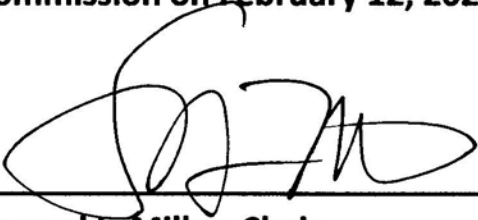


4/12/21

Minutes
Environmental Management Commission Meeting
Alabama Department of Environmental Management Building
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400
February 12, 2021

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 February 12, 2021.

A handwritten signature in black ink, appearing to read 'S. L. Miller', is written over a solid horizontal line.

Samuel L. Miller, Chair

Alabama Environmental Management Commission

Certified this 9th day of April 2021.

Minutes
Environmental Management Commission Meeting
Alabama Department of Environmental Management Building
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400
February 12, 2021

Convened: 11:00 a.m.

Adjourned: 11:28 a.m.

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Transcript
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Part B

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Part A

ALABAMA ENVIRONMENTAL MANAGEMENT COMMISSION MEETING
Meeting on 02/12/2021

1 ALABAMA ENVIRONMENTAL MANAGEMENT
2 COMMISSION MEETING

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11 ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

12 Alabama Room

13 1400 Coliseum Boulevard

14 Montgomery, Alabama 36110-2400

15 February 12, 2021

16 11:00 a.m.

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25 Taken by: Victoria M. Castillo, ACCR No. 17

ALABAMA ENVIRONMENTAL MANAGEMENT COMMISSION MEETING

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1 A P P E A R A N C E S

2

3 COMMISSION MEMBERS PRESENT:

4 H. Lanier Brown, II, Esq.

5 John (Jay) H. Masingill, III

6 Kevin McKinstry

7 Mary J. Merritt

8 Samuel L. Miller, M.D., Chair

9

10 COMMISSION MEMBERS NOT PRESENT:

11 Ruby L. Perry, D.V.M.

12 Thomas P. Walters, P.E., Vice Chair

13

14 ALSO PRESENT:

15 Zack Wilson, AEMC Legal Counsel

16 Debi Thomas, AEMC Executive Assistant

17 Lance R. LeFleur, ADEM Director

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1 (WHEREUPON, proceedings began at

2 11:00 a.m.)

3 DR. MILLER: Good morning and

4 welcome to the February 12th, 2021 Environmental

5 Management Commission meeting. We have a quorum

6 present.

7 And our first agenda item is to

8 consider the minutes from the meeting of December

9 11th, 2020. These have been distributed to all

10 the members to look through.

11 And if that has happened, I will

12 entertain a motion to adopt the minutes as

13 written.

14 MR. BROWN: So moved.

15 MR. MASINGILL: Second.

16 DR. MILLER: And a second.

17 Is there any discussion?

18 (No response.)

19 DR. MILLER: All in favor,

20 signify by raising your right hand.

21 (All Commissioners raise their

22 right hand.)

23 DR. MILLER: All opposed, same

24 sign.

25 (No response.)

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1 DR. MILLER: Motion passes.

2 Debi, do we need to sign anything?

3 MS. THOMAS: No. I will get you

4 to sign the certification afterwards.

5 DR. MILLER: Now we're going to

6 ask Mr. LeFleur to come follow up with his report

7 from the Director.

8 MR. LeFLEUR: I have removed my

9 mask once again so that you-all will be able to

10 hear me a little better.

11 Good morning, everybody, and welcome

12 to the third meeting of the Alabama Environmental

13 Management Commission for FY2021. Normally, this

14 February report would focus on the EPA dashboards

15 for Air, Land, Water and Drinking Water that

16 compare all states on compliance and enforcement.

17 We will review the updated dashboards at the

18 April Commission meeting. By way of reminder,

19 the ADEM Update memo that goes out before each

20 Commission meeting has the latest EPA dashboards

21 showing the size of the regulated universe,

22 inspection rates, non-compliance rates and

23 enforcement actions for Air, Hazardous Waste,

24 Water and Drinking Water.

25 Today's report will focus on the

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1 latest developments regarding two environmental

2 contaminants that have received considerable

3 media attention in the last several years -- Coal

4 Combustion Residuals (CCR) and per- and

5 polyfluoroalkyl substances (PFAS).

6 First, Coal Combustion Residuals --

7 sometimes referred to as coal ash. The concern

8 is with the unlined impoundments containing coal

9 ash material where contaminants can be released

10 to groundwater. Coal ash management is an issue

11 both nationally and here in Alabama.

12 We begin with the question of 'What

13 are Coal Combustion Residuals?' CCR is the solid

14 material remaining after the combustion of coal

15 from the production of electricity by electric

16 generating utilities. It's comprised of bottom

17 ash, fly ash -- which is the particles that rise

18 and are captured by a baghouse or electrostatic

19 precipitator -- and the solid material generated

20 when flue gases are subjected to a chemical

21 reaction to remove sulphur and other air

22 contaminants.

23 Coal ash has been determined by EPA

24 to be non-hazardous. However, coal ash does

25 contain naturally occurring elements that can, at

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1 elevated levels, be hazardous to human health.
 2 These include lead, arsenic, cadmium, barium and
 3 lithium. Coal ash can be in either a wet form or
 4 a dry form.
 5 This slide shows as red dots the
 6 nine sites in Alabama where CCR have been
 7 deposited. The total number of individual CCR
 8 disposal units on those 9 sites is 16. Twelve
 9 are unlined units shown as blue dots in the gray
 10 information box. These are the ones of primary
 11 concern. Two have closed, and 10 will be
 12 closing. All will be remediated. The four
 13 remaining CCR disposal units are lined and will
 14 continue to be operational. Two are surface
 15 impoundments, and two are landfills. They are
 16 shown as yellow dots in the gray information box.
 17 At each site where utilities
 18 generate electricity, there may be one or more
 19 Electric Generating Unit, or EGU.
 20 Prior to promulgation of the State
 21 CCR rules in 2015: There were 39 coal-fired EGUs
 22 that generated coal ash at the nine plant sites
 23 in Alabama. Thirty-four of those coal-fired EGUs
 24 were generating coal ash that was sluiced, or
 25 transported via water to surface impoundments.

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1 Currently, there are only seven
 2 coal-fired EGUs statewide generating coal ash.
 3 All are using dry handling so the practice of wet
 4 handling is stopped. All dry coal ash currently
 5 generated is stored in lined units or is being
 6 recycled.
 7 On the non-coal-fired side, prior to
 8 the CCR rules in 2015, only eight natural gas
 9 EGUs in Alabama had replaced coal-fired units.
 10 As of today, 18 natural gas EGUs operating in
 11 Alabama have replaced coal-fire units, with one
 12 more under development. Replacing the wet coal
 13 ash handling coal-fired EGUs with those burning
 14 natural gas or with alternate energy sources means
 15 there is little chance of new groundwater impacts
 16 from CCR generation in Alabama.
 17 Next, the status of State CCR
 18 permitting. As of today, the Department has
 19 issued final permits for the closure of the
 20 unlined CCR surface impoundments at three of the
 21 nine sites. Each of these sites has a single
 22 unlined surface impoundment. The closure plans
 23 meet the federal and state requirements for
 24 closure-in-place, and the permits incorporate
 25 that provision. Two additional draft permits

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1 will be going out on notice for public comment
 2 next week and are anticipated to be final by
 3 mid-year. Draft permits for the remaining plant
 4 sites are being developed and anticipated to be
 5 out for public comment by the middle of this year
 6 with final permits before year end.
 7 The two primary issues related to
 8 CCR are the closure of unlined impoundments, and
 9 the remediation of groundwater contamination
 10 caused by CCR in those impoundments. The permits
 11 will address both closure and remediation.
 12 First, the status of closing the 12
 13 unlined CCR disposal units at the nine utility
 14 plant sites in Alabama. Each of the nine sites
 15 will have a permit that includes a closure plan
 16 designed specifically for that particular site.
 17 Initial steps towards closure of the unlined
 18 surface impoundments at all sites is now
 19 underway, despite some sites still not having yet
 20 completed the permitting process.
 21 Dewatering the impoundments is the
 22 first phase of closure regardless of what method
 23 of closure is utilized. Permits to allow
 24 dewatering will be in place at all but one plant
 25 site by mid-year. Dewatering has commenced or

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1 been completed at six of the nine utility plant
 2 sites. And dewatering will take several years to
 3 complete. ADEM will monitor closure progress for
 4 compliance with CCR permit requirements.
 5 Moving on to the second CCR issue --
 6 groundwater remediation. Groundwater remediation
 7 plans are in development through an iterative
 8 process similar to that used to develop closure
 9 plans. When final, the remediation plans will be
 10 incorporated into each CCR permit.
 11 The process begins with a groundwater
 12 monitoring plan. The impacted groundwater is
 13 sampled and assessed to determine the level of
 14 contamination that exists above normal
 15 background. The boundary of the contamination is
 16 also determined. Sampling is underway at all
 17 nine plant sites. ADEM has approved groundwater
 18 monitoring plans at the three plant sites where
 19 permits have been issued.
 20 The assessment of possible
 21 corrective measures, the next step in
 22 remediation, is at varying stages at each of the
 23 sites, but none is yet complete. The proposed
 24 remedy will be selected from the available
 25 corrective measures options, subject to ADEM

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<p style="text-align: right;">Page 10</p> <p>1 approval. The remediation plans will be subject 2 to a formal public comment period before becoming 3 final and integrated into the CCR permits. We 4 anticipate going out for public comment on the 5 remediation plans for all sites before year end. 6 ADEM will monitor groundwater remediation 7 progress and, if necessary, plans will be 8 adjusted during implementation to achieve 9 regulatory cleanup standards.</p> <p>10 In order to obtain state authority 11 over the regulation of coal ash and expand on the 12 Federal CCR rule, the Department adopted a State 13 CCR rule. Although the process of closing 14 unlined impoundments and remediating contaminated 15 groundwater is underway, the Federal and State 16 CCR rules under which they will be taking place 17 are evolving.</p> <p>18 Our State CCR rules, adopted in 2018 19 and updated in 2020, were patterned after the 20 Federal CCR rules. As updates to the Federal CCR 21 rules become final, once the State CCR program is 22 determined to be "at least as protective as the 23 Federal CCR program" EPA will approve those 24 portions of the State CCR rules. Upon approval 25 by EPA, Alabama will have authority to operate</p>	<p style="text-align: right;">Page 12</p> <p>1 them very stable. The stability and other 2 characteristics make them useful as firefighting 3 foams, oil- and moisture-resistant food 4 packaging, clothing fire retardants, high 5 temperature sealants and gasket materials, and 6 many other applications used by the public every 7 day. Until the early 2000s, these materials were 8 considered safe from a health perspective and 9 extremely beneficial for their usefulness.</p> <p>10 The stability of PFAS allows them to 11 accumulate in humans. In the early 2000s, 12 regulators began investigating potential health 13 impacts of that accumulation in humans. High 14 doses of certain PFAS were found to cause 15 reproductive and other anomalies in lab animals. 16 In 2009, EPA developed provisional lifetime 17 exposure health advisories for two PFAS 18 compounds, PFOA and PFOS, in drinking water. In 19 2016, a new lifetime health advisory level was 20 established that was lower than the provisional 21 levels by a factor of eight.</p> <p>22 The regulation of PFAS is a 23 developing federal and state issue. Due to 24 increasing public concern and at the urging of 25 many states, including Alabama, in February 2019</p>
<p style="text-align: right;">Page 11</p> <p>1 the State CCR program in lieu of the Federal 2 program. Until EPA approves the ADEM CCR rules, 3 CCR generators are required to comply with both 4 State and Federal CCR rules.</p> <p>5 Information on CCR rules, 6 permitting, closure and remediation progress, and 7 a CCR tutorial video are available on our website 8 by selecting the blue "CCR Update" icon near the 9 bottom middle of our home page.</p> <p>10 The second environmental contaminant 11 being addressed in today's report is also an 12 issue throughout the nation and here in Alabama. 13 It involves per- and polyfluoroalkyl substances, 14 abbreviated as PFAS. After providing some 15 background and the concerns related to PFAS, 16 today's report will summarize what Federal 17 actions and what State actions are underway to 18 address this issue.</p> <p>19 We begin with some background and 20 concerns related to PFAS. This family of 21 chemicals has been produced and used since the 22 1940s. There are at least 5,000 chemical 23 compounds in this family. These substances are 24 characterized by a chemical bond between carbon 25 and fluorine that is exceptionally strong, making</p>	<p style="text-align: right;">Page 13</p> <p>1 EPA released a PFAS Action Plan. In February 2 2020, EPA published an update to the PFAS Action 3 Plan. The progress noted includes:</p> <p>4 EPA has determined it will regulate 5 two PFAS in drinking water, PFOA and PFOS, but 6 has not published Maximum Contaminant Level (MCL) 7 standards for drinking water. EPA has developed 8 and validated new testing methods for analyzing 9 PFAS at the very low concentrations thought to 10 affect human health. They have issued interim 11 recommendations to address PFOA and PFOS soil and 12 groundwater contamination, including interim 13 guidance on PFAS disposal methods, but have not 14 set cleanup standards. EPA is evaluating 15 designating PFOA and PFOS hazardous substances 16 under CERCLA and requiring Toxic Release 17 Inventory reporting.</p> <p>18 EPA now requires prior approval for 19 any new PFAS put on the market. They are 20 targeting certain enforcement actions under the 21 federal Safe Drinking Water Act and Toxic 22 Substances Control Act. This is difficult to do 23 without established standards. EPA is continuing 24 research with health and toxicity studies, 25 drinking water surveys, PFAS detection methods,</p>

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<p style="text-align: right;">Page 14</p> <p>1 and PFAS removal methods. They are assisting 2 states. In our case, EPA assisted with portions 3 of the 3M Interim Consent Order that will be 4 discussed in a few moments. 5 Those are some of the actions at the 6 Federal level. 7 Here in Alabama, ADEM is being 8 proactive in controlling PFAS, though without 9 federal PFAS standards we must use means other 10 than traditional enforcement tools. 11 Although no PFAS drinking water 12 standard, discharge limits, or cleanup standards 13 exist, the Department has nevertheless undertaken 14 a number of initiatives to address the PFAS issue 15 in Alabama. ADEM has required all public 16 drinking water systems in Alabama to test for the 17 presence of a panel of PFAS compounds in finished 18 drinking water. All public drinking water 19 systems where PFOA and PFOS concentrations in the 20 finished drinking water at or above the lifetime 21 exposure health advisory level have been detected 22 are required to report that information to their 23 customers. As of today, three of the 579 public 24 drinking water systems in Alabama have had 25 monitored values above the 70 parts per trillion</p>	<p style="text-align: right;">Page 16</p> <p>1 into a significant enforcement order to control 2 PFAS from that facility. The 3M Corporation and 3 ADEM entered into an Interim Consent Order in 4 July 2020. The Order builds on successful past 5 PFAS production and control initiatives going 6 back to 2009. The Interim Consent Order calls 7 for: 8 Identification of land disposal 9 sites and contaminated groundwater on and off the 10 plant site, including any private water wells in 11 the contaminated groundwater area. Also, 12 remediation of contaminated sites with 13 site-specific methodologies that may include pump 14 and treat, encapsulization, and institutional 15 controls. 16 The Order calls for developing and 17 implementing PFAS control technologies, including 18 Granular Activated Carbon beds, wastewater 19 minimization, closed loop systems, enhanced O&M 20 procedures, and others to reduce releases. 21 Regular monitoring and reporting of total Soluble 22 Fluoride concentrations at the plant river water 23 intake, at the wastewater treatment plant, at all 24 stormwater and process water outfalls, and at air 25 emission point sources.</p>
<p style="text-align: right;">Page 15</p> <p>1 advisory level and all three have installed PFAS 2 removal technology. 3 We are undertaking in-stream 4 monitoring for selected watercourses where there 5 is an increased likelihood of PFAS being 6 presented. Included are: 7 The Tennessee River near the 3M PFAS 8 manufacturing plant. The Coosa River downstream 9 from carpet manufacturing facilities in Georgia. 10 This is being done in cooperation with EPA since 11 it's an interstate matter. We will be doing 12 in-stream monitoring of raw drinking water 13 sources near drinking water systems with elevated 14 PFAS levels in finished drinking water, and ADEM 15 will be monitoring watercourses near Department 16 of Defense and other facilities engaging in 17 firefighting training. 18 Monitoring results will dictate 19 additional actions. 20 In Alabama, one manufacturer 21 previously produced PFOA and PFOS, the two PFAS 22 of most concern. It is the 3M Corporation 23 facility located on the Tennessee River near 24 Decatur. Although there are no enforceable 25 environmental standards for PFAS, we have entered</p>	<p style="text-align: right;">Page 17</p> <p>1 Measuring Soluble Organic Fluoride 2 covers all per- and polyfluoroalkyl substances 3 rather than just the dozen or so being studied by 4 EPA currently. 5 The Order requires health studies, 6 including toxicity determinations and evaluation 7 of the fate and transport of PFAS in the 8 environment. EPA's Office of Research and 9 Development will assist with the studies. These 10 studies will advance nationwide efforts to better 11 understand the health impacts of the PFAS family 12 of compounds. 13 I can report that all deliverables 14 required of 3M thus far under the Interim Consent 15 Order have been provided timely to ADEM. Prompt 16 detailed review by ADEM is taking place as the 17 scheduled deliveries are received. All this 18 information is available on the ADEM website. 19 The Order provides for significant 20 predetermined (stipulated) penalties for 3M's 21 failure to meet deadlines or other non-compliance 22 with the Interim Consent Order. The Interim 23 Consent Order will be updated as needed, in 24 particular when EPA develops PFAS standards. 25 The Alabama public drinking water</p>

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1 PFAS testing results, a link to the EPA PFAS
 2 Action Plan and a PFAS tutorial video are
 3 available on the ADEM website home page by
 4 selecting the red "PFAS Update" icon.
 5 Information on the 3M Interim Consent Order
 6 progress is available on the ADEM website by
 7 selecting the "eFile" icon and entering "3M
 8 COMPANY" under the Facility.
 9 As has often been noted in the past,
 10 the professional development of our people is a
 11 high priority for the Department. Today I am
 12 pleased to recognize those who have achieved
 13 significant milestones in their professional
 14 development. These are people who have the
 15 desire to excel and are willing to do the work.
 16 Earning the designation of Certified Public
 17 Manager is no small feat. Participation is
 18 voluntary. Many hours of personal time, rigorous
 19 course work and testing are required. My
 20 introduction of these individuals is somewhat
 21 belated due to COVID. They successfully
 22 completed the Certified Public Manager I program
 23 several months ago.
 24 They will be coming -- well, we have
 25 them in the room. Good. Good. Some are not

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1 here with us. They will be participating
 2 remotely through their computers. Since they
 3 will be masked and unavailable in person, I will
 4 show their photos on the screen as I introduce
 5 them.
 6 In our Air Division, Jennifer
 7 Youngpeter. She is with us remotely.
 8 From our Land Division, Jared
 9 Kelly -- also remote -- Joe Kelly -- no relation,
 10 also remote -- Lynn Roper -- where are you, Lynn?
 11 There she is in the back raising her hand.
 12 From our Water Division, Blake
 13 Pruitt. She is with us remotely.
 14 And then in person, I think, Donna
 15 Adams. Donna from our Field Operations Division.
 16 Pam Ballentine. Pam, from our Field Operations
 17 Division. And Ashley Lockwood from Field
 18 Operations.
 19 We have from our Office of
 20 Environmental Quality, Sharon Moses, who is with
 21 us remotely.
 22 Also remote, Carrie Blanton in our
 23 Legal Office of General Counsel. Todd Carter,
 24 who is I think out doing some legal actions.
 25 And I want to congratulate all of

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1 you who have earned the CMP I. You-all have done
 2 a lot of hard work and we really do appreciate
 3 it.
 4 And if I could introduce one more
 5 person, Shawn LaGrone, who is in our Field Office
 6 up in Decatur. He is with us remotely also. He
 7 has completed the Certified Public Manager II,
 8 the advanced level.
 9 And I want to tell you-all how much
 10 I appreciate your dedication and hard work, and I
 11 congratulate you.
 12 (Audience applause.)
 13 MR. LeFLEUR: Thank you for
 14 being here. With that, that concludes today's
 15 report. I will be happy to answer any questions.
 16 DR. MILLER: Questions?
 17 Any questions?
 18 (No response.)
 19 DR. MILLER: Thank you.
 20 MR. LeFLEUR: Thank you.
 21 DR. MILLER: The next option is
 22 a Report from the Commission Chair. I'd like to
 23 publicly thank the Director and the Department
 24 for making a strong effort to keep us up to date
 25 on the PFAS and CCR happenings. It's an

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1 extremely complex and complicated situation, and
 2 we're trying to stay as much ahead of the curve
 3 as we possibly can. We appreciate all the help
 4 that we're getting from the Department.
 5 Is there any other business that we
 6 would need to discuss today?
 7 (No response.)
 8 DR. MILLER: If not, our next
 9 meeting will be April 9th, 2021. Is there
 10 anybody with a known conflict for that day?
 11 (No response.)
 12 DR. MILLER: I take it no
 13 conflicts.
 14 We have no one registered this
 15 morning to speak, so I think at this point we
 16 will entertain a motion to adjourn.
 17 MR. BROWN: So moved.
 18 MS. MERRITT: Second.
 19 DR. MILLER: All in favor say
 20 aye.
 21 (All Commissioners reply
 22 "aye.")
 23 DR. MILLER: Thank you. All
 24 right.
 25 (Proceedings concluded at

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1 11:28 a.m.)
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1 STATE OF ALABAMA)
2 COUNTY OF ELMORE)
3
4
5 I hereby certify that the above
6 proceedings were taken down by me and transcribed
7 by me using computer-aided transcription and that
8 the above is a true and accurate transcript of
9 said proceedings taken down by me and transcribed
10 by me.
11 I further certify that I am neither
12 of kin nor of counsel to any of the parties nor
13 in anywise financially interested in the outcome
14 of this case.
15 I further certify that I am duly
16 licensed by the Alabama Board of Court Reporting
17 as a Certified Court Reporter as evidenced by the
18 ACCR number following my name found below.
19
20
21
22
23 *Victoria Castillo*
24 VICTORIA CASTILLO, ACCR #17, 9/30/21
25 FREELANCE COURT REPORTER

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ALABAMA ENVIRONMENTAL MANAGEMENT COMMISSION MEETING

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Part B

Attachment Index

Attachment 1 Agenda

**Attachment 2 Director's Slides
(Agenda Item 3)**

Attachment 1

AGENDA*
MEETING OF THE
ALABAMA ENVIRONMENTAL MANAGEMENT COMMISSION

DATE: February 12, 2021

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

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* 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 DECEMBER 11, 2020
2. REPORT FROM THE ADEM DIRECTOR
3. REPORT FROM THE COMMISSION CHAIR
4. OTHER BUSINESS
5. 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).

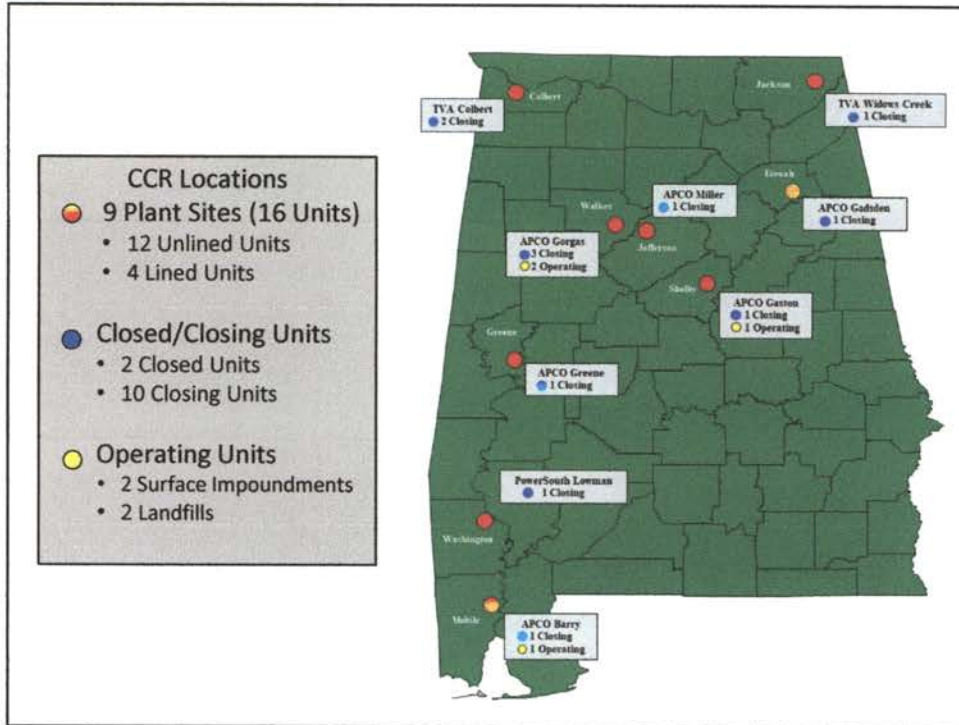
The Guidelines for Public Comment are used in the application of ADEM Administrative Code 335-2, Environmental Management Commission Regulations, Rule 335-2-3-.05, Agenda and Public Participation. The Guidelines for Public Comment serve to educate and inform the public as to how the Commission interprets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

Attachment 2

Coal Combustion Residuals (CCR)

What are Coal Combustion Residuals?

- Bottom ash, Fly ash, Boiler slag, Flue gas desulfurization materials
- Hazardous constituents: Lead, Arsenic, Cadmium, Barium, Lithium
- Wet / Dry



ADEM Alabama Department Of Environmental Management

Electric Generating Units

- Coal-Fired EGUs
 - 2015 = 39 [34 wet]
 - 2021 = 7 [0 wet]
- Gas-Fired EGUs
 - 2015 = 8
 - 2021 = 18

CCR Permits Status

- Final permits for 3 of 9 sites
- Meet federal and state requirements for closure-in-place
- Draft permits for 2 sites out to notice next week
- Draft permits for remaining sites out to public notice by June 2021

Impoundments Closure Status

- Customized closure plans
- Initial closure steps underway
- Dewatering first:
 - Permits in place
 - Dewatering commenced
 - Years to complete
- Monitoring by ADEM



Alabama Department Of Environmental Management

Groundwater Remediation Status

- Sampling to define contamination boundary
- Assessment of corrective measures
- Proposed remedy subject to ADEM approval
- Proposed remedy subject to public comment
- Implementation monitored by ADEM



Alabama Department Of Environmental Management

ADEM CCR rule

- Adopted 2018, amended 2020.
- EPA approval requires “at least as protective as the Federal CCR program.”
- CCR generators required to comply with both State and Federal rules.

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS Background and Concerns

- Manmade since 1940s.
- At least 5000 chemicals.
- Very stable with useful properties.
- Until 2000s considered safe.

PFAS Background and Concerns

- Health impact studies for bioaccumulation.
- High doses cause anomalies in lab animals.
- 2009 & 2016 EPA Lifetime exposure health advisories.

EPA PFAS Action Plan

- Will regulate PFOA & PFOS in drinking water
- Developed new test methods
- Interim guidance to address PFAS cleanup
- Evaluating designating PFOA & PFOS under CERCLA



Alabama Department Of Environmental Management

EPA PFAS Action Plan

- No new PFAS on market w/o EPA approval
- Targeted enforcement under SDWA & TSCA
- Continuing PFAS research
- Assisting states with PFAS issues



Alabama Department Of Environmental Management

ADEM PFAS Testing & Control Initiatives

- Testing all public drinking water systems for PFAS.
- PFAS concentrations above EPA health advisory must be reported to customers.
- 3 of 579 PDWS above health advisory installed PFAS removal.

ADEM PFAS Testing & Control Initiatives

- In-stream monitoring:
 - Tennessee River
 - Coosa River
 - Drinking water sources with elevated PFAS
 - Sites with firefighting training history

3M Interim Consent Order

- Identify PFAS contaminated sites
- Cleanup contaminated sites
- Develop & implement PFAS control technologies
- Monitor & report PFAS in water and air

3M Interim Consent Order

- Health Studies
- Extensive regular reporting to ADEM
- Stipulated penalties for non-compliance
- Updated as needed