department.

Author: Joe Alan Power, Thomas S. DeLoach, Edgar K. Hughes, Dennis D. Harrison, Aubrey White.
Statutory Authority: Code of Alabama 1975, §§ 22-23-33, 22-23-49, 22-22A-5, 22-22A-6.
History: May 23, 1977; **Repealed and Readopted:** Effective January 4, 1989; **Amended:** Effective October 31, 1990. **Amended:** Filed July 24, 1995; Effective November 28, 1995; **Amended:** Effective September 19, 1995 (ER); **Amended:** Filed November 28, 1995; Effective January 2, 1996; **Amended:** Filed December 21, 1998; Effective January 25, 1999; **Amended:** Filed May 2, 2000; Effective June 7, 2000; **Amended:** Filed: November 7, 2005; Effective December 12, 2005; **Amended:** Filed December 18, 2007; Effective January 22, 2008; **Amended:** Filed July 21, 2016; Effective August 5, 2016; **Amended:** Filed: June 25, 2019; Effective: August 9, 2019.

Attachment 6

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

WHEREAS, the Alabama Department of Environmental Management gave notice of a public hearing on the proposed revisions to ADEM Admin. Code 335-7 of the Department's Water Division – Water Supply Program Rules in accordance with Ala. Code § 22-22A-8 (2006 Rplc. Vol.) and Ala. Code § 41-22-4 (2000 Rplc. Vol.); and

WHEREAS, a public hearing was held before a representative of the Alabama Department of Environmental Management designated by the Environmental Management Commission for the purpose of receiving data, views and arguments on the amendment of such proposed rules; and

WHEREAS, the Alabama Department of Environmental Management has reviewed the oral and written submissions introduced into the hearing record, and has prepared a concise statement of the principal reasons for and against the adoption of the proposed rules incorporating therein its reasons for the adoption of certain revisions to the proposed rules in response to oral and written submissions, such revisions, where appropriate, having been incorporated into the proposed rules attached hereto; and

WHEREAS, the Environmental Management Commission has considered fully all oral and written submissions respecting the proposed amendments and the Reconciliation Statement prepared by the Alabama Department of Environmental Management.

NOW THEREFORE, pursuant to Ala. Code. §§ 22-22A-5, 22-22A-6, 22-22A-8 (2006 Rplc. Vol.), and Ala. Code. § 41-22-5 (2000 Rplc. Vol.), as duly appointed members of the Environmental Management Commission, we do hereby adopt and promulgate these revisions to division 335-7 [335-7-7-.03/Distribution Facilities Design and Construction Requirements (Amend)] of the Department's Water Division – Water Supply Program rules, administrative code attached hereto, to become effective forty-five days, unless otherwise indicated, after filing with the Alabama Legislative Services Agency.

ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION

ADEM Admin. Code division 335-7 – Water Supply Program

IN WITNESS WHEREOF, we have affixed our signatures below on this 21st day of June 2019.

APPROVED:

DISAPPROVED:

ABSTAINED:

This is to certify that this Resolution is a true and accurate account of the actions taken by the Environmental Management Commission on this 21st day of June 2019.

Samuel L. Miller, Chair
Environmental Management Commission
Certified this 21st day of June 2019

335-7-7-.03 Distribution Facilities Design And Construction Requirements. To prevent contamination of the drinking water, the following are required in the design and construction of drinking water facilities:

(a) Water Main Facility Requirements:

1. Water mains shall be constructed of materials which will neither contaminate nor allow deterioration of the water quality.

2. Gaskets, O-rings, and other products used for joining pipe, setting meters or valves, or other appurtenances shall not be made nor coated with materials which will support microbiological growth and shall be certified as meeting the specifications of the National Sanitation Foundation (NSF)/American National Standard Institute (ANSI) Standard 61.

3. Water mains permitted by the Department shall be properly pressure tested and disinfected after installation. Copies of the pressure test and bacteriological results showing absence of coliform shall be provided to the Department along with a request for a final inspection prior to the setting of meters to serve customers on these lines.

4. Unless otherwise approved by the Department, the following applies when installing water mains after January 1, 2013;

(i) A minimum horizontal separation of five feet shall be maintained between water mains and sanitary sewer mains.

(ii) When water and sewer main crossings are necessary, place a continuous casing around one of the mains to allow a minimum five-foot separation between each end of the cased and uncased main.

(iii) Where possible, install the water main such that the top elevation of the sewer main is a minimum of 18 inches below the bottom elevation of the water main.

(iv) Unless adequately cased to protect against cross contamination, do not install any water main such that it comes in contact with any part of a sewer manhole, septic tank field lines, or soil saturated with organic solvents or gasoline.

(b) Pumping stations shall be located or constructed so that the pumps and piping will be protected from flooding and shall be designed and operated in such a manner as to allow satisfactory pressure and service to customers on the suction and discharge side of the station.

(c) Finished Water Storage Requirements:

1. An uncovered finished water storage reservoir used to store water

that will undergo no further treatment except residual disinfection and is open to the atmosphere is prohibited.

2. All finished water storage structures shall have suitable water tight roofs, hatches, and covers to exclude outside contamination.

3. Access manholes shall be provided with a locking mechanism.

4. Clearwells and pumping sumps associated with surface treatment plants may not be constructed adjacent to unfinished water units when the compartments are separated by a single wall.

5. All metal water storage facilities shall be protected by paints or other protective coatings. Inside paint systems shall not use lead primer but shall otherwise conform to AWWA D102 or latest revision Coating Steel Water- Storage Tanks or other standards accepted by the Department.

6. Protective coatings shall be used and applied in such a manner as to prevent contamination of the water in contact with these coatings.

7. Storage tanks permitted after December 31, 2006 shall meet the following requirements:

(i) Shall provide for a minimum fluctuation of 50% in water height during all normal operating conditions. Deviations must have prior written approval from the Department. Deviations from this requirement must be requested in writing. The request must include reasons the deviation should be granted and the deviation cannot be made until written approval is received by the Department.

(ii) Shall minimize water age and shall provide adequate mixing of water. Inlet pipe diameters or wet risers greater than 36 inches are not allowed unless approved by the Department. The request must be in writing and include reasons for the larger diameter and include design calculations showing that the tank will mix properly and water age will be minimized.

(iii) Shall be designed to allow the water storage tank to be removed from service for cleaning and repair as required by the Water Storage Tank Maintenance section of this chapter.

(iv) Shall be properly disinfected and upon refilling, two bacteriological samples must be collected showing absence of coliform prior to use. Documentation of the disinfection and bacteriological analyses information must be provided to the Department along with a request to place the tank into service.

Author: Joe Alan Power, Edgar Hughes, Dennis D. Harrison.
Statutory Authority: Code of Alabama 1975, §§ 22-23-33, 22-23-49, 22-22A-5, 22-22A-6.
History: May 23, 1977; **Amended:** Repealed and readopted: January 4, 1989; **Amended:** Effective: October 31, 1990; **Amended:** Effective: December 5, 1990. **Amended:** Effective: June 7, 2000; **Amended:** Effective: January 28, 2004; **Amended:** Effective: December 12, 2005; **Amended:** Effective: January 22, 2008; **Amended:** Effective: September 25, 2012; **Amended:** Filed: June 25, 2019; Effective: August 9, 2019.

Attachment 7

BEFORE THE ENVIRONMENTAL MANAGEMENT COMMISSION
OF THE
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

In the matter of:	)	
	)	
Shady Side Farm, LLC	)	
	)	
Petitioner,	)	
	)	EMC Docket No. 19-05
v.	)	
	)	
Alabama Department of Environmental Management,	)	
	)	
Respondent.	)	

ORDER

Before the Commission in the above matter is the *Joint Motion to Suspend Administrative Appeal*, submitted by Petitioner, Shady Side Farm, LLC and Respondent, ADEM, and having considered the same, the Commission hereby ORDERS, ADJUDGES, and DECREES as follows:

1. That the *Joint Motion to Suspend Administrative Appeal* is hereby granted; and

2. That this action has been taken and this Order shall be deemed rendered effective as of the date shown below; and

3. That a copy of this Order along with a copy of the *Joint Motion to Suspend Administrative Appeal*, attached hereto as Exhibit A, and made a part hereof, shall be forthwith served upon each of the parties hereto either personally, or by certified mail, return receipt requested.

ISSUED this 21st day of June 2019.

APPROVED:

Commissioner

Commissioner

Commissioner

Commissioner

Commissioner

Commissioner

Commissioner

Commissioner

DISAPPROVED:

Commissioner

Commissioner

Commissioner

ABSTAINED:

Commissioner

This is to certify that this Order is a true and accurate account of the actions taken by the Environmental Management Commission on this 21st day of June 2019.

Samuel L. Miller, Chair
Environmental Management Commission
Certified this 21st day of June 2019

Exhibit A

Before the
Alabama Environmental Management Commission

SHADY SIDE FARM, LLC,	)	
	)	
Petitioner,	)	
	)	
v.	)	EMC Docket No. 19-05
	)	
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	)	
	)	
Respondent.	)	

JOINT MOTION TO SUSPEND ADMINISTRATIVE APPEAL

COMES NOW, the Petitioner, Shady Side Farm, LLC ("Shady Side Farm") and Respondent, Alabama Department of Environmental Management (the "Department") (collectively the "Parties"), and hereby submit this joint motion to suspend and hold Shady Side Farm's Appeal and Request for Hearing in abeyance to give the Parties the opportunity to resolve this matter without a hearing. In support thereof, the Parties state as follows:

1. The Department issued a Notice of Violation to Shady Side Farm on April 18, 2019. **(Attached hereto as Exhibit A).**

2. The Notice of Violation, among other things, alleged that Shady Side Farm violated NPDES permitting requirements.

3. Shady Side Farm filed a Notice of Appeal and Request for Hearing on May 14, 2019. **(Attached hereto as Exhibit B).**

4. As stated in the Notice of Appeal and Request for Hearing, Shady Side Farm contends that Shady Side Farm is solely a farming operation with only farming construction activity and is thus exempt from NPDES permitting requirements pursuant to Ala. Admin. Code

335-6-6-.03. However, the Department contends, pursuant to ADEM Admin. Code r. 335-6-12.11(6)(a)(3)(d), that an exemption for farming activity exists if certain conditions are met. The Department further contends that at the time of the issuance of the Notice of Violation, those conditions were not met.

5. Shady Side Farm has been consulting with engineer Joel Seawell of Erosion Pros, LLC in an effort to address concerns of the Department.

6. Despite the Notice of Appeal and Request for Hearing, Shady Side Farm responded to the Department's Notice of Violation letter on May 17, 2019. **(Attached hereto as Exhibit C).**

7. Shady Side Farm, along with Joel Seawell, have been working diligently with the Department to address concerns and resolve this matter without conducting a hearing before a hearing officer.

8. For the aforementioned reasons, the Parties jointly request that this administrative appeal be held in abeyance to give the Parties the opportunity to resolve this matter without a hearing.

Respectfully submitted, this the 30th day of May, 2019.

/s/ Robert E. L. Gilpin

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Morgan Eason Chappell. Esq.
Gilpin Givhan, PC
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Attorneys for Shady Side Farm, LLC

/s/ Rebecca E. Patty

Rebecca E. Patty, Esq.
Alabama Department of Environmental Management
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Email: REP@adem.alabama.gov
Attorney for Alabama Department of Environmental Management

EXHIBIT A

91 7199 9991 7038 0574 3751

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

April 18, 2019

CERTIFIED MAIL

Loring White
Shady Side Farms, LLC
9270 County Road 222
Five Points, AL 36855

RE: NOTICE OF VIOLATION – Need To Apply
FID 61643
Facility/Site: Shady Side Farm
Chambers County (017)

Dear Mr. White:

Attached please find a report prepared as a result of an inspection conducted at the above referenced facility on April 4, 2019.

The following deficiencies or violations noted during the inspection constitute violations of the Alabama Water Pollution Control Act Ala. Code, §§22-22-1 through 22-22-14 (2006 Rplc. Vol.), and ADEM Admin. Code rs. 335-6-12.

1. A review of our records indicates that ADEM permit coverage for the facility has not been applied for and/or obtained.

2. Appropriate, effective Best Management Practices (BMPs) for the control of pollutants in stormwater run-off have not been fully implemented and regularly maintained to the maximum extent practicable resulting in the potential for uncontrolled discharges of sediment, turbidity and other pollutants to a water of the State of Alabama.

3. Accumulation of sediment was observed offsite and/or in State waters downgradient/downstream of stormwater discharge outlets at the facility.

4. Unprotected streambed(s) and/or unstabilized raised crossing structures were observed in waters of the State of Alabama, resulting in the potential for water quality impacts due to crossing structure erosion and/or failure, streambank scour, sediment deposition, soil compaction, rutting, etc. Accumulation of sediment was observed downstream of the stream crossings.

Please be advised that effective erosion control measures, sediment control measures, and other site pollution management practices are required to be designed, implemented, and continually maintained consistent with the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* (http://conservealabama.gov/resources/erosion-and-sediment) to prevent/minimize pollution discharges to the maximum extent practicable from a 2-year, 24-hour precipitation event.

In addition, BMPs are required to be implemented to control pollutant discharges resulting from the volume of normally expected or predicted precipitation for the time period that the disturbance is planned or is ongoing for the duration of the project.

NPDES Construction Site means construction activities that are required to obtain NPDES permit coverage under this Chapter. An NPDES Construction Site is construction that disturbs 1 acre or greater or will disturb less than 1 acre but is part of a larger common plan of development or sale whose total land disturbing activities total 1 acre or greater. An NPDES construction site also includes construction sites, irrespective of size, whose stormwater discharges have a reasonable potential to be a significant contributor of pollutants to a water of the State, or whose stormwater discharges have a reasonable potential to cause or contribute to a violation of an applicable Alabama water quality standard as determined by the Department. (ADEM Admin. Code r. 335-6-12-.02(m))

Sites, irrespective of size, whose stormwater discharges have a reasonable potential to be a significant contributor of pollutants to a water of the state, require permit coverage, as determined by the Department. (ADEM Admin. Code r. 335-6-12-.02(m))

Sites, irrespective of size, whose stormwater discharges have a reasonable potential to cause or contribute to a violation of an applicable Alabama water quality standard, require permit coverage, as determined by the Department. (ADEM Admin. Code r. 335-6-12-.02(m))

Based on the results of the inspection, the owner/operator should submit a complete and correct Notice of Intent (NOI), including the appropriate permit fee, no later than ten (10) days from the receipt of this letter. Your permit fee may include the assessment of a Greenfield fee since your facility was inspected prior to the submittal of your application. The NOI and the permit fee should be submitted electronically via the eNOI system for the NPDES Construction General Permit on the ADEM website at https://app.adem.alabama.gov/eNOI/.

Please call the ADEM Water Division Construction Permits Section at 334-271-7823 or email cswmail@adem.alabama.gov should you have any questions regarding the construction stormwater permitting requirements, permit fees, or the construction stormwater eNOI application process.

In addition, not later than ten (10) days from the receipt of this letter, the owner/operator is required to submit the following to the ADEM's Field Operations Division, Attn: Clifton McRoy at Office of Field Services, 1350 Coliseum Blvd, Montgomery, AL 36110:

1. Proof of NOI submission, such as an eNOI system submission receipt requesting permit coverage for this site, or proof of coordination in writing with the ADEM Water Division Construction Permits Section regarding construction stormwater permitting requirements for this site.

2. A written report prepared and certified by a QCP meeting the requirements of ADEM Admin. Code r. 335-6-12-.02(r), describing the steps taken to correct the violations noted above. The report shall include supporting documentation such as photographs of completed/repaired/enhanced BMPs, and any other data necessary to support the QCP's certification that full compliance with all ADEM requirements.

3. Documentation that a site assessment has been conducted of all existing BMPs and that said BMPs are sufficiently designed and properly implemented and maintained to prevent and/or minimize erosion and to maximize sediment removal resulting from a 2-year, 24-hour precipitation event, and to prevent pollution to the maximum extent practicable from leaving the site, entering offsite conveyances, and/or discharging into affected State waters, in accordance with ADEM requirements, and the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas, September 2014. (NPDES General Permit ALR100000 Permit Part III.)

4. Documentation that a site assessment has been conducted of all existing BMPs and that said BMPs are sufficient to meet the requirements of ADEM Admin. Code r. 335-6-12-.21.

5. A detailed sediment loss analysis and plan for removal, remediation, and/or mitigation of sediment and other pollutants deposited offsite and/or in State waters, wetlands, and/or other waters, to include a schedule of compliance and calculations/estimates of sediment lost from each discharge point. (Permit Part III. I. 3.) Please be advised that removal/remediation of offsite sediment is not authorized to commence until the detailed sediment removal/remediation plan is reviewed and accepted by ADEM in writing.

6. A detailed plan for the removal and/or permanent stabilization of the crossing(s) in the unnamed tributaries to Veasey Creek.

Failure to submit the document(s) required by this notice is a violation of Water Pollution Control Act, Ala. Code, §22-22-9(e) (2006 Rplc. Vol.) for which civil penalties or criminal fines may be imposed. Please be advised that all requirements of ADEM Admin. Code r. 335-6-12, are in effect related to this site.

The determination to pursue further enforcement action will be dependent on the timeliness and content of your response to this letter, including but not limited to documentation of site corrective actions implemented.

If you have any questions concerning this matter, please contact **Clifton McRoy by email at ccm@adem.alabama.gov or by phone at (334) 394-4315.**

Sincerely,

Anthony Scott Hughes, Chief
Field Operations Division

ASH/ccm File: ENOV

Enclosure: Inspection Report

ADEM Alabama Department of Environmental Management
GENERAL SITE INSPECTION REPORT

Company/Operator/Permittee: Shady Side Farms, LLC		Phone Number: 334-782-3672	
Mailing Address: 9270 County Road 222	City Five Points	State AL	Zip Code 36855
Responsible Official/Operator Name: Loring White			

Facility Name: Shady Side Farms	Facility ID # or Permit #: FID 61643	Inspection Entry Date & Time: 4/4/2019 10:10 AM	County: Chambers
Activity Description: Pastureland	NMS Inspection #: 64577	Inspection Exit Date & Time: 4/4/2019 1:45 PM	Report Complete Date: 4/9/2019

Inspection Type: ☒CEI ☐CSI ☐Inspection Request Routine ☐ Complaint ☒ Photos Taken ☒ Samples Collected ☐

Township, Range, Section: T23N, R27E, S3, 4, 9, 10

Physical Address/Location Description (include nearest city): 9270 CR 222, Five Points, AL 36855

Entrance Latitude & Longitude: 33.011904 -85.331016

Discharge Point(s) Latitude & Longitude: * 32.998243 -85.334062, 33.006501 -85.331001, 33.006538 -85.329826, 33.006324 -85.320280, 33.012152-85.316953

Receiving Water(s): Veasey Creek, UTs to Veasey Creek, UTs to Wells Creek

Weather Conditions: Mostly cloudy, cool, light breeze

Observations/Comments: *The Discharge Point(s) Lat. & Longs are locations where receiving water(s) exit the facility property.

Inspection conducted in response to a complaint received by the Department (complaint #6N-003UD1S67). The complaint indicates runoff from land conversion affecting private pond and property.

The on-site representative advised that the land disturbance activity is converting land usage from silviculture to pastureland. Additionally, the site representative indicated, the property was purchased from Timberlands II, LLC without timber; Timberlands II, LLC harvested the timber.

An impoundment of a drainage feature has been constructed. Areas of disturbance appear to have been recently graded. Some areas of disturbance appear to have been recently mulched and seeded. At the time of inspection a hydro-seeder and hay blower were observed on-site.

Silt fence appears to be improperly installed and/or maintained. Off-site deposition of sediments observed in streams and on adjacent property. Erosion rills and gullies observed on-site. Low water stream crossings do not appear to be adequately stabilized. Stream banks near low water crossing do not appear to be adequately protected.

Name(s) of On-site Representative(s) and Phone Numbers: Loring White, 334-782-3672

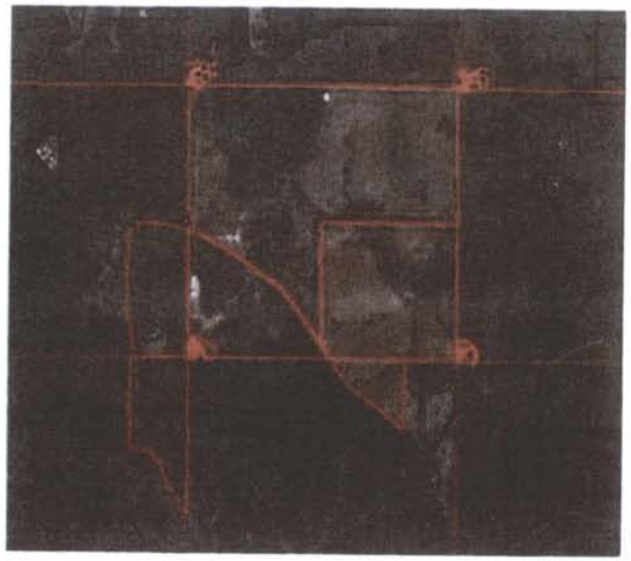
Name of Inspector: Clifton McRoy	Signature of Inspector: Clifton C. McRoy	Date: 4/10/2019
Name of Reviewing Supervisor: Shelane Bergquist	Signature of Reviewing Supervisor:	Date: 4/10/19

FOD Office: ☐ Birmingham ☐ Decatur ☐ Mobile ☒ Montgomery

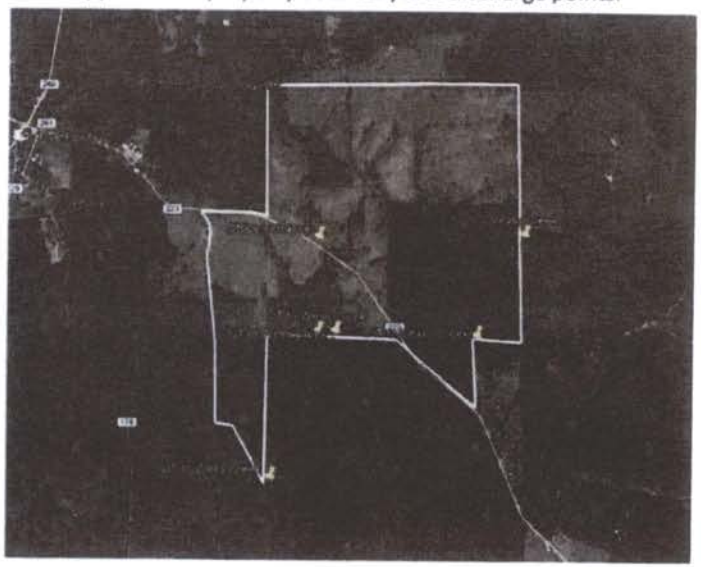
SHADY SIDE FARM, LLC
FID 61643
CHAMBERS COUNTY
APRIL 4, 2019

Shady Side Farm Plat Map

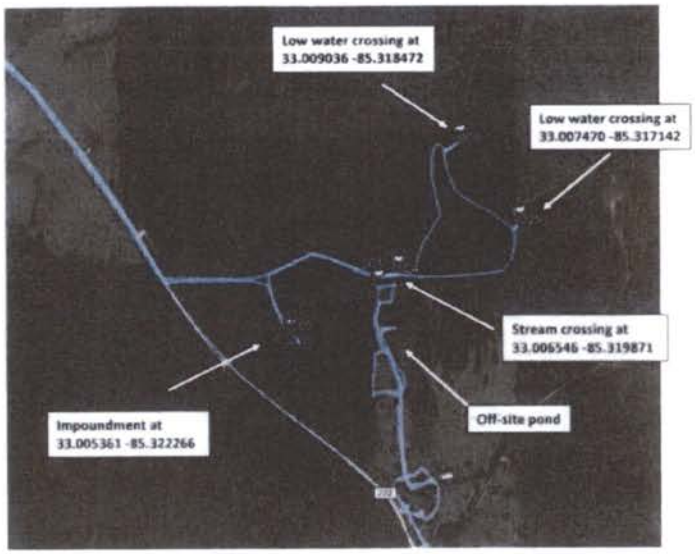
Shady Side Farm Plat Map Aerial Overlay



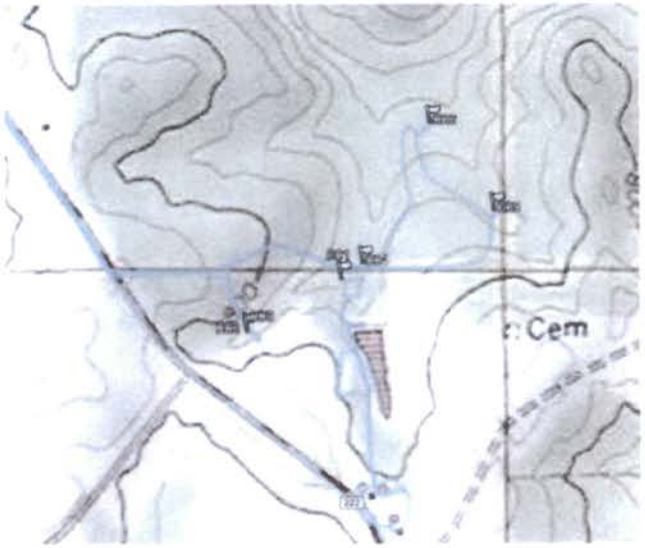
Approximate property boundary and discharge points.



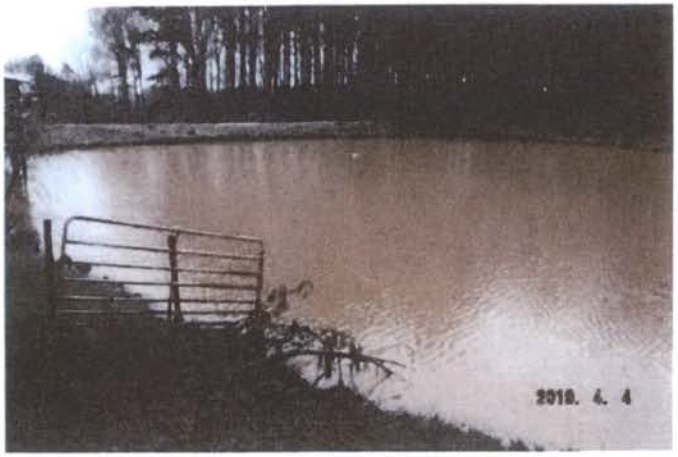
Shady Side Farm GPX track.



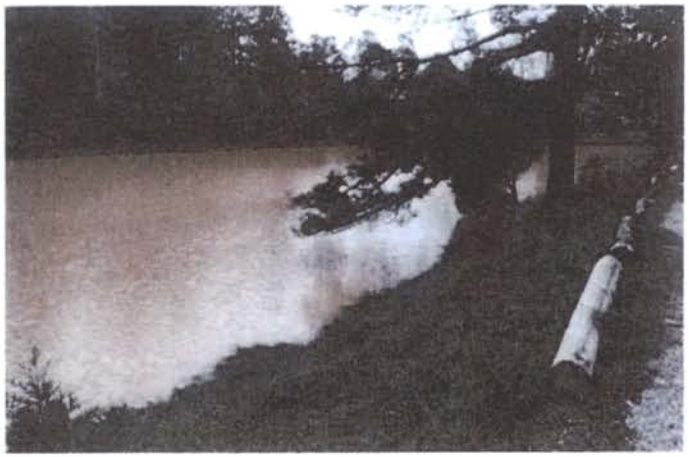
Shady Side Farm Topographic Map



Private pond off site of Shady Side Farm



Private pond off site of Shady Side Farm



Overview

10

Overview

Overview

11

Silt fence did not appear to be properly implemented or maintained.

12

Erosion rills and gullies observed off site

Silt fence did not appear to be properly implemented or maintained

Silt fence did not appear to be properly implemented or maintained

Overview

Overview

17

Overview

18

Erosion rills and gullies observed on site.
Slopes did not appear to be properly stabilized.

19

Sediment observed leaving the site and is being deposited on adjacent property.

20

Sediment observed leaving the site and is being deposited on adjacent property

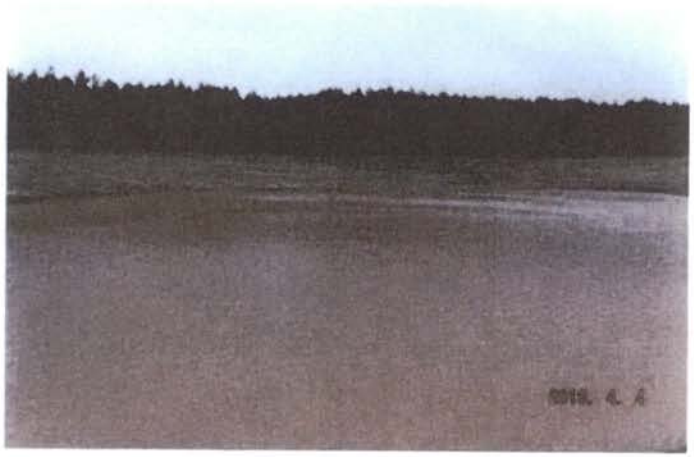
Stream crossing at 33.006546 -85.319871
Sediment observed leaving the site and is being deposited on adjacent property
Sediment observed leaving the site and entering an unnamed tributary to Veasey Creek

Sediment observed leaving the site and is being deposited on adjacent property

Overview
Impoundment constructed at 33.005361 -85.322266

Overview

Impoundment constructed at 33.005361 -85.322266



Overview - Dam of impoundment, view facing northwest

Overview - Dam of impoundment, view facing southeast

View facing northeast from dam of impoundment
Slopes did not appear to be properly stabilized
Erosion rills and gullies observed on site

Emergency spillway of dam
Slopes did not appear to be properly stabilized
Erosion rills and gullies observed on site

Overview. Slopes appear to be recently graded

Overview. Slopes appear to be recently graded.

Overview. Slopes appear to be recently graded.

Low water stream crossing at [illegible] 1714.
Stream crossing does not appear to be adequately stabilized.

Downstream of low water stream crossing at [illegible] 1714.
Stream banks did not appear to have adequate protection.

Downstream of low water stream crossing at 33.007470, -85.317142
Sediment observed leaving the site and entering an unnamed tributary to Veasey Creek

Overview. Area appears to have been recently graded

Low water stream crossing at 33.009336, -85.318472

Upstream of low water stream crossing at 33.009336, -85.318472

Low water stream crossing at: 34.009036, -86.318472

EXHIBIT B

NOTICE OF APPEAL AND REQUEST FOR HEARING

TO: Environmental Management Commission
Post Office Box 301463
Montgomery, Alabama 36130-1463

Shady Side Farm, LLC ("Shady Side Farm") files this *Notice of Appeal and Request for Hearing* in accordance with the Code of Alabama and the Alabama Department of Environmental Management Commission Administrative Code. For its appeal, Shady Side Farm states as follows:

A. Name, mailing address, and telephone number of the person making the request.

Shady Side Farm, LLC
c/o Loring White
9270 County Road 222
Five Points, Alabama 36855

B. A short and plain statement identifying the administrative action of the Department being contested.

Shady Side Farm contests the following actions by the Alabama Department of Environmental Management (the "Department"):

(i) Issuance of Notice of Violation (attached hereto as **Exhibit A**);
(ii) Determination that Best Management Practices (BMPs) have not been fully implemented and regularly maintained;
(iii) Determination that Shady Side Farm qualifies as a NPDES Construction Site; and
(iv) Determination that Shady Side Farm is required to obtain a NPDES permit.

C. A short and plain statement of the threatened or actual injury suffered by the person making the request as a result of the administrative action of the Department.

Shady Side Farm has and will continue to sustain substantial economic damage based on its efforts to comply with instructions from the Department. Since receiving the Notice of Violation, Shady Side Farm has been consulting with engineer Joel Seawell of Erosion Pros, LLC in an effort to address all concerns of the Department. Shady Side Farm and Mr. Seawell have worked in conjunction along with the Natural Resources Conservation Service (NRCS), to ensure that the farming operation is properly managed. Shady Side Farm has done all of this despite the fact that Shady Side Farm is not required to obtain NPDES permit

coverage due to the fact that it is an agricultural activity exempt from the NPDES permitting requirements, as discussed further below.

D. A short and plain statement of the alleged error(s) made by the Department in the administrative action.

The Department issued the Notice of Violation to Shady Side Farm for a NPDES permit violation, despite the fact that Shady Side Farm is solely a farming operation with only farming construction activity and is thus exempt from NPDES permitting requirements. Ala. Admin. Code 335-6-6-.03 provides an exception to the regulation requiring a valid NPDES permit for any discharge of pollutants into waters. This exception applies to discharge "[f]rom non-profit source agricultural and silvicultural activities, including runoff from orchards, cultivated crops, pastures, range lands and forest lands." Ala. Admin. Code 335-6-6-.03(1)(d). Thus, Shady Side Farm is exempt from NPDES permitting requirements and the Department erred by issuing the Notice of Violation.

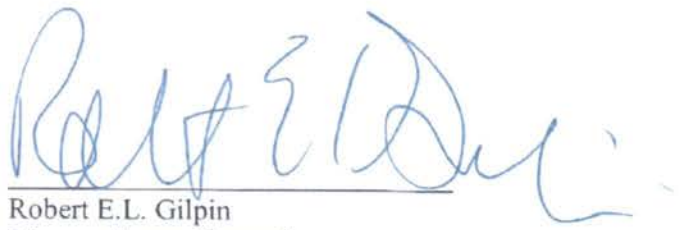
E. A short statement of the terms and conditions which the person making the request proposes that the Commission should include in an order modifying or disapproving the Department's administrative action.

The Commission should revoke the Notice of Violation.

F. The name, mailing address, and telephone number of the attorney for the person making the request, if represented by an attorney.

Robert E.L. Gilpin, Esq.
Morgan Eason Chappell, Esq.
Gilpin Givhan, PC
2660 EastChase Lane, Suite 300
Montgomery, Alabama 36117
(334) 244-1111

Submitted this 14th day of May, 2019.



Robert E.L. Gilpin
Morgan Eason Chappell

EXHIBIT A

to the Notice of Appeal and Request for Hearing on behalf of Shady Side Farm, LLC

91 7199 9991 7038 0574 3751

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

April 18, 2019

CERTIFIED MAIL

Loring White
Shady Side Farms, LLC
9270 County Road 222
Five Points, AL 36855

RE: NOTICE OF VIOLATION – Need To Apply
FID 61643
Facility/Site: Shady Side Farm
Chambers County (017)

Dear Mr. White:

Attached please find a report prepared as a result of an inspection conducted at the above referenced facility on April 4, 2019.

The following deficiencies or violations noted during the inspection constitute violations of the Alabama Water Pollution Control Act Ala. Code, §§22-22-1 through 22-22-14 (2006 Rplc. Vol.), and ADEM Admin. Code rs. 335-6-12.

1. A review of our records indicates that ADEM permit coverage for the facility has not been applied for and/or obtained.

2. Appropriate, effective Best Management Practices (BMPs) for the control of pollutants in stormwater run-off have not been fully implemented and regularly maintained to the maximum extent practicable resulting in the potential for uncontrolled discharges of sediment, turbidity and other pollutants to a water of the State of Alabama.

3. Accumulation of sediment was observed offsite and/or in State waters downgradient/downstream of stormwater discharge outlets at the facility.

4. Unprotected streambed(s) and/or unstabilized raised crossing structures were observed in waters of the State of Alabama, resulting in the potential for water quality impacts due to crossing structure erosion and/or failure, streambank scour, sediment deposition, soil compaction, rutting, etc. Accumulation of sediment was observed downstream of the stream crossings.

Please be advised that effective erosion control measures, sediment control measures, and other site pollution management practices are required to be designed, implemented, and continually maintained consistent with the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* (http://conservealabama.gov/resources/erosion-and-sediment) to prevent/minimize pollution discharges to the maximum extent practicable from a 2-year, 24-hour precipitation event.

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

In addition, BMPs are required to be implemented to control pollutant discharges resulting from the volume of normally expected or predicted precipitation for the time period that the disturbance is planned or is ongoing for the duration of the project.

NPDES Construction Site means construction activities that are required to obtain NPDES permit coverage under this Chapter. An NPDES Construction Site is construction that disturbs 1 acre or greater or will disturb less than 1 acre but is part of a larger common plan of development or sale whose total land disturbing activities total 1 acre or greater. An NPDES construction site also includes construction sites, irrespective of size, whose stormwater discharges have a reasonable potential to be a significant contributor of pollutants to a water of the State, or whose stormwater discharges have a reasonable potential to cause or contribute to a violation of an applicable Alabama water quality standard as determined by the Department. (ADEM Admin. Code r. 335-6-12-.02(m))

Sites, irrespective of size, whose stormwater discharges have a reasonable potential to be a significant contributor of pollutants to a water of the state, require permit coverage, as determined by the Department. (ADEM Admin. Code r. 335-6-12-.02(m))

Sites, irrespective of size, whose stormwater discharges have a reasonable potential to cause or contribute to a violation of an applicable Alabama water quality standard, require permit coverage, as determined by the Department. (ADEM Admin. Code r. 335-6-12-.02(m))

Based on the results of the inspection, the owner/operator should submit a complete and correct Notice of Intent (NOI), including the appropriate permit fee, no later than ten (10) days from the receipt of this letter. Your permit fee may include the assessment of a Greenfield fee since your facility was inspected prior to the submittal of your application. The NOI and the permit fee should be submitted electronically via the eNOI system for the NPDES Construction General Permit on the ADEM website at https://app.adem.alabama.gov/eNOI/.

Please call the ADEM Water Division Construction Permits Section at 334-271-7823 or email cswmail@adem.alabama.gov should you have any questions regarding the construction stormwater permitting requirements, permit fees, or the construction stormwater eNOI application process.

In addition, not later than ten (10) days from the receipt of this letter, the owner/operator is required to submit the following to the ADEM's Field Operations Division, Attn: Clifton McRoy at Office of Field Services, 1350 Coliseum Blvd, Montgomery, AL 36110:

1. Proof of NOI submission, such as an eNOI system submission receipt requesting permit coverage for this site, or proof of coordination in writing with the ADEM Water Division Construction Permits Section regarding construction stormwater permitting requirements for this site.

2. A written report prepared and certified by a QCP meeting the requirements of ADEM Admin. Code r. 335-6-12-.02(r), describing the steps taken to correct the violations noted above. The report shall include supporting documentation such as photographs of completed/repaired/enhanced BMPs, and any other data necessary to support the QCP's certification that full compliance with all ADEM requirements.

3. Documentation that a site assessment has been conducted of all existing BMPs and that said BMPs are sufficiently designed and properly implemented and maintained to prevent and/or minimize erosion and to maximize sediment removal resulting from a 2-year, 24-hour precipitation event, and to prevent pollution to the maximum extent practicable from leaving the site, entering offsite conveyances, and/or discharging into affected State waters, in accordance with ADEM requirements, and the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas, September 2014. (NPDES General Permit ALR100000 Permit Part III.)

4. Documentation that a site assessment has been conducted of all existing BMPs and that said BMPs are sufficient to meet the requirements of ADEM Admin. Code r. 335-6-12-.21.

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Failure to submit the document(s) required by this notice is a violation of Water Pollution Control Act, Ala. Code, §22-22-9(e) (2006 Rplc. Vol.) for which civil penalties or criminal fines may be imposed. Please be advised that all requirements of ADEM Admin. Code r. 335-6-12, are in effect related to this site.

The determination to pursue further enforcement action will be dependent on the timeliness and content of your response to this letter, including but not limited to documentation of site corrective actions implemented.

If you have any questions concerning this matter, please contact **Clifton McRoy by email at ccm@adem.alabama.gov or by phone at (334) 394-4315.**

Sincerely,

Anthony Scott Hughes, Chief
Field Operations Division

ASH/ccm File: ENOV

Enclosure: Inspection Report

ADEM Alabama Department of Environmental Management
GENERAL SITE INSPECTION REPORT

Company/Operator/Permittee: Shady Side Farms, LLC		Phone Number: 334-782-3672	
Mailing Address: 9270 County Road 222	City Five Points	State AL	Zip Code 36855
Responsible Official/Operator Name: Loring White			

Facility Name: Shady Side Farms	Facility ID # or Permit #: FID 61643	Inspection Entry Date & Time: 4/4/2019 10:10 AM	County: Chambers
Activity Description: Pastureland	NMS Inspection #: 64577	Inspection Exit Date & Time: 4/4/2019 1:45 PM	Report Complete Date: 4/9/2019

Inspection Type: ☒CEI ☐CSI ☐Inspection Request Routine ☐ Complaint ☒ Photos Taken ☒ Samples Collected ☐

Township, Range, Section: T23N, R27E, S3, 4, 9, 10

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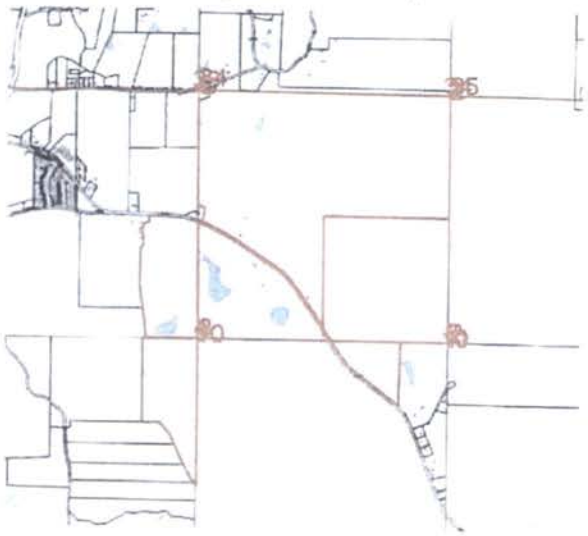
Name(s) of On-site Representative(s) and Phone Numbers: Loring White, 334-782-3672

Name of Inspector: Clifton McRoy	Signature of Inspector: Clifton C. McRoy	Date: 4/10/2019
Name of Reviewing Supervisor: Shelane Bergquist	Signature of Reviewing Supervisor:	Date: 4/10/19

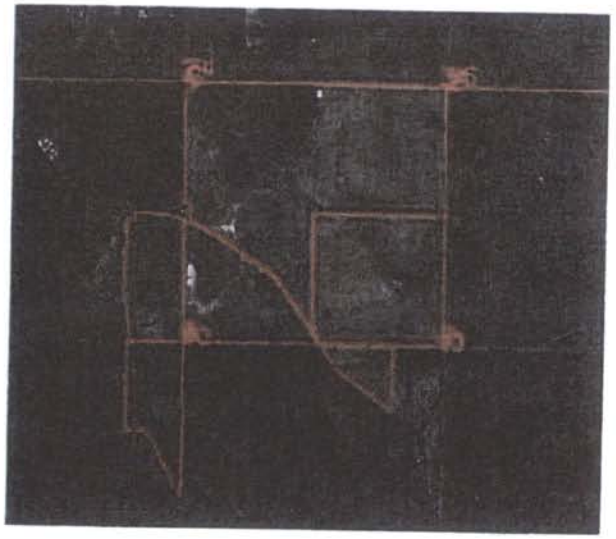
FOD Office: ☐ Birmingham ☐ Decatur ☐ Mobile ☒ Montgomery

SHADY SIDE FARM, LLC
FID 61643
CHAMBERS COUNTY
APRIL 4, 2019

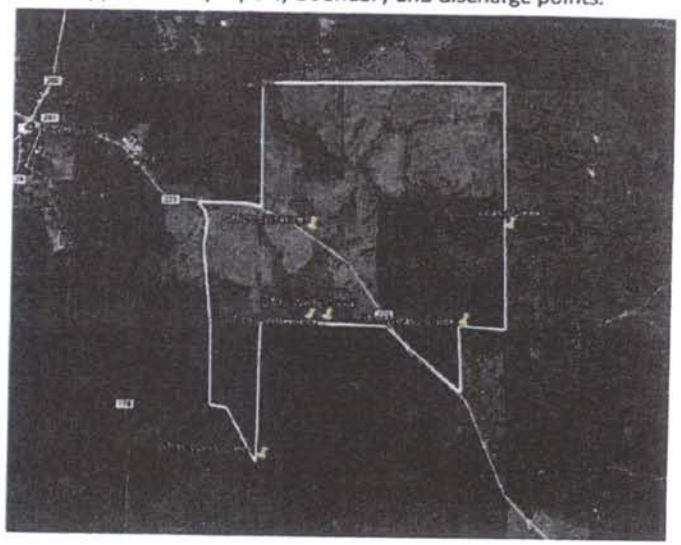
Shady Side Farm Plat Map



Shady Side Farm Plat Map Aerial Overlay



Approximate property boundary and discharge points.



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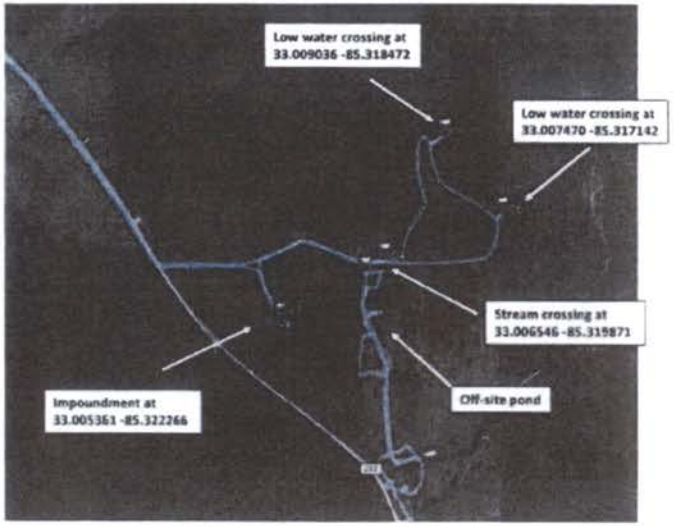
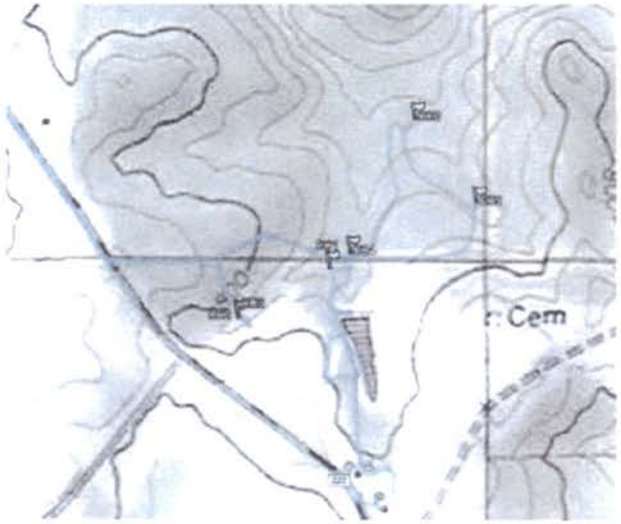
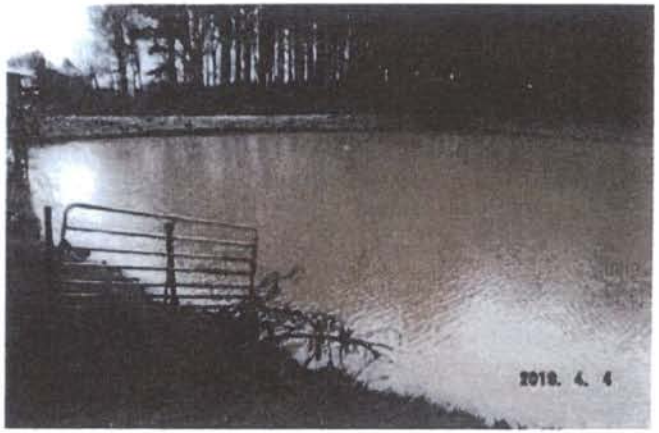


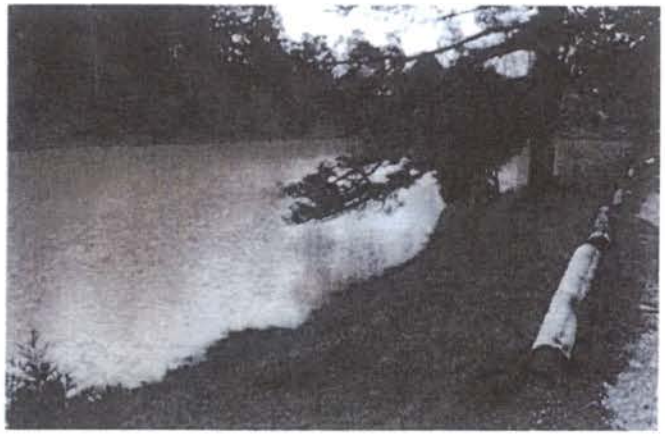
Shady Side Farm Topographic Map



Private pond off site of Shady Side Farm



Private pond off site of Shady Side Farm



Overview

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Overview

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Overview

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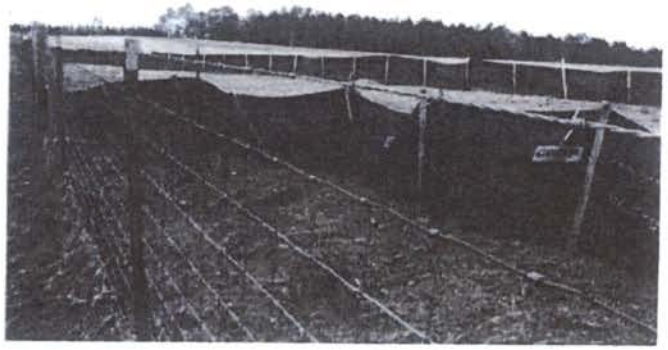
Silt fence did not appear to be properly implemented or maintained



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Erosion rills and gullies observed off-site

13

Silt fence did not appear to be properly implemented or maintained

14

Silt fence did not appear to be properly implemented or maintained

15

Overview

16

Overview

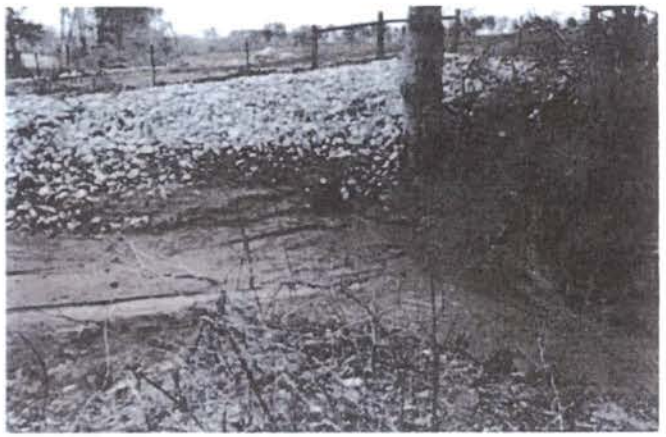
Overview

Erosion rills and gullies observed on site.
Slopes did not appear to be properly stabilized.

Sediment observed leaving the site and is being deposited on adjacent property.

Sediment observed leaving the site and is being deposited on adjacent property

Stream crossing at 33.006546, -85.319871
Sediment observed leaving the site and is being deposited on adjacent property
Sediment observed leaving the site and entering an unnamed tributary to Wesley Creek



Sediment observed leaving the site and is being deposited on adjacent property

Overview
Impoundment constructed at 33.005361, -85.322266

Overview

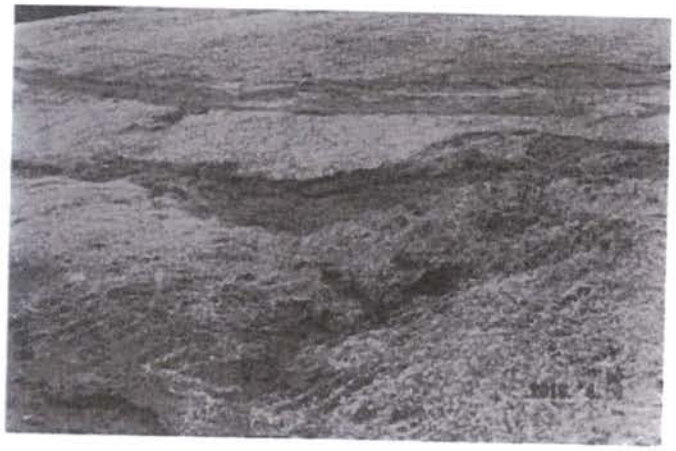
Impoundment constructed at 33.005361 -85.322266

Overview - Dam of impoundment, view facing northwest

Overview - Dam of impoundment, view facing southeast

View facing northeast from dam of impoundment
Slopes did not appear to be properly stabilized
Erosion rills and gullies observed on site

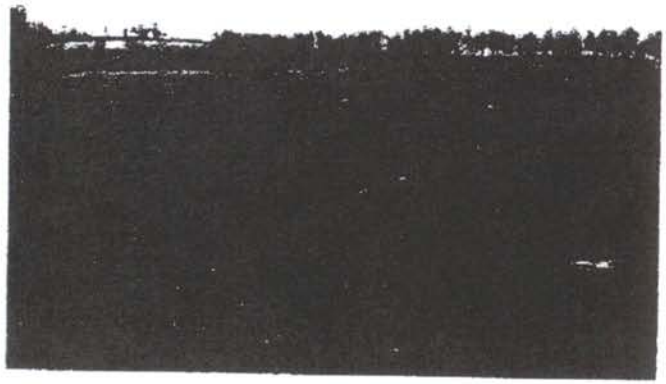
Emergency spillway of dam
Slopes did not appear to be properly stabilized
Erosion rills and gullies observed on site



Stream [illegible]

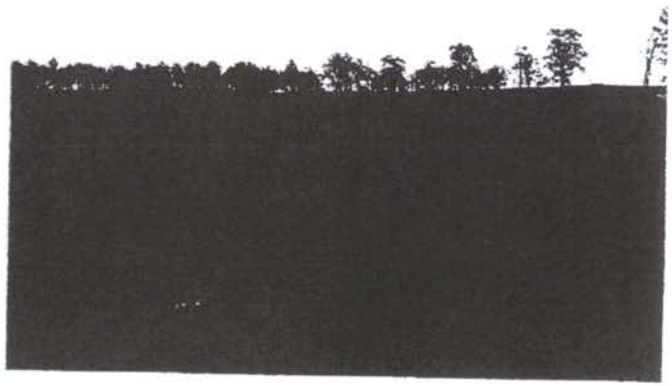
Overview. Slopes appear to be recently graded

-Overview. Slopes appear to be recently graded.



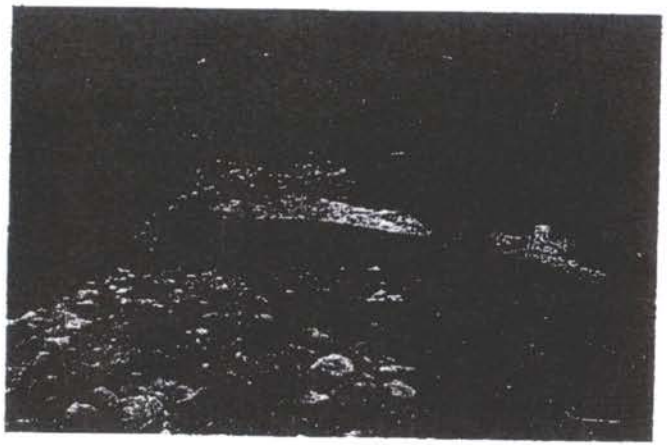
33

-Overview. Slopes appear to be recently graded.



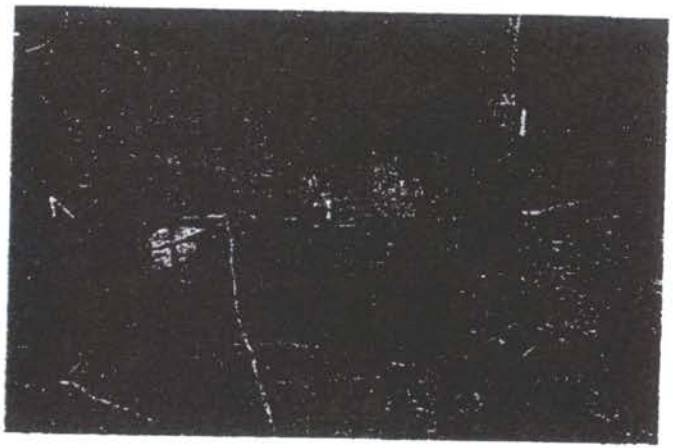
34

-Low water stream crossing at 33.007470 -85.317142
-Stream crossing does not appear to be adequately stabilized.



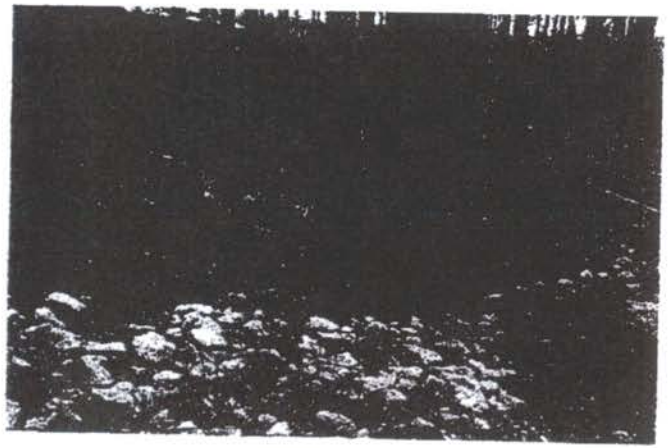
35

-Upstream of low water stream crossing at 33.007470 -85.317142.
-Stream banks did not appear to have adequate protection.



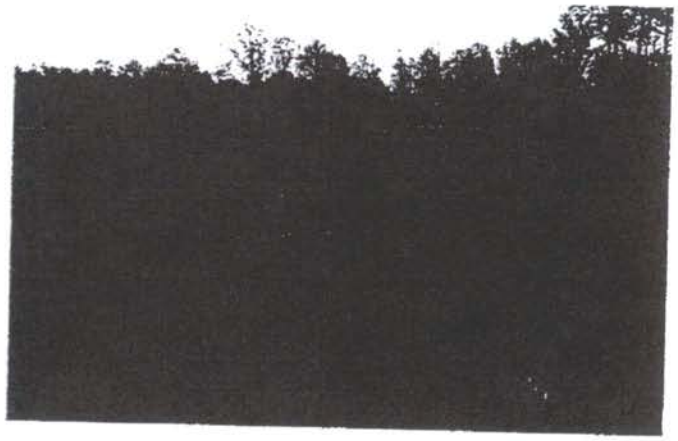
36

-Downstream of low water stream crossing at 33.007470 -85.317142.
-Sediment observed leaving the site and entering an unnamed tributary to Veasey Creek.



37

-Overview. Area appears to have been recently graded.



38

-Low water stream crossing at 33.009036 -85.318472.

39

-Upstream of low water stream crossing at 33.009036 -85.318472.

40

-Low water stream crossing at 33.009036 -85.318472.

41

EXHIBIT C

Erosion Pros LLC
ENVIRONMENTAL SPECIALISTS

May 17, 2019

Mr. Clifton McRoy
ADEM - Field Operations Division
Office of Field Services
1350 Coliseum Blvd.
Montgomery, AL 36110

RE: Shady Side Farms, LLC (FID 61643) / required Qualified Credentialed Professional (QCP) Certification Report and Notice of Violation (NOV) Response

Dear Mr. McRoy:

Thank you again for your time on this project. This letter will serve as Shady Side Farms, LLC's (SSF) response to ADEM's NOV Letter dated April 18, 2019 and received by SSF on April 30, 2019. It is our understanding that the Permittee is appealing this NOV through legal counsel – however – Erosion Pros is providing this information as requested by ADEM. SSF desires to work with ADEM on all concerns but is appealing the NOV on the basis that they believe that the NPDES regulations do not apply to this property because it is a 100% agricultural operation.

We discussed the Shady Side Farms, LLC activity on the phone approximately ten (10) days ago in which the Department acknowledged certain facts about this property and requested that Erosion Pros submit the following information by no later than Friday May 17, 2019:

1. AL Qualified Credentialed Professional (QCP) certification.
2. Correspondence with the Natural Resources Conservation Service (NRCS) regarding the agricultural activity's Conservation Plan.
3. Current Site Photos
4. Offsite Sediment Loss Analysis and Removal-Remediation-Mitigation Plan

All of these requested items are included in this report.

1975 Mall Blvd. Suite #104 Auburn, AL 36830
Phone: 334.502.4722 Fax: 334.502.5315

www.erosionpros.com

We hope that ADEM will find our report satisfactory. We look forward to working with ADEM to accomplish the state's mission which = to assure for all citizens of the State a safe, healthful, and productive environment.

If you should have any questions, please contact my office at 334-502-4722.

QCP Certification:

Certification by Joel D. Seawell
Certified Professional in Erosion and Sediment Control # 2799

Enclosures:

1. Correspondence with the Natural Resources Conservation Service (NRCS) regarding the agricultural activity's Conservation Plan.
2. May 1, 2019 Site Photos
3. Offsite Sediment Loss Analysis and Removal-Remediation-Mitigation Plan

USDA

United States Department of Agriculture

5/9/2019

SUBJECT: Conservation Plan

TO: Clifton McRoy
ADEM -Field Operations Division
Office of Field Services
1350 Coliseum Blvd.
Montgomery, AL 36110

This correspondence is to inform you that Mr. J. Loring White with Shady Side Farms, LLC has been in contact with my office and requested our assistance with regards to his resource concerns on Farm 3739 Tract 1199 (as currently established with the Farm Service Agency) located in Section 10, Township 23N, Range 27E in Chambers County, AL.

I am working directly with Mr. White to develop a Conservation Plan that will serve as a guiding document for proper stewardship with regards to the intended goals of the farming operation. This document will center on the long-term objectives of the farm while addressing the immediate issues and resource concerns that arise.

As part of the planning process, a resource inventory and Environmental Evaluation will be performed, as well as documentation of any Cultural Resources. The plan will include all the necessary NRCS practice standards and specifications and any engineering designs needed. Once developed, the plan will be agreed upon by the producer and ultimately approved by the Chambers County Soil and Water Conservation District Board.

Thank you,

Patrick Rohling
District Conservationist
USDA-NRCS Alabama

CC: J. Loring White
Joel Seawell

Natural Resources Conservation Service
OPELIKA SERVICE CENTER
600 S. 7TH STREET
OPELIKA, AL 36801
Phone: (334) 745 - 4791 Fax: (855) 747 - 0598









Detailed Offsite Sediment-Solids Loss Analysis and Proposed Removal-Remediation-Mitigation Plan

Shady Side Farms, LLC (FID 61643)

May 17, 2019

Erosion Pros LLC
1975 MALL BLVD . STE 104 AUBURN, AL 36830 PH 334.502.4722 FAX: 334.502.5315

Detailed Offsite Sediment-Solids Loss Analysis and Proposed Removal-Remediation-Mitigation Plan

Shady Side Farms, LLC (FID 61643)
Five Points, Chambers County, Alabama

TABLE OF CONTENTS

Detailed Offsite Sediment-Solids Loss Analysis and Proposed Removal-Remediation-Mitigation Plan

Shady Side Farms, LLC (FID 61643)
Five Points, Chambers County, Alabama

1.0 Introduction

Erosion Pros, LLC (Erosion Pros) has been retained to estimate off-site sediment loss at the above referenced farm. Erosion Pros has collected data and has utilized the Modified Universal Soil Loss Equation (MUSLE) method to develop an estimate of potential soil loss from the farm.

2.0 Methodology

Inspection photographs, rainfall data, and site conditions were used to run the MUSLE equation.

The MUSLE equation method does not account for soil captured in Best Management Practices (BMPs) on-site. It does account for erosion control practices such as erosion control blankets, turf reinforcement mats, and vegetation. The calculations presented in this report assume that no sediment control BMPs are in place to capture sediment.

Based on Erosion Pros inspections, ADEM inspections, and the collected field data, it is fair to assume that the BMP treatment trains (that were implemented during agriculture) provided for an approximate and variable % reduction(s) in soil loss controlled.

The work on this agricultural farm property began in January 2018. Rainfall data (and site conditions) from January 2018 through May 2019 were used to accurately determine the quantity of sediment that may have been contributed to the system.

The MUSLE equation includes combined settleable, suspended, and turbid solids.

3.0 Site Summaries

Farm Outfall:

The disturbed farm area in question drains to one primary location. Stormwater generally drains north to northwest from the farm to the primary farm outfall. The transported/deposited sediment is significant – however – it is contained on-site within Shady Side Farms. LLC (SSF / Owner) property. The farm is now stabilized.

Based on the MUSLE (from January 2018 through May 2019) at this location, an estimated 7,511.23 cubic yards of sediment was potentially discharged from the site. The vast majority of the area that drains to this location had been stabilized with vegetation. Mulching, and erosion control blankets. No further sediment transport is anticipated – however minor work remained necessary in the drainage channel below the ADEM referenced Impoundment at Lat/Lon: 33.005361 / -85.322266. The Owner has done a good job controlling this drainage – however – the Owner and Erosion Pros have agreed that additional check structures should be placed here to help slow the velocity of the flow and to help stabilize this drainage feature.

The timeline for soil loss has been determined sing the following:

SSF purchased the land from Timberland II property in July 2017. Timberland started cutting their trees January 2018, and finished in February 2018. SSF started removing the stumps and debris in February 2018. Johnson & Son (SSF land clearer) finished around October 2018. SSF drilled seed all during these times and planted grass during these times. May 2019 SSF implemented heavy grassing efforts in accordance with NRCS standards. The work is now nearly complete and all worked areas are now stabilized.

Therefore, it is fair to assume that (based on this schedule and our knowledge of the property) standard farming BMPs have retained an approximate % of the calculated sediment loss resulting in approximately 5,664.51 cubic yards of sedimentation that is deposited in the natural area onsite.

It is recommended that NRCS oversee the reclamation of this area in accordance with USDA/NRCS standard practices (and as determined by the property Conservation Plan).

4.0 Conclusions

Based on the MUSLE (from January 2018 through May 2019) at this location, an estimated 7,511.23 cubic yards of sediment was potentially discharged from the site. The vast majority of the area that drains to this location had been stabilized with vegetation. Mulching, and erosion control blankets. No further sediment transport is anticipated – however minor work remained necessary in the drainage channel below the ADEM referenced Impoundment at Lat/Lon: 33.005361 / -85.322266. The Owner has done a good job controlling this drainage – however – the Owner and Erosion Pros have agreed that additional check structures should be placed here to help slow the velocity of the flow and to help stabilize this drainage feature.

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Therefore, it is fair to assume that (based on this schedule and our knowledge of the property) standard farming BMPs have retained an approximate % of the calculated sediment loss resulting in approximately 5,664.51 cubic yards of sedimentation that is deposited in the natural area onsite.

It is recommended that NRCS oversee the reclamation of this area in accordance with USDA/NRCS standard practices (and as determined by the property Conservation Plan).

QCP Certification:

Certification by Joel D. Seawell
Certified Professional in Erosion and Sediment Control # 2799
Member

APPENDIX I

Sediment Yield Calculations (MUSLE)

Sediment Yield Calculations (MUSLE)

Shady Side Farms, LLC (FID61643)

Rain Event	Rainfall Amount (inches)	Rainfall Duration (Minutes)	Site Conditions	Runoff Coefficient	Area (Acres)	Discharge (ft^3/sec)	Volume of Water (ac-ft)	K	LS	C	P	Calculated Soil Loss (Tons)	Calculated Soil Loss (yd^3)	Sediment Reduction Factor	Sediment Captured onsite (yd^3)	Sediment Leaving the Site (yd^3)
1/22/2018	1.45	1440	Started clearing	0.15	17	0.15	2.05	0.49	1.63	0.50	1.00	19.92	15.81	75%	11.86	3.95
1/28/2018	1.6	1440	50% cleared	0.15	85	0.85	11.33	0.49	1.63	0.50	1.00	134.89	107.06	50%	53.53	53.53
2/26/2018	0.83	1440	100% cleared	0.20	170	1.18	11.76	0.49	1.63	1.00	1.00	330.29	262.13	0%	0.00	262.13
3/29/2018	0.76	1440	Bare / drill seeded in spots / terracing	0.40	170	2.15	10.77	0.49	1.63	1.00	1.00	441.18	350.14	25%	87.54	262.61
4/15/2018	1.3	1440	Bare / drill seeded in spots / terracing	0.40	170	3.68	18.42	0.49	1.63	1.00	1.00	804.86	638.78	25%	159.69	479.08
4/22/2018	0.86	1440	Bare / drill seeded in spots / terracing	0.40	170	2.44	12.18	0.49	1.63	1.00	1.00	506.69	402.13	25%	100.53	301.60
5/16/2018	3	1440	Bare / drill seeded in spots / terracing	0.40	170	8.50	42.50	0.49	1.63	1.00	1.00	2053.43	1629.71	25%	407.43	1222.28
5/18/2018	0.9	1440	Bare / drill seeded in spots / terracing	0.40	170	2.55	12.75	0.49	1.63	1.00	1.00	533.16	423.14	25%	105.79	317.36
5/23/2018	2.3	1440	Bare / drill seeded in spots / terracing	0.40	170	6.52	32.58	0.49	1.63	1.00	1.00	1524.89	1210.23	25%	302.56	907.67
6/17/2018	0.75	1440	Bare / drill seeded in spots / terracing	0.40	170	2.13	10.63	0.49	1.63	1.00	1.00	434.68	344.99	25%	86.25	258.74
6/28/2018	1	1440	Bare / drill seeded in spots / terracing	0.40	170	2.83	14.17	0.49	1.63	1.00	1.00	599.93	476.14	25%	119.03	357.10
7/21/2018	0.9	1440	Bare / drill seeded in spots / terracing	0.40	170	2.55	12.75	0.49	1.63	1.00	1.00	533.16	423.14	25%	105.79	317.36
8/29/2018	1.26	1440	Bare / drill seeded in spots / terracing	0.40	170	3.57	17.85	0.49	1.63	1.00	1.00	777.18	616.81	25%	154.20	462.60
10/2/2018	1.25	1440	Bare / drill seeded in spots / terracing	0.40	170	3.54	17.71	0.49	1.63	1.00	1.00	770.27	611.33	25%	152.83	458.49
10/15/2018	2.2	1440	Bare / drill seeded in spots / terracing	0.40	170	6.23	31.17	0.49	1.63	1.00	1.00	1450.83	1151.45	25%	287.86	863.59
11/15/2018	6	1440	Bare / drill seeded in spots / terracing	0.40	170	17.00	85.00	0.49	1.63	1.00	1.00	4463.07	3542.12	25%	885.53	2656.59
12/5/2018	2	1440	Bare / drill seeded in spots / terracing	0.40	170	5.67	28.33	0.49	1.63	1.00	1.00	1303.94	1034.87	25%	258.72	776.15
12/12/2018	2	1440	Bare / drill seeded in spots / terracing	0.40	170	5.67	28.33	0.49	1.63	1.00	1.00	1303.94	1034.87	25%	258.72	776.15
1/2/2019	6	1440	Bare / drill seeded in spots / terracing	0.40	170	17.00	85.00	0.49	1.63	1.00	1.00	4463.07	3542.12	25%	885.53	2656.59
1/24/2019	2.8	1440	Bare / drill seeded in spots / terracing	0.40	170	7.93	39.67	0.49	1.63	1.00	1.00	1900.73	1508.52	25%	377.13	1131.39
3/7/2019	2	1440	Recently grassed	0.20	170	2.83	28.33	0.49	1.63	0.10	1.00	132.79	105.39	50%	52.69	52.69
4/11/2019	2.5	1440	Recently grassed	0.20	170	3.54	35.42	0.49	1.63	0.10	1.00	165.25	131.15	50%	65.57	65.57
4/17/2019	2	1440	Germination with Heavy Mulch	0.15	170	2.13	28.33	0.49	1.63	0.05	1.00	57.67	45.77	75%	34.32	11.44
4/24/2019	3	1440	Germination with Heavy Mulch	0.15	170	3.19	42.50	0.49	1.63	0.05	1.00	85.80	68.09	75%	51.07	17.02
5/14/2019	3.1	1440	Established vegetation	0.10	170	2.20	43.92	0.49	1.63	0.01	1.00	14.53	11.53	80%	9.22	2.31
										Totals		9464.53	7511.53			5664.51

$$T = 95\left(V \times Q_p\right)^{0.75} \times K \times LS \times C \times P$$

Soil Map—Chambers County, Alabama
(Shady Side Farms, LLC)

Map Scale: 1:9,370 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chambers County, Alabama
Survey Area Data: Version 12, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 18, 2015—Nov 4, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbD3	Appling gravelly sandy clay loam, severely eroded, stongly sloping	3.2	0.7%
CaC3	Cecil gravelly clay loam, severely eroded, sloping	3.5	0.8%
Ga	Gullied land	234.7	53.4%
LaB3	Lloyd clay loam, severely eroded, gently sloping	5.4	1.2%
LaC3	Lloyd clay loam, severely eroded, sloping	72.6	16.5%
LbB3	Lloyd gravelly clay loam, severely eroded, gently sloping	11.5	2.6%
LbC3	Lloyd gravelly clay loam, severely eroded, sloping	41.0	9.3%
LbD3	Lloyd gravelly clay loam, severely eroded, strongly sloping	11.9	2.7%
LdB2	Lloyd gravelly sandy loam, eroded, gently sloping	7.0	1.6%
Sa	Sandy alluvial land, poorly to somewhat poorly drained	48.2	11.0%
Sd	Starr soils	0.5	0.1%
W	Water	0.0	0.0%
Totals for Area of Interest		**439.5**	**100.0%**

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic surface layer. .

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed. Organic surface horizons are not displayed.

RUSLE2 Related Attributes–Chambers County, Alabama

Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
AbD3—Appling gravelly sandy clay loam, severely eroded, stongly sloping								
Appling	85	98	B	.15	5	55.1	17.4	27.5
CaC3—Cecil gravelly clay loam, severely eroded, sloping								
Cecil	85	125	B	.24	5	34.7	37.8	27.5
Ga—Gullied land								
Gullied land	85	—	—	.49	—	29.7	54.3	16.0
LaB3—Lloyd clay loam, severely eroded, gently sloping								
Lloyd	85	151	B	.17	5	35.0	32.0	33.0
LaC3—Lloyd clay loam, severely eroded, sloping								
Lloyd	85	125	B	.17	5	35.0	32.0	33.0
LbB3—Lloyd gravelly clay loam, severely eroded, gently sloping								
Lloyd	85	151	B	.17	5	35.0	32.0	33.0
LbC3—Lloyd gravelly clay loam, severely eroded, sloping								
Lloyd	85	125	B	.17	5	35.0	32.0	33.0

RUSLE2 Related Attributes--Chambers County, Alabama								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
LbD3—Lloyd gravelly clay loam, severely eroded, strongly sloping								
Lloyd	85	98	B	.17	5	35.0	32.0	33.0
LdB2—Lloyd gravelly sandy loam, eroded, gently sloping								
Lloyd	90	151	B	.17	5	65.0	20.0	15.0
Sa—Sandy alluvial land, poorly to somewhat poorly drained								
Udifluvents, loamy	90	75	B/D	.28	4	43.0	39.5	17.5
Sd—Starr soils								
Starr	90	151	B	.28	5	43.0	39.5	17.5

Data Source Information

Soil Survey Area: Chambers County, Alabama
Survey Area Data: Version 12, Sep 12, 2018