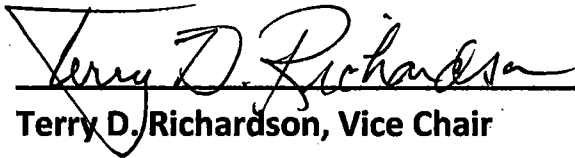


1/3/18

**Minutes
Environmental Management Commission Meeting
Alabama Department of Environmental Management Building
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400
October 20, 2017**

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 October 20, 2017.

A handwritten signature in black ink, reading "Terry D. Richardson", is written over a solid horizontal line.

Terry D. Richardson, Vice Chair

Alabama Environmental Management Commission

Certified this 15th day of December 2017.

Minutes
Environmental Management Commission Meeting
Alabama Department of Environmental Management Building
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400
October 20, 2017

Convened: 11:00 a.m.
Adjourned: 11:45 a.m.

Part A

Transcript
Word Index

Part B

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Part A

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1 * * * * *

2

3

4 ALABAMA ENVIRONMENTAL MANAGEMENT

5 COMMISSION MEETING

6

7

8 ALABAMA DEPARTMENT OF ENVIRONMENTAL

9 MANAGEMENT

10 Alabama Room

11 1400 Coliseum Boulevard

12 Montgomery, Alabama 36110-2400

13

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18

19

20 Taken by: Bridgette W. Mitchell,

21 ACCR 231

22

23

Page 3

1 DR. RICHARDSON: Good morning,

2 everyone. I'd like to call this meeting

3 of the October 20th meeting of the

4 Environmental Management Commission to

5 order, acknowledge that we do have a

6 quorum here; barely, but we do have one.

7 First item on the agenda will be the

8 consideration of the minutes of the

9 meeting held on August 18th. And I'll

10 entertain a motion from the Commission

11 regarding the minutes.

12 DR. MARTIN: Propose we approve

13 the minutes as presented.

14 DR. RICHARDSON: Do I hear a

15 second?

16 DR. LAIER: Second.

17 DR. RICHARDSON: It has been

18 moved and seconded. Is there any

19 discussion regarding the minutes?

20 (No response.)

21 DR. RICHARDSON: Hearing none,

22 I'll call the question. All in favor of

23 the minutes, signify by saying aye.

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1 * * * * *

2 APPEARANCES

3

4 COMMISSION MEMBERS PRESENT:

5 Terry D. Richardson, Ph.D., Vice

6 Chair

7 Samuel L. Miller, M.D.

8 James E. Laier, Ph.D., P.E.

9 Craig Martin, D.V.M.

10

11 COMMISSION MEMBERS NOT PRESENT:

12 H. Lanier Brown, II

13 Mary J. Merritt

14

15

16 ALSO PRESENT:

17 Robert Tambling, EMC Legal Counsel

18 Lance R. LeFleur, ADEM Director

19 Kayla Currie, Assistant Attorney

20 General

21 Debi Thomas, EMC Executive

22 Assistant

23

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1 (Members indicate.)

2 DR. RICHARDSON: All opposed,

3 same sign.

4 (No response.)

5 DR. RICHARDSON: Any abstentions?

6 (No response.)

7 DR. RICHARDSON: Motion carries.

8 The second item on the agenda is the

9 Commission will consider the election of

10 commission chair and vice chair. And

11 apparently it may be a little too late

12 for people to back out at this point. So

13 I'll entertain a motion from the

14 Commission regarding the election of

15 chair.

16 DR. MARTIN: Since -- since

17 Mr. Brown is not here, I'd like to

18 nominate Lanier Brown as chair of the

19 commission.

20 DR. MILLER: Second.

21 DR. RICHARDSON: So the motion

22 has been made and seconded. Are there

23 any other motions to be made along those

Page 5

1 lines? We're going to close it at that.
2 Any discussion?
3 (No response.)
4 DR. RICHARDSON: Hearing none,
5 I'll call the question. All in favor
6 regarding Lanier Brown as chair of
7 Commission, signify by saying aye.
8 (Members indicate.)
9 DR. RICHARDSON: All opposed,
10 same sign.
11 (No response.)
12 DR. RICHARDSON: Any abstentions?
13 (No response.)
14 DR. RICHARDSON: Motion carries.
15 The chair of the committee next year will
16 be Lanier Brown.
17 Now the Commission will entertain a
18 motion regarding the election of vice
19 chair.
20 DR. MILLER: I'll nominate
21 Dr. Terry Richardson.
22 DR. MARTIN: Second.
23 DR. RICHARDSON: Motion has been

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1 made and seconded. Would anyone else
2 like to jump into this election?
3 (No response.)
4 DR. RICHARDSON: I guess not. So
5 hearing -- any discussion on the matter?
6 (No response.)
7 DR. RICHARDSON: Hearing no
8 further discussion, I'll call the
9 question. All in favor of Dr. Terry
10 Richardson being the vice chair for the
11 next year, signify by saying aye.
12 (Members indicate.)
13 DR. RICHARDSON: All opposed,
14 same sign.
15 (No response.)
16 DR. RICHARDSON: Any abstentions?
17 (No response.)
18 DR. RICHARDSON: Motion carries.
19 At least I was here to defend myself.
20 DR. LAIER: That's right.
21 DR. RICHARDSON: Agenda Item 3
22 will be the report from the ADEM
23 Director.

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1 DIRECTOR LeFLEUR: Good morning,
2 Doctor, Doctor, Doctor, and Doctor.
3 Congratulations on the elections. Also,
4 good morning and welcome to the first
5 meeting of the Alabama Environmental
6 Management Commission for fiscal year
7 2018. Today's report will update you on
8 the Department's funding for this fiscal
9 year, address the high points of the
10 Department's operating plans for FY 2017
11 and 2018, notify you of some significant
12 personnel developments, and, finally,
13 report on the latest progress in filling
14 the top management spots at EPA.
15 October 1st began our fiscal year
16 2018. We still do not know what the
17 federal appropriation portion of our
18 fiscal year 2018 budget will be. Work
19 continues on RESTORE Act funding to
20 replace the two woefully substandard
21 facilities in Mobile housing the Field
22 Office and Coastal Program with a single
23 facility designed to allow the Department

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1 to accomplish its mission today and in
2 the future.
3 Despite the ongoing difficult budget
4 challenges, our financial situation is
5 sound and future budget prospects are
6 manageable. The Department has not only
7 met all federal and state statutory and
8 regulatory obligations, but as the EPA
9 dashboards and other impartial metrics
10 consistently demonstrate, has performed
11 at a level among the highest in the
12 nation. We are prepared to continue to
13 do so.
14 Top performance begins with a plan.
15 In 2014, the Department and the
16 Commission updated the joint consolidated
17 strategic plan as it does every five
18 years. Each fiscal year, the Department
19 updates its annual operating plan, which
20 addresses the same goals reflected in the
21 strategic plan.
22 The strategic plan and annual
23 operating plan shared goals are:

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1 Effective and Responsive Commission;
2 High-Performing Work Environment;
3 Credible Relationships with External
4 Stakeholders; and Efficient and Effective
5 Departmental Operations.
6 The next several slides will recap
7 some of the individual FY 2017
8 departmental operating plan objectives
9 that were accomplished during the past
10 fiscal year and provide a general
11 description of some of the new objectives
12 in the FY 2018 departmental operating
13 plan. The objectives are grouped under
14 the four broad-shared goals in the
15 Commission and Department's consolidated
16 five-year strategic plan.
17 The first goal in the Department's
18 annual operating plan is to have an
19 effective and responsive Commission. To
20 achieve this goal, there must be
21 effective communication between me as
22 Director and each of the seven
23 Commissioners. To this end, the

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1 Goal 2, High Performing Work
2 Environment, has several sub goals or
3 objectives which, among other things,
4 focus on resource management including
5 both financial and human resources. On
6 the financial side, in FY 2017, the
7 Department worked with agricultural
8 interests to obtain a fiscal year 2018
9 General Fund appropriation for the
10 important Concentrated Animal Feeding
11 Operations program. As a result of
12 permit fee increases during the last
13 several years, the Department has more
14 stable funding, albeit at a level that
15 continues to be the lowest in the nation.
16 Efforts to obtain other sources of
17 funding such as RESTORE Act funding for
18 the new Field Office in Mobile and a
19 recently awarded \$300,000 exchange
20 network grant to increase Departmental
21 efficiency through e-enterprise are
22 ongoing.
23 As mentioned earlier, there remains

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1 Commission is provided a written schedule
2 of all anticipated rulemaking well before
3 proposed rules are formally presented.
4 The Director regularly meets with the
5 Commissioners to discuss the latest
6 issues confronting the Department and
7 affecting our environment. The
8 Director's report delivered at each
9 Commission meeting and the written
10 memorandum titled "ADEM Update" provided
11 to the Commission prior to each
12 Commission meeting highlights significant
13 new activities in each of the
14 Department's five divisions; address
15 interim progress on the individual
16 objective set out in the Department's
17 annual operating plan; and provide --
18 show standard performance metrics.
19 The ongoing rulemaking memo, the
20 Director's report, and the ADEM update
21 memo are available to any interested
22 party on the ADEM website in eFile under
23 the heading "Director's Correspondence."

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1 a significant question mark in the area
2 of funding, which is whether the federal
3 portion of the Department's funding will
4 be cut. Because of our very low level of
5 state-provided funding, any reduction in
6 federal funding could have a material
7 impact on Departmental activities.
8 In the human resource management
9 effort to promote high-performing work
10 environment, the Department has continued
11 to recruit interns and co-ops with the
12 objective of encouraging the most
13 talented of them to become permanent
14 employees when they graduate.
15 The Department has also focused on
16 recruiting and advancing diversity within
17 the Department in entry-level positions
18 as well as promotional positions. Our
19 recruitment team continues to visit
20 colleges and universities throughout
21 Alabama each spring and fall in our
22 ongoing effort to attract minority
23 applicants. We activity recruit at

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1 historically black colleges and
 2 universities as well as other in-state
 3 colleges and universities.
 4 An ongoing objective in the
 5 management of human resources is to
 6 promote professional development of our
 7 workforce which is necessary to
 8 purport -- to support a high-performance
 9 organization. At this time, I'm pleased
 10 to recognize nine of our personnel who
 11 have completed the rigorous Certified
 12 Public Managers program at Auburn
 13 University Montgomery. Those of you who
 14 are here, please stand when I call your
 15 name.
 16 The six who have achieved the CPM I
 17 designation are Sonja Favors, Rick
 18 Kelsey, Diane Lockwood, Jennifer McCord,
 19 Tommy Newman, and Dan Prempramont. I
 20 apologize for my pronunciation, by the
 21 way.
 22 Those who have --
 23 (Applause.)

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1 objective within the goal of achieving a
 2 high-performing work environment. Recent
 3 examples of innovation include the
 4 addition of numerous interactive maps on
 5 our website to provide timely, relevant,
 6 easy-to-use information on sanitary sewer
 7 overflows, wastewater treatment plant
 8 outfalls, Brownfield sites, and numerous
 9 other matters of interest to the public.
 10 Nearly all of the objectives in the
 11 high-performing work environment goal,
 12 which include providing financial and
 13 human resources, using data-driven
 14 performance measures, and promoting
 15 innovation are ongoing endeavors that
 16 continue to advance but, by their nature,
 17 are never fully completed. For that
 18 reason, many of the objectives in the
 19 FY 2018 operating plan, or within this
 20 broad goal, remain the same as they were
 21 in FY 2017.
 22 The third broad goal is credible
 23 relationships with external stakeholders.

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1 DIRECTOR LeFLEUR: Those who have
 2 achieved the advanced CPM II designation
 3 are: Mark Davidson, Ashley Mastin, and
 4 Spring Tate. Congratulations to all of
 5 you.
 6 (Applause.)
 7 DIRECTOR LeFLEUR: Also within
 8 this broad goal of promoting a high-
 9 performing work environment is the
 10 practice of regularly using objective
 11 relevant data measures of performance.
 12 This is accomplished with the regular
 13 presentation of EPA dashboard analyses
 14 for the air, water, hazardous waste, and
 15 drinking water programs at Commission
 16 meetings. While these metrics are
 17 presented to keep the Commission and the
 18 public informed about performance, more
 19 importantly, they are used by the
 20 Department to track results, which is a
 21 necessary activity if we are to continue
 22 being a high-performing organization.
 23 Finally, innovation is an important

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1 Having credible relationships requires
 2 face-to-face time with stakeholders. The
 3 operating plan sets out a schedule --
 4 sets out scheduled group meetings twice
 5 per year with environmental groups and
 6 with industry groups in addition to
 7 individual one-on-one meetings as the
 8 opportunities arise. Other stakeholder
 9 groups include low-income, minority, and
 10 disadvantaged communities.
 11 Many of the outreach activities in
 12 those committees are detailed in a
 13 document entitled "Community Engagement"
 14 available on our website. The December
 15 Director's report will cover this area in
 16 greater detail when the regular update of
 17 the Department's Environmental Justice
 18 program is presented.
 19 ADEM's website is another tool used
 20 to build credible relationships with
 21 outside stakeholders. The eMaps Portal
 22 application mentioned earlier along with
 23 the eFile, eComplaint, and "What's

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1 Happening In Your County" applications
 2 are available to help citizens voice
 3 their concerns and access information
 4 about their specific geographic areas of
 5 interest. These tools are continually
 6 updated and improved.
 7 Other examples of outreach to build
 8 credible relationships with external
 9 stakeholders include the ongoing Energy
 10 Management Initiative, which provides
 11 energy efficiency assistance to municipal
 12 wastewater treatment facilities, and a
 13 drinking water quality-assurance outreach
 14 to all Alabama public schools.
 15 The goal of credible relationships
 16 with external stakeholders lends itself
 17 to distinct individual outreach events as
 18 confirmed by having 16 separate
 19 objectives in FY 2017, some of which you
 20 have just seen. Several other -- several
 21 of those objectives were one-time events
 22 that were completed; however, most of
 23 them continue to be ongoing objectives.

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1 to meet or exceed all work plan
 2 commitments with EPA. This was
 3 accomplished in FY 2017 and continues to
 4 be an objective for FY 2018.
 5 Another important objective within
 6 this broad Goal of Efficient and
 7 Effective Departmental Operations is to
 8 incorporate more e-enterprise and
 9 e-business applications. EPA provided
 10 additional impetus in the push to
 11 automate when it adopted the eReporting
 12 rule about a year ago. Implementation of
 13 the rule is spread in stages over several
 14 years. EPA provides two graphs to track
 15 the progress states are making in efforts
 16 to automate those activities covered by
 17 the eReporting rule.
 18 As you -- as you see represented in
 19 the dark blue portion of EPA's first
 20 graph, compared to our sister states in
 21 Region 4, Alabama on the far left has the
 22 highest percentage of facilities ready
 23 to -- for electronic reporting of

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1 The FY 2018 operating plan adds two new
 2 one-time objectives, including: A
 3 targeted campaign to increase awareness
 4 and encourage the public to use our
 5 electronic tools; and a second one, to
 6 work with a regional group which includes
 7 the Alabama Forestry Commission to reduce
 8 the air -- the air-quality impacts of
 9 prescribed fires.
 10 The fourth and final Departmental
 11 Operating Plan Goal, Efficient and
 12 Effective Departmental Operations, is a
 13 critical element in the Department's
 14 efforts to provide cost-effective
 15 services to the citizens of Alabama.
 16 Coordinated effort is necessary to
 17 accomplish goals within any organization,
 18 and that requires quick, effective
 19 communication. Specific objectives
 20 addressing both formal and informal means
 21 of internal communication are part of the
 22 plan.
 23 A major objective under this goal is

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1 Discharge Monitoring Reports, or DMRs.
 2 At more than 99 percent, Alabama is
 3 actually the highest in the entire
 4 nation, which attests to ADEM's
 5 commitment to automation.
 6 Likewise, as represented in dark
 7 blue on EPA's second graph, ADEM has the
 8 second highest absolute number of
 9 facilities with electronic DMR reporting
 10 in place. Since five of the other seven
 11 Region 4 states, including Florida,
 12 Georgia, and North Carolina, have
 13 considerably larger populations than
 14 Alabama, it appears that many states,
 15 unlike Alabama, are yet to even fully
 16 populate the database used in the EPA
 17 comparisons. If that is in fact the
 18 case, then those states showing
 19 percentages approaching Alabama are in
 20 fact dramatically further behind Alabama
 21 than the prior graph indicates.
 22 For fiscal year 2018, five discrete
 23 one-time objectives in the area of

Page 21	<p>1 electronic applications were added. 2 Three involve publicly available mapping 3 for RCRA information, Administrative 4 Orders by media, and beach monitoring 5 data, while the remaining two deal with 6 special environmental situation 7 notifications and added permit 8 requirements to address sanitary sewer 9 overflow events. 10 Another of the electronic 11 application objectives within the broader 12 Goal of Efficient and Effective 13 Departmental Operations is streamlining 14 field inspections using the system known 15 as nSPECT, which has been discussed at 16 past Commission meetings. As of October 17 2016, the field tablets allowing direct 18 entry of inspection data into multiple 19 databases, which improves both 20 productivity and accuracy, were fully 21 operational. Productivity has increased 22 by approximately 30 percent so far. In 23 August, ADEM was one of two state</p>	Page 23
Page 22	<p>1 agencies in the nation to receive the 2 award for business process innovation for 3 this new inspection program. The award 4 was given by the Environmental Council of 5 States, which is the organization 6 representing environmental agencies in 7 all the states. 8 As with the nSPECT application, the 9 move to greater automation through 10 electronic applications is designed to 11 improve efficiency, which is critical if 12 we are to operate at a high level within 13 the constraints of ever-tightening 14 budgets. 15 In addition to operating plan 16 progress covered in Commission meeting 17 reports, a more complete rundown on 18 progress in meeting FY 2017 objectives is 19 available in the six ADEM update reports 20 mentioned earlier that were prepared 21 during fiscal year 2017 and are available 22 on the ADEM website. Copies of the FY 23 2018 departmental operating plan have</p>	Page 24
	<p>1 been provided to you, and additional 2 copies are available on the table outside 3 the meeting room for others who may be 4 interested. 5 Moving on from the operating plan 6 review, I'm pleased to announce some 7 recent promotions and transfers within 8 the Department which, as a group, 9 represent the most extensive personnel 10 moves since ADEM was created. As with 11 all state agencies, it is a challenge to 12 retain employees beyond 25 years of 13 service because after completing 25 years 14 of service, an employee can retire and 15 begin receiving state retirement benefits 16 regardless of the employee's age. Many 17 of those electing to retire under this 18 provision are still well below normal 19 retirement age and are able to pursue a 20 new career. 21 At the same time, with the 22 Department's relatively low level of 23 employee turnover, promotional</p>	

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1 in order for my predecessor, Trey Glenn,
2 who is now Region 4 administrator. Of
3 the 13 -- of the other 13 appointed
4 senior positions requiring Senate
5 confirmation, four have been nominated
6 but none have received final Senate
7 confirmation. The result of the slow
8 progress is that we are primarily dealing
9 with senior EPA career staff.
10 As a final matter, on the occasion
11 of beginning the new fiscal year, I'd
12 like to take a moment to thank each of
13 the Commissioners for your service to the
14 state of Alabama. You're required to
15 invest untold hours to become informed on
16 the issues before the Commission, which
17 includes the task of listening to all
18 points of view on any given matter, and
19 you do this without material benefit to
20 yourselves. Your benefit can only come
21 from the satisfaction of serving your
22 state.
23 Unfortunately, there are times when

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1 for us and updating us on -- on your
2 accomplishments. And I'm particularly
3 glad to hear about the promotions and for
4 the management advancement for some of
5 the employees. So thank you very much.
6 Appreciate it.
7 DIRECTOR LeFLEUR: Thank you.
8 (Applause.)
9 DR. RICHARDSON: Moving along,
10 Agenda Item 4 is for the Chair to give
11 his report, and since the Chair is not
12 here -- he did not pass along a report to
13 me, so we'll move along to Agenda Item
14 No. 5. And this item will consider a
15 resolution for former Commissioner Scott
16 Promer, who recently resigned from the
17 Commission. The resolution is as
18 follows: Whereas Scott Promer, P.E.,
19 M.B.A., served in the -- served in the
20 Certified By Water Well Association
21 position of the Alabama Environmental
22 Management Commission from May 2, 2017 to
23 September 15, 2017; and, whereas, during

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1 your actions and motives are subjected to
2 irresponsible partisan negative
3 speculation, innuendo,
4 mischaracterization, or are otherwise
5 unfairly maligned in a way that
6 undermines public confidence in the good
7 work that is being done. Your continued
8 dedication to serve our state in the face
9 of these trying occurrences is much
10 appreciated by me and others who seek the
11 best for Alabama. Thank you for your
12 service.
13 That concludes my report today.
14 I'll be pleased to answer any questions
15 you have.
16 DR. RICHARDSON: Thank you,
17 Director. Any questions for the
18 Director?
19 (No response.)
20 DR. RICHARDSON: I would just
21 like to state that I think that you and
22 the Department do an excellent job and
23 appreciate you providing these reviews

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1 his tenure on the Commission he was
2 elected to be a member of the Rulemaking
3 Committee; and, whereas, his support of
4 the efforts of the Commission and those
5 of the Alabama Department of
6 Environmental Management and his
7 willingness to explore and take on
8 important environmental issues will be
9 greatly missed by his fellow
10 Commissioners, the Commission's legal
11 counsel and assistant, and the
12 Department's director, supervisors, and
13 staffs. Now, therefore, be it resolved
14 that the Alabama Environmental Management
15 Commission expresses gratitude to Scott
16 Promer, P.E., M.B.A., for his
17 contributions to a better environment and
18 an improved quality of life for the
19 citizens of Alabama, done this 20th day
20 of October, 2017.
21 I will entertain a motion from the
22 Commission regarding the resolution.
23 DR. MARTIN: Motion that we

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1 accept this resolution.
 2 DR. LAIER: Second.
 3 DR. RICHARDSON: It has been
 4 moved and seconded to adopt the
 5 resolution of former Commissioner Promer.
 6 Is there any discussion regarding the
 7 motion?
 8 (No response.)
 9 DR. RICHARDSON: Hearing none, I
 10 will call the question. All in favor of
 11 the resolution as presented signify by
 12 saying aye.
 13 (Members indicate.)
 14 DR. RICHARDSON: All oppose, same
 15 sign.
 16 (No response.)
 17 DR. RICHARDSON: Any abstentions?
 18 (No response.)
 19 DR. RICHARDSON: Then the
 20 resolution is adopted.
 21 Brings us up to Agenda Item No. 6.
 22 And I will call on the Personnel
 23 Committee Chair Miller for a report and

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1 recommendations from the Personnel
 2 Committee on ADEM Director job
 3 performance evaluation.
 4 DR. MILLER: Thank you,
 5 Mr. Chairman. As you know or recall, at
 6 the June 2017 meeting, Chair Brown asked
 7 for our committee to get public input and
 8 to consider the evaluation of the
 9 Director's job performance. At that
 10 time, we put out through all the usual
 11 channels to get public input as well as
 12 Commissioner input, with a deadline of
 13 July 31, 2017. We did receive some
 14 evaluations. All the evaluations were
 15 more positive, and so we'll -- we'll
 16 include those as part of the record of
 17 the Committee's activity.
 18 We also made a recommendation
 19 regarding the Director's salary. At this
 20 time, Director LeFleur is Step 17 of
 21 Grade 90, which is around \$160,000. We
 22 had one more grade available in the
 23 state's system to go to Step 18, Pay

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1 Grade 90, which is a salary of
 2 \$164,419.20 per year; it's about a 2.5-
 3 percent increase. We had discussion on
 4 this matter and unanimously agreed that
 5 we felt like this was a step that should
 6 be taken, and we now present that to the
 7 Committee as our recommendation.
 8 We also recommended that me as
 9 Chairman meet with Mr. LeFleur after
 10 today's meeting and discuss the
 11 evaluation -- the evaluations that we
 12 received and make him aware of our
 13 position and position of others.
 14 So with that, I would like to turn
 15 that over to you for any motions and so
 16 forth to get the Committee -- entire
 17 personnel -- I mean the entire Commission
 18 to vote on our recommendation.
 19 DR. RICHARDSON: Thank you,
 20 Chairman Miller.
 21 At this time, I will entertain a
 22 motion to adopt the recommendations of
 23 the Personnel Committee.

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1 DR. MILLER: So move.
 2 DR. LAIER: Second.
 3 DR. RICHARDSON: It has been
 4 moved and seconded to adopt the
 5 recommendations of the Personnel
 6 Committee regarding the ADEM Director
 7 Mr. LeFleur's performance evaluation.
 8 Are there any discussions regarding the
 9 recommendation and the motion?
 10 DR. MARTIN: I just wanted to
 11 clarify. This is a -- a one-step pay
 12 grade. There's no other higher levels
 13 that can be achieved. The recommendation
 14 was for just a one-step increase.
 15 DR. RICHARDSON: Thanks for that
 16 clarification. Any further discussion?
 17 (No response.)
 18 DR. RICHARDSON: Hearing none,
 19 I'll call the question. All in favor to
 20 accept the motion to adopt the
 21 recommendations of the Personnel
 22 Committee signify by saying aye.
 23 (Members indicate.)

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1 DR. RICHARDSON: All oppose, same
2 sign.
3 (No response.)
4 DR. RICHARDSON: Any abstentions?
5 (No response.)
6 DR. RICHARDSON: Motion carries.
7 We will adopt the recommendations of the
8 Personnel Committee.
9 This brings us up to Agenda Item
10 No. 7. And No. 7, the Commission will
11 consider proposed amendments to ADEM
12 Administrative Code 335-1, the general
13 administration regulations, specifically
14 Rules 335-1-1.03 and .04. And I'll call
15 on the Department for comments.
16 MR. GORE: Mr. Chair, gentlemen,
17 my name's Ron Gore. I'm with the Air
18 Division here. And I'm here to ask that
19 you adopt rules in both this agenda item
20 and the next one. In the interest of
21 time, I'll tell you that the public
22 participation schedule is the same for
23 both rules. We held a comment period

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1 between July the 24th and September the
2 8th of 2017, public hearing on September
3 the 6th; there were no comments received,
4 orally or written, for either of these
5 sets of rules.
6 This first set of rules the
7 Department's asking you to adopt seems
8 like something that's so obvious you
9 don't need to adopt these rules, but the
10 EPA, in terms of Clean Air Act, to say
11 that rules or a conflict-of-interest
12 disclosure and state ethics laws be
13 incorporated to the Department's rules.
14 So the rules we're asking you to
15 adopt does three things: It requires
16 that the EMC members meet state ethics
17 law and federal conflict-of-interest
18 laws; ADEM staff meet the state ethics
19 law; and the Director, the Deputy
20 Director, and division chiefs all have to
21 meet federal conflict-of-interest
22 rulings.
23 So, again, I want to say it seems

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1 obvious. We all have to meet these
2 anyway. But we have to put them in our
3 rules to satisfy EPA. And so pending any
4 questions, I ask that you adopt these
5 rules.
6 DR. RICHARDSON: Do I hear a
7 motion to adopt the proposed amendment to
8 335-1-1-.03 and 335-1-1-.04 related to
9 the Federal Clean Air Act General
10 Administration Rules?
11 DR. LAIER: So move.
12 DR. RICHARDSON: Second?
13 DR. MILLER: Second.
14 DR. RICHARDSON: It's been moved
15 and seconded. Any discussion?
16 (No response.)
17 DR. RICHARDSON: I would just
18 like to clarify for the record that
19 adding this change to the general
20 administration regulations does not
21 change any of the ethics rules related to
22 the Commission members per se. We're all
23 bound by the Alabama State Ethics Laws,

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1 and the inclusion of us being bound by
2 those laws actually rise above and beyond
3 anything EPA is requiring, but it was
4 just a formality that this had to be put
5 into the rules. So I just wanted to make
6 that particular statement.
7 Anyone else?
8 (No response.)
9 DR. RICHARDSON: Then I'll call
10 the question. All in favor of the
11 motion, signify by saying aye.
12 (Members indicate.)
13 DR. RICHARDSON: All opposed,
14 same sign.
15 (No response.)
16 DR. RICHARDSON: Any abstentions?
17 (No response.)
18 DR. RICHARDSON: Motion carries.
19 MR. GORE: Thank you.
20 DR. RICHARDSON: Agenda Item 8 is
21 consideration of proposed amendments to
22 ADEM Administrative Code 335-3, Air
23 Pollution Control Program Regulations,

<p style="text-align: right;">Page 37</p> <p>1 specifically Rule 335-3-3-.05. And it 2 looks like you're still there to talk to 3 us, so go right ahead. 4 MR. GORE: Yes, sir. This is 5 kind of an unusual situation. About a 6 year and a half year ago, EPA adopted 7 some very specific rules applying to 8 cement kilns and, as usual, offered the 9 states the opportunity to administer 10 those rules by adopting identical or 11 similar rules. You approved those rules 12 about a year ago, and in that interim, 13 since you approved those rules, EPA and 14 the industry have discovered there was a 15 mistake made in the EPA's adoption of the 16 rule in that they failed to include an 17 alternate and equivalent emission limit 18 for these cement kilns for mercury 19 emissions. 20 And so the industry, EPA, and we 21 states all acknowledge that mistake was 22 made. I know that sister states are 23 doing the same thing we're asking you to</p>	<p style="text-align: right;">Page 39</p> <p>1 (No response.) 2 DR. RICHARDSON: Any abstentions? 3 (No response.) 4 DR. RICHARDSON: Motion carries. 5 MR. GORE: Thank you again. 6 DR. RICHARDSON: This brings us 7 to Agenda Item 9, consideration of 8 proposed amendments to ADEM 9 Administrative Code 335-6, the Water 10 Quality Program, those dealing with 11 Underground Storage Tank Regulations. So 12 I'll call on the Department for comments. 13 MR. COBB: Good morning, Chairman 14 Richardson, members of the Commission. 15 I'm Stephen Cobb, and I'm chief of the 16 Land Division. You have before you today 17 the complete hearing record for the 18 proposed revisions to the Administrative 19 Code Division 6, Volume 2, 20 Chapter 335-6-15, which are the technical 21 standards, corrective action 22 requirements, and financial 23 responsibility requirements for owners</p>
<p style="text-align: right;">Page 38</p> <p>1 do here, and we're asking you to insert 2 that alternate and equivalent emission 3 limit into our rules to cover that 4 mistake. EPA will fix the problem later 5 at their slower pace. 6 So pending any questions, we ask 7 that you adopt this -- this change. 8 DR. RICHARDSON: I'll entertain a 9 motion from the Commission regarding the 10 proposed amendments to the Air Pollution 11 Control Program Regulations. 12 DR. MARTIN: So move. 13 DR. LAIER: Second. 14 DR. RICHARDSON: It's been moved 15 and seconded. Is there any discussion? 16 (No response.) 17 DR. RICHARDSON: Hearing no 18 discussion, I'll call the question. All 19 in favor of the motion of proposed change 20 signify by saying aye. 21 (Members indicate.) 22 DR. RICHARDSON: All opposed, 23 same sign.</p>	<p style="text-align: right;">Page 40</p> <p>1 and operators of underground petroleum 2 storage tanks. 3 The proposed provisions are 4 necessary to maintain consistency with 5 our federal requirements and to be no 6 less stringent than EPA rulemaking, which 7 was effective October 13, 2015. Once the 8 regulations are final, we will move 9 forward with revisions for our state 10 program approval submittal to EPA, which 11 is necessary to retain the UST program 12 primacy for Alabama. Regulations before 13 you have been subject to public notice 14 and a public hearing was held. One set 15 of comments was received during the 16 comment period which ended September 6, 17 2016. None of the comments received were 18 actually related to any of the proposed 19 regulatory revisions, but a reply 20 providing clarifications has been 21 provided to the commenter which addressed 22 their questions. 23 The Department recommends</p>

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1 adoption of these rules as proposed. And
2 I'll be happy to answer any questions
3 that you might have.
4 DR. RICHARDSON: Are there any
5 questions?
6 (No response.)
7 DR. RICHARDSON: I'll entertain a
8 motion from the Commission regarding the
9 proposed amendments to the Water Quality
10 Program as it relates to underground
11 storage tank regulations.
12 DR. MILLER: I move that we
13 accept the amendment.
14 DR. LAIER: Second.
15 DR. RICHARDSON: It's been moved
16 and seconded. Is there any discussion?
17 (No response.)
18 DR. RICHARDSON: Hearing none,
19 I'll call the question. All in favor of
20 the proposed motion, signify by saying
21 aye.
22 (Members indicate.)
23 DR. RICHARDSON: All opposed,

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1 know of.
2 DR. RICHARDSON: And I have none
3 that I know of at this point either. So
4 looks like perhaps three of us will be
5 here. And perhaps the new chairman will
6 be here as well.
7 I will note that there was a request
8 to make a presentation on coal ash
9 regulations, and that request has been
10 withdrawn pending further information. I
11 believe we have no brief statements from
12 the public. No one has registered to
13 speak before the Commission at this
14 meeting, which brings us up to my -- one
15 of my favorite topics, which is
16 adjournment. I will entertain a motion
17 to adjourn this meeting.
18 DR. LAIER: So move.
19 DR. MILLER: Second.
20 DR. RICHARDSON: All in favor say
21 aye.
22 (Members indicate.)
23 DR. RICHARDSON: Thank you very

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1 same sign.
2 (No response.)
3 DR. RICHARDSON: Any abstentions?
4 (No response.)
5 DR. RICHARDSON: The motion
6 passes.
7 MR. COBB: Thank you.
8 DR. RICHARDSON: Agenda Item 10
9 is other business. Is there any other
10 business from the Commissioners?
11 (No response.)
12 DR. RICHARDSON: I know of no
13 other business myself. With none, we'll
14 move on to Agenda Item 11, which is
15 future Commission sessions. The date of
16 the next commission meeting is
17 December 15th. And I'd like to confirm
18 with the Commissioners their availability
19 for this meeting, starting to my left.
20 DR. LAIER: I have no conflicts.
21 DR. MARTIN: I do not believe I
22 will be able to attend.
23 DR. MILLER: I have none that I

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1 much. Meeting is adjourned.
2
3 (The meeting concluded at
4 11:45 a.m. on October 20, 2017.)
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1 REPORTER'S CERTIFICATE

2 STATE OF ALABAMA)
3)
4 ELMORE COUNTY)

5

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

14 I further certify that I am neither
15 of counsel, nor any relation to the
16 parties to the action, nor am I anyway
17 interested in the result of said cause.

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

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24 Bridgette W. Mitchell
25 Certified Court Reporter and
26 Commissioner for the State of
27 Alabama at Large
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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 anyway interested in the result of said cause.

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**Bridgette W. Mitchell
Certified Court Reporter and
Commissioner for the State of
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Part B

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Terry Richardson as Vice Chair
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(Agenda Item 3)**

**Attachment 4 Resolution for former Commissioner Scott Promer, P.E., M.B.A.
(Agenda Item 5)**

**Attachment 5 Order adopting recommendations of the Personnel Committee
(Agenda Item 6)**

**Attachment 6 Resolution adopting amendments to ADEM Administrative Code 335-1,
General Administration Regulations, Rules 335-1-1-.03 and 335-1-1-.04
and Attachment A – Adopted Amendments
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**Attachment 7 Resolution adopting amendments to ADEM Administrative Code 335-3,
Air Pollution Control Program Regulations, Rule 335-3-3-.05 and
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**Attachment 8 Resolution adopting amendments to ADEM Administrative Code 335-6,
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(Agenda Item 9)**

Attachment 1

Amended 10/6/17

AGENDA*
MEETING OF THE
ALABAMA ENVIRONMENTAL MANAGEMENT COMMISSION
DATE: October 20, 2017
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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b. Brief statements by members of the public registered to speak	3

* 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 AUGUST 18, 2017

2. ELECTIONS

The Commission will elect a Commission Chair and Vice Chair.

3. REPORT FROM THE ADEM DIRECTOR

4. REPORT FROM THE COMMISSION CHAIR

5. CONSIDERATION OF RESOLUTION FOR FORMER COMMISSIONER SCOTT PROMER, P.E., M.B.A.

6. REPORT AND RECOMMENDATIONS FROM THE PERSONNEL COMMITTEE ON THE ADEM DIRECTOR
JOB PERFORMANCE EVALUATION FOR COMMISSION CONSIDERATION

The Personnel Committee will report on the ADEM Director Job Performance Evaluation and present the Committee's recommendations to the Commission for consideration.

7. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-1, GENERAL
ADMINISTRATION REGULATIONS, RULES 335-1-1-.03 AND 335-1-1-.04

The Commission will consider proposed amendments to ADEM Administrative Code 335-1, General Administration Regulations, Rules 335-1-1-.03 and 335-1-1-.04. Revisions to Rules 335-1-1-.03 and 335-1-1-.04 are being proposed to clarify the inclusion of federal Clean Air Act requirements respecting the disclosure of potential conflicts of interests. The Department held a public hearing on the proposed amendments on September 6, 2017.

8. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-3, AIR POLLUTION
CONTROL PROGRAM REGULATIONS, RULE 335-3-3-.05

The Commission will consider proposed amendments to ADEM Administrative Code 335-3, Air Pollution Control Program Regulations, Rule 335-3-3-.05. Revisions to Rule 335-3-3-.05 are being proposed to incorporate an equivalent production-based mercury emission limit, and add additional monitoring and recordkeeping requirements, for Existing Commercial and Industrial Solid Waste Incineration Units in the waste-burning kiln category. The Department held a public hearing on the proposed amendments on September 6, 2017.

9. CONSIDERATION OF PROPOSED AMENDMENTS TO ADEM ADMINISTRATIVE CODE 335-6, WATER
QUALITY PROGRAM – UNDERGROUND STORAGE TANK REGULATIONS

The Commission will consider proposed amendments to ADEM Administrative Code 335-6, Water Quality Program – Underground Storage Tank Regulations. Revisions to Volume II of the Division 6 Code are being proposed to maintain the program's authorized status, to adopt new rules published by EPA, and to make typographical and grammatical corrections. The Department held a public hearing on the proposed amendments on September 6, 2017.

10. OTHER BUSINESS

11. FUTURE BUSINESS SESSION

PUBLIC COMMENT PERIOD

a. REQUEST TO MAKE PRESENTATION

- (1) Request from Cindy Lowry, Alabama Rivers Alliance, SUBJECT: Coal ash regulations
(The full Commission will vote on whether or not to grant the request to make a presentation prior to moving to the Public Comment Period.)

b. 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

BEFORE THE
ENVIRONMENTAL MANAGEMENT COMMISSION
OF THE
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

MOTION

Accept Lanier Brown as Chair and

Terry Richardson as Vice Chair

ORDER

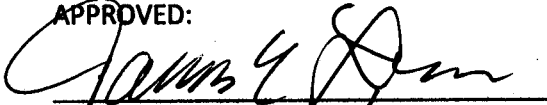
This cause having come before the Environmental Management Commission pursuant to the above motion, and having considered the same, the Commission hereby ORDERS, ADJUDGES, and DECREES as follows:

1. That the above motion is hereby adopted; and
2. That this action has been taken and this Order shall be deemed rendered effective as of the date shown below.

Environmental Management Commission Order
Page 2

ISSUED this 20th day of October 2017.

APPROVED:



Commissioner

Commissioner



Commissioner

Commissioner



Commissioner

Commissioner



Commissioner

Commissioner

DISAPPROVED:

Commissioner

Commissioner


Commissioner

Commissioner

Commissioner

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 20th day of October 2017.



Terry D. Richardson, Vice Chair
Environmental Management Commission
Certified this 20th day of October 2017

Attachment 3



Alabama Department of Environmental Management

Shared AEMC / ADEM Plan Goals

- Effective and Responsive Commission
- High Performing Work Environment
- Credible Relationships with External Stakeholders
- Efficient and Effective Departmental Operations



Alabama Department of Environmental Management

ADEM Operating Plan Goals

- Effective and Responsive Commission
 - Information on proposed rulemaking
 - Information on current environmental policy issues
 - Regular updates on Operating Plan progress
 - Provide performance metrics



Alabama Department of Environmental Management

ADEM Operating Plan Goals

- High Performing Work Environment
 - Financial resources
 - Human resources
 - Data driven performance measurement
 - Promote innovation



Alabama Department of Environmental Management

ADEM Operating Plan Goals

- Credible Relationships with External Stakeholders
 - Meet with private sector, NGOs, Fed & State
 - Community engagement
 - Website information
 - Energy efficiency and safe water outreach

ADEM

Alabama Department of Environmental Management



Community Engagement

ADEM is committed to keeping all residents of Alabama informed and involved regarding the environmental activities in their local communities.

Updated September 2017



Alabama Department of Environmental Management

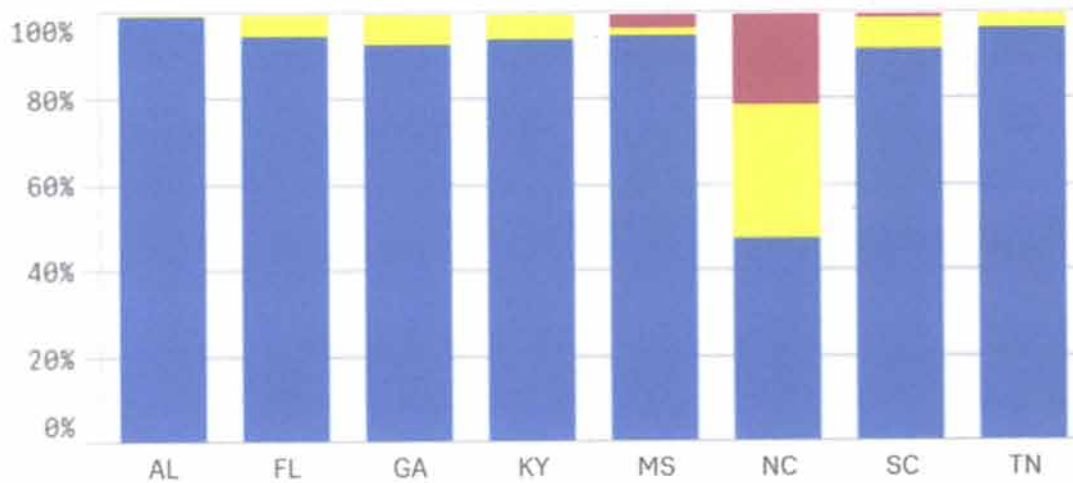
ADEM Operating Plan Goals

- Efficient and Effective Departmental Operations
 - Effective internal communication
 - Meet or exceed EPA work plan
 - Incorporate electronic applications
 - Operate with tight budget



Alabama Department of Environmental Management

Percentage of Permits in Evaluation Categories by State



Number of Permits in Evaluation Categories by State





Alabama Department Of Environmental Management

History and Definition of Environmental Justice (EJ)

- 1994 Presidential Executive Order
- Unlike the Civil Rights Act it is not a law
- State participation is voluntary
- ADEM vigorously engages in EJ activities



Alabama Department Of Environmental Management

Designated ADEM Personnel to Coordinate EJ Activities

- Air, Land, and Water EJ coordinators
- EJ activities overseen by Deputy Director
- Meet with Deputy Director at least twice per month
- Specialized training (e.g. EPA conferences)



**Alabama Department Of
Environmental Management**

**Implementing Elements of
EPA EJ Plan**

- Community Participation in Rulemaking
- Community Engagement in Permitting
- Compliance and Enforcement



**Alabama Department Of
Environmental Management**

**Implementing Elements of
EPA EJ Plan**

- Promising Community-Based Practices
- Interagency EJ Efforts
- Tools Development



Alabama Department Of Environmental Management

Additional ADEM EJ Initiatives

- Formal EJ Training for ADEM Employees
- Tracking of Environmental Improvements in EJ Areas
- Increased Ranking Weight for Cleanups and Eligibility for Loan Forgiveness in EJ Areas

Attachment 4

State of Alabama



RESOLUTION

WHEREAS, Scott Promer, P.E., M.B.A. served in the Certified by Water Well Association position of the Alabama Environmental Management Commission from May 2, 2017, to September 15, 2017; and

WHEREAS, during his tenure on the Commission, he was elected to be a Member of the Rulemaking Committee; and

WHEREAS, his support of the efforts of the Commission and those of the Alabama Department of Environmental Management and his willingness to explore and take on important environmental issues will be greatly missed by his fellow Commissioners; the Commission's legal counsel and assistant; and the Department's Director, supervisors, and staff; now

THEREFORE, BE IT RESOLVED that the Alabama Environmental Management Commission expresses gratitude to SCOTT PROMER, P.E., M.B.A. for his contributions to a better environment and an improved quality of life for the citizens of Alabama.

DONE this 20th day of October 2017.

Terry D. Richardson
James C. Lee
Tom Martin
Sam Mitchell

This is to certify that this Resolution is a true and accurate account of the actions taken by the Environmental Management Commission on this 20th day of October 2017.

Terry D. Richardson

Terry D. Richardson, Vice Chair
Environmental Management Commission
Certified this 20th day of October 2017

Attachment 5

BEFORE THE
ENVIRONMENTAL MANAGEMENT COMMISSION
OF THE
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

MOTION

Adopt the recommendations of the Personnel Committee

ORDER


This cause having come before the Environmental Management Commission pursuant to the above motion, and having considered the same, the Commission hereby ORDERS, ADJUDGES, and DECREES as follows:

1. That the above motion is hereby adopted; and
2. That pursuant to the adoption of the recommendations of the Personnel Committee, the Commission approves a salary advance for Director LeFleur of one step to Step 18 in Pay Grade 90 (per year salary of \$164,419.20); and
3. That pursuant to the adoption of the recommendations of the Personnel Committee, the Chair of the Personnel Committee is authorized to meet with Director LeFleur regarding the Summary of Written Comments on ADEM Director Job Performance Evaluation and action taken by the Commission regarding the evaluation and to execute the verification of understanding between the Commission and the Director regarding the evaluation; and
4. That this action has been taken and this Order shall be deemed rendered effective as of the date shown below.

Environmental Management Commission Order
Page 2

ISSUED this 20th day of October 2017.

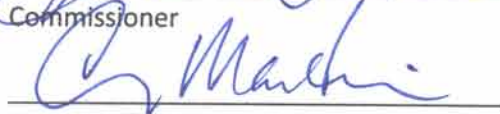
APPROVED:



Commissioner



Commissioner



Commissioner

Commissioner



Commissioner

Commissioner

Commissioner


DISAPPROVED:

Commissioner

Commissioner

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 20th day of October 2017.**



**Terry D. Richardson, Vice Chair
Environmental Management Commission
Certified this 20th day of October 2017**

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 335-1 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 335-1-1-.03/Organization of Duties of the Commission (Amend); 335-1-1-.04/Organization of the Department (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 Reference Service.

**ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION**

ADEM Admin. Code division 335-1 – General Administration

IN WITNESS WHEREOF, we have affixed our signatures below on this 20th day of October 2017.

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 20th day of October 2017.


Terry D. Richardson, Vice Chair
Environmental Management Commission
Certified this 20th day of October 2017

335-1-1-.03 Organization and Duties of the Commission.

(1) The Commission is a statutorily-created seven member commission with the following duties:

(a) To select a Director for the Department of Environmental Management and to advise the Director on environmental matters which are within the Department's scope of authority;

(b) To establish, adopt, promulgate, modify, repeal and suspend any rules, regulations, or environmental standards for the Department which may be applicable to the state as a whole or any of its geographical parts;

(c) To develop environmental policy for the state; and

(d) To hear and determine appeals of administrative actions.

(2) The members of the Commission are appointed for six-year terms by the Governor with the advice and consent of the senate. Position qualifications are as follows:

(a) a physician licensed to practice medicine in the State of Alabama who shall be familiar with environmental matters;

(b) a professional engineer registered in the State of Alabama who shall be familiar with environmental matters;

(c) an attorney licensed to practice law in the State of Alabama who shall be familiar with environmental matters;

(d) a chemist possessing as a minimum a bachelor's degree from an accredited university, or a veterinarian licensed to practice veterinary medicine in the State of Alabama, who shall be familiar with environmental matters;

(e) an individual certified by the national water well association certification program;

(f) a biologist or an ecologist possessing as a minimum a bachelor's degree from an accredited university with training in environmental matters;

(g) a resident of the state for at least two years; and

(h) members shall meet all requirements of the state ethics law and the conflict of interest provisions of applicable federal laws and regulations.

(3) The Commission meets regularly, at least once every two months, and keeps a complete and accurate record of the proceedings of its meetings, a copy of which is on file in the office of the Director and open to public inspection.

(4) Beginning with Fiscal Year 2009 as needed for the effective

execution of statutory mandates, and at least every fifth year after the last notice as outlined herein, and in accordance with all applicable statutes and regulations, the Director shall deliver to the Commission a notice of intent to update the Unified Strategic Plan under which the Commission and Department operate. The notice shall contain the Department's summary of departmental goals, timeline for plan development, and a brief explanation of methodology for updating the Unified Strategic Plan. Any and all updates to the Unified Strategic Plan shall be completed within one year of the Director's notice.

(5) Upon receipt of the notice delivered according to paragraph (4) of this rule, the Commission shall appoint a special ad hoc committee to oversee the Department's development and implementation of the planning process.

(6) Any final Unified Strategic Plan produced according to this process shall be approved by the Commission.

Author: Marilyn Elliott; John P. Hagood.

Statutory Authority: Code of Alabama, 1975, §§22-22A-5, 22-22A-6, 22-22A-8, 41-22-4, 41-22-5.

History: August 1, 1988.

Amended: May 26, 2009; XXXXXX, 2017.

335-1-1-.04 Organization of the Department.

(1) The Department is under the direction, supervision, and control of the Director who is designated by the Commission.

(2) The Director is assisted by a Deputy Director who is a merit system employee and who has charge and general supervision of the Department in the absence or disability of the Director.

(3) The Director establishes Divisions for the purposes of distributing duties, responsibilities, and work among the various personnel of the Department.

(4) The Deputy Director, Division Chiefs, and all other Departmental personnel are merit system employees selected by the Director consistent with the provisions of merit system law and the rules and regulations of the State Personnel Board.

(5) The Director, Deputy Director, Division Chiefs, and all other Departmental personnel shall meet all requirements of the state ethics law.

(6) The Director, Deputy Director, and Division Chiefs shall meet all requirements of the conflict of interest provisions of applicable federal laws and regulations.

Author: Marilyn Elliott.

Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-22A-6, 22-22A-8, 41-22-4, 41-22-5.

History: August 1, 1988-; XXXXXX, 2017.

Attachment 7

**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 335-3 of the Department's Air Division – Air Pollution Control 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 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 335-3 [rules 335-3-3-.05/Incineration of Commercial and Industrial Solid Waste (Amend)]; of the Department's Air Division – Air Pollution Control Program rules, administrative code attached hereto, to become effective forty-five days, unless otherwise indicated, after filing with the Alabama Legislative Reference Service.

**ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION**

ADEM Admin. Code division 335-3 - Air Pollution Control Program

IN WITNESS WHEREOF, we have affixed our signatures below on this 20th day of October 2017.

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 20th day of October 2017.


Terry D. Richardson, Vice Chair
Environmental Management Commission
Certified this 20th day of October 2017

335-3-3-.05 Incineration of Commercial and Industrial Solid Waste.

(1) Terms used but not defined in this rule are defined in 40 CFR 60, Subparts A and B, and are incorporated by reference in ADEM Admin. Code chapter 335-3-10. For the purposes of this rule only, the following definitions apply:

(a) "30-day rolling average" means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent.

(b) "Administrator" means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative.

(c) "Affirmative defense" means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

(d) "Agricultural waste" means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

(e) "Air curtain incinerator" means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

(f) "Annual heat input" means the heat input for the 12 months preceding the compliance demonstration.

(g) "Auxiliary fuel" means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

(h) "Average annual heat input rate" means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

(i) "Bag leak detection system" means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

(j) "Burn-off oven" means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is not an incinerator, waste-burning kiln, an energy recover unit or a small, remote incinerator under this rule.

(k) "Bypass stack" means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

(l) "Calendar quarter" means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

(m) "Calendar year" means 365 consecutive days starting on January 1 and ending on December 31.

(n) "CEMS data during startup and shutdown" means the following:

1. For incinerators, small remote incinerators: CEMS data collected during the first hours of a CISWI unit startup from a cold start until waste is fed into the unit and the hours of operation following the cessation of waste material being fed to the CISWI unit during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less.

2. For energy recovery units: CEMS data collected during the startup or shutdown periods of operation. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown begins when the boiler or process heater no longer makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer makes useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in less;

3. For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for a least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

(o) "Chemical recovery unit" means combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. A chemical recovery unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule. The following seven types of units are considered chemical recovery units:

1. Units burning only pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

2. Units burning only spent sulfuric acid used to produce virgin sulfuric acid.

3. Units burning only wood or coal feedstock for the production of charcoal.

4. Units burning only manufacturing byproduct streams/residue containing catalyst metals that are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

5. Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

6. Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

7. Units burning only photographic film to recover silver.

(p) "Chemotherapeutic waste" means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

(q) "Clean lumber" means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

(r) "Commercial and industrial solid waste incineration (CISWI) unit" means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns material other than traditional fuels as defined in §241.2 that have been discarded, and the owner or operator does not keep and produce records as required by subparagraph (ll)(u) of this rule, the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas:

1. The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and

2. The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. -The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

3. A CISWI unit does not include any of the types of units described in subparagraph (2)(d) of this rule, nor does it include any combustion turbine or reciprocating internal combustion engine.

(s) "Contained gaseous material" means gases that are in a container when that container is combusted.

(t) "Continuous emission monitoring system (CEMS)" means the total equipment that may be required to meet the data acquisition and availability requirements of this rule, used to sample, condition (if applicable), analyze, and provide a record of emissions.

(u) "Continuous monitoring system (CMS)" means the total equipment, required under the emission monitoring sections in applicable rules, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

(v) "Cyclonic burn barrel" means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air. A cyclonic burn barrel is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.

(w) "Deviation" means any instance in which an affected source subject to this rule, or an owner or operator of such a source:

1. Fails to meet any requirement or obligation established by this rule, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

2. Fails to meet any term or condition that is adopted to implement an applicable requirement in this rule and that is included in the operating permit for any affected source required to obtain such a permit.

(x) "Dioxins/furans" means tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

(y) "Discard" means, for purposes of this rule and 40 CFR 60, Subpart CCCC [ADEM Admin. Code r. 335-3-10-.02(81)], only, burned in an incineration unit without energy recovery.

(z) "Drum reclamation unit" means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

(aa) "Dry scrubber" means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

(bb) "Energy recovery" means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

(cc) "Energy recovery unit" means a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.

(dd) "Energy recovery unit designed to burn biomass (Biomass)" means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

(ee) "Energy recovery unit designed to burn coal (Coal)" means an energy recovery unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

(ff) "Energy recovery unit designed to burn liquid waste materials and gas (Liquid/gas)" means an energy recovery unit that burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.

(gg) "Energy recovery unit designed to burn solid materials (Solids)" includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass.

(hh) "Fabric filter" means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

(ii) "Foundry sand thermal reclamation unit" means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.

(ij) "Incinerator" means any furnace used in the process of combusting solid waste (as that term is defined by the Administrator under Resource Conservation and Recovery Act in 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter. Incinerator designs include single chamber and two-chamber.

(kk) "In-line coal mill" means those coal mills using kiln exhaust gases in their process. Coal mills with a heat source other than the kiln or coal mills using exhaust gases from the clinker cooler alone are not an in-line coal mill.

(ll) "In-line kiln/raw mill" means a system in a Portland Cement production process where dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.

(mm) "Kiln" means an oven or furnace, including any associated preheater or precalciner devices, in-line raw mills, in-line coal mills or alkali bypass used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement. Because the alkali bypass, inline raw mill and inline coal mill are considered an integral part of the kiln, the kiln emissions limits also apply to the exhaust of the alkali bypass, in-line raw mill and in-line coal mill.

(nn) "Laboratory analysis unit" means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.

(oo) "Load fraction" means the actual heat input of an energy recovery unit divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

(pp) "Low-level radioactive waste" means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 [42 U.S.C. 2014(e)(2)].

(qq) "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

(rr) "Minimum voltage or amperage" means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.

(ss) "Modification or modified CISWI unit" means a CISWI unit that has been changed later than August 7, 2013, and that meets one of two criteria:

1. The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

2. Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

(tt) "Municipal solid waste or municipal-type solid waste" means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

(uu) "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

(vv) "Operating day" means a 24-hour period between 12:00 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI unit.

(ww) "Oxygen analyzer system" means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler/process heater, firebox, or other appropriate location. This definition includes oxygen trim systems and certified oxygen CEMS. The source owner or operator is responsible to install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

(xx) "Oxygen trim system" means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating range. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

(yy) "Part reclamation unit" means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

(zz) "Particulate matter" means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of 40 CFR 60, Appendix A.

(aaa) "Pathological waste" means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

(bbb) "Performance evaluation" means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

(ccc) "Performance test" means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

(ddd) "Process change" means any of the following physical or operational changes:

1. A physical change (maintenance activities excluded) to the CISWI unit which may increase the emission rate of any air pollutant to which a standard applies;

2. An operational change to the CISWI unit where a new type of non-hazardous secondary material is being combusted;

3. A physical change (maintenance activities excluded) to the air pollution control devices used to comply with the emission limits for the CISWI unit (e.g., replacing an electrostatic precipitator with a fabric filter);

4. An operational change to the air pollution control devices used to comply with the emission limits for the affected CISWI unit (e.g., change in the sorbent injection rate used for activated carbon injection).

(eee) "Rack reclamation unit" means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

(fff) Raw mill means a ball or tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

(ggg) "Reconstruction" means rebuilding a CISWI unit and meeting two criteria:

1. The reconstruction begins on or after August 7, 2013.

2. The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

(hhh) "Refuse-derived fuel" means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

1. Low-density fluff refuse-derived fuel through densified refuse-derived fuel.
2. Pelletized refuse-derived fuel.

(iii) "Responsible Official" means one of the following:

1. For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

- (i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

- (ii) The delegation of authority to such representatives is approved in advance by the Department;

2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

3. For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this rule, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or

4. For affected facilities:

- (i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Clean Air Act or the regulations promulgated there under are concerned; or

- (ii) The designated representative for any other purposes under 40 CFR Part 60.

- (iii) "Shutdown" means the period of time after all waste has been combusted in the primary chamber.

(kkk) "Small, remote incinerator" means an incinerator that combusts solid waste (as that term is defined by the Administrator in 40 CFR part 241) and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill.

(lll) "Soil treatment unit" means a unit that thermally treats petroleum-contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.

(mmm) "Solid waste" (as defined in 40 CFR 241.2) means any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

(nnn) "Solid waste incineration unit" means a distinct operating unit of any facility which combusts any solid waste (as that term is defined by the Administrator in 40 CFR part 241) material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include:

1. Materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals;

2. Qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or

3. Air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Director by rule.

(ooo) "Space heater" means a unit that meets the requirements of 40 CFR 279.23. A space heater is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.

(ppp) "Standard conditions, when referring to units of measure", means a temperature of 68 deg. F (20 deg. C) and a pressure of 1 atmosphere (101.3 kilopascals).

(qqq) "Startup period" means the period of time between the activation of the system and the first charge to the unit.

(rrr) "Waste-burning kiln" means a kiln that is heated, in whole or in part, by combusting solid waste (as the term is defined by the Administrator in 40 CFR part 241). Secondary materials used in Portland cement kilns shall not be deemed to be combusted unless they are introduced into the flame zone in the hot end of the kiln or mixed with the precalciner fuel.

(sss) "Wet scrubber" means an add-on air pollution control device that uses an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

(ttt) "Wood waste" means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

1. Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.
2. Construction, renovation, or demolition wastes.
3. Clean lumber.

(2) Applicability.

(a) Except as provided in subparagraph (b) of this paragraph below, the designated facility to which this rule applies is each individual CISWI that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013..

(b) If the owner or operator of a CISWI unit makes changes that meet the definition of modification or reconstruction on or after August 7, 2013, the CISWI unit becomes subject to 40 CFR 60, Subpart CCCC [ADEM Admin. Code r. 335-3-10-.02(81)] and this rule no longer applies to that unit.

(c) If the owner or operator of a CISWI unit makes physical or operational changes to an existing CISWI unit primarily to comply this rule, 40 CFR 60, Subpart CCCC [ADEM Admin. Code r. 335-3-10-.02(81)] does not apply to that unit. Such changes do not qualify as modifications or reconstructions under Subpart CCCC.

(d) The following types of units are exempt from this rule, but some units are required to provide notification. Air curtain incinerators are exempt from the

requirements in this rule except for the provisions in paragraph (12), subparagraphs (13)(j) and (13)(l) of this rule:

1. Pathological waste incineration units. Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in paragraph (1) are not subject to this rule if the two requirements specified in subparagraphs (d)1.(i) and (ii) of this paragraph below are met.

(i) Notify the Director that the unit meets these criteria.

(ii) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

2. Reserved.

3. Municipal waste combustion units. Incineration units that are subject to 40 CFR 60, Subpart Ea (Standards of Performance for Municipal Waste Combustors); 40 CFR 60, Subpart Eb (Standards of Performance for Large Municipal Waste Combustors); 40 CFR 60, Subpart Cb (Emission Guidelines and Compliance Time for Large Municipal Combustors); 40 CFR 60, Subpart AAAA (Standards of Performance for Small Municipal Waste Combustion Units); or 40 CFR 60, Subpart BBBB (Emission Guidelines for Small Municipal Waste Combustion Units)

4. Medical waste incineration units. Incineration units regulated under 40 CFR 60, Subpart Ec incorporated by reference in rule 335-3-10-.02(3)(c) (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or rule 335-3-3-.04 [Incineration of Hospital/Medical/Infectious Waste].

5. Small power production facilities. Units that meet the three requirements specified in subparagraphs (d)5.(i) through (iii) of this paragraph below.

(i) The unit qualifies as a small power-production facility under Section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(ii) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(iii) The owner or operator submit a request to the Director for a determination that the qualifying small power production facility is combusting homogenous waste.

(iv) The owner or operator maintains records specified in subparagraph (11)(v) of this rule.

6. Cogeneration facilities. Units that meet the three requirements specified in subparagraphs (d)6.(i) through (iii) of this paragraph below.

(i) The unit qualifies as a cogeneration facility under Section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(ii) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(iii) The owner or operator submits a request to the Director for a determination that the qualifying cogeneration facility is combusting homogenous waste.

(iv) The owner or operator maintain records specified in subparagraph (ll)(w) of this rule.

7. Hazardous waste combustion units. Units that are required to get a permit under section 3005 of the Solid Waste Disposal Act.

8. Materials recovery units. Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

9. Air curtain incinerators. Air curtain incinerators that burn only the materials listed in subparagraphs (d)9.(i) through (iii) of this paragraph below are only required to meet the requirements under "Air Curtain Incinerators" (paragraph (13) of this rule).

(i) 100 percent wood waste.

(ii) 100 percent clean lumber.

(iii) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

10. Reserved.

11. Reserved.

12. Reserved.

13. Sewage treatment plants. Incineration units regulated under 40 CFR 60, Subpart O as incorporated in rule 335-3-10-.02(15) (Standards of Performance for Sewage Treatment Plants).

14. Reserved.

15. Reserved.

16. Sewage sludge incineration units. Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of 40 CFR 60 as incorporated in rule 335-3-10-.02(90) (Standards of Performance for Sewage Sludge Incineration Units) or subpart MMMM of 40 CFR 60 (Emission Guidelines for Sewage Sludge Incineration Units).

17. Other solid waste incineration units. Incineration units that are subject to subpart EEEE of 40 CFR 60 (Standards of Performance for Other Solid Waste Incineration Units) or subpart FFFF of 40 CFR 60 (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units).

(3) Increments of Progress.

(a) For owners or operators planning to achieve compliance more than one year following the effective date of EPA's approval of these rules, the two increments of progress specified in subparagraphs (a)1. and 2. of this paragraph below shall be met.

1. Submit a final control plan to the Director no later than one year after the effective date of EPA's approval of these rules.

2. Achieve final compliance no later than December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010.

(b) The owner or operator shall submit to the Director, notifications for achieving increments of progress. The notifications shall be postmarked no later than 10 business days after the compliance date for the increment. These notifications shall include the three items specified in subparagraphs (b)1. through 3. of this paragraph below:

1. Notification that the increment of progress has been achieved.
2. Any items required to be submitted with each increment of progress.
3. Signature of the owner or operator of the CISWI unit.

(c) If an owner or operator fails to meet an increment of progress, a notification to the Director shall be submitted and postmarked within 10 business days after the date for that increment of progress in subparagraph (3)(a) above. The owner or operator shall inform the Director that the increment was not met, and reports shall be submitted each subsequent calendar month until the increment of progress is met.

(d) For the control plan increment of progress, the owner or operator shall satisfy the two requirements specified in subparagraphs (d)1. and 2. of this paragraph below.

1. Submit the final control plan that includes the five items described in subparagraphs (d)1.(i) through (v). of this paragraph below.

(i) A description of the devices for air pollution control and process changes that will be used to comply with the emission limitations and other requirements of this rule.

(ii) The type(s) of waste to be burned.

(iii) The maximum design waste burning capacity.

(iv) The anticipated maximum charge rate.

(v) If applicable, the petition for site-specific operating limits under paragraph (6)(c) of this rule.

2. Maintain an onsite copy of the final control plan.

(e) For the final compliance increment of progress, the owner or operator shall complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected CISWI unit is brought online, all necessary process changes and air pollution control devices would operate as designed.

(f) Closing and restarting a CISWI unit.

1. If the CISWI unit is closed but will be restarted prior to the final compliance date of December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010, the owner or operator shall meet the increments of progress specified in subparagraph (a) of this paragraph.

2. If the CISWI unit is closed but will be restarted after the final compliance date of December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010, the owner or operator shall complete emission control retrofits and meet the emission limitations and operating limits on the date the unit restarts operation.

(g) Permanent closure of a CISWI unit. If the owner or operator plans to close the CISWI unit rather than comply with this rule, submit a closure notification, including the date of closure, to the Director within 90 days after EPA approval of these rules.

(4) Waste Management Plan.

(a) A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

(b) A waste management plan shall be submitted no later than the date specified in subparagraph (3)(a)1. of this rule for submittal of the final control plan.

(c) A waste management plan shall include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan shall identify any additional waste management measures, and the source shall implement those measures considered practical and feasible, based on the effectiveness of waste management measures already in place, the costs of additional measures, the

emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

(5) Operator Training and Qualification.

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, the procedures in subparagraph (h) of this paragraph below shall be followed.

(b) Operator training and qualification shall be obtained through a State-approved program that meets the requirements included in subparagraph (c) of this paragraph below. Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under subparagraph (c)2. of this paragraph below.

(c) Training shall be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in subparagraphs (c)1. through 3. of this paragraph below.

1. Training on the eleven subjects listed in subparagraphs (c)1.(i) through (xi) of this paragraph below.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (if applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunction.

(viii) Bottom and fly ash characteristics and handling procedures.

(ix) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(x) Pollution prevention.

(xi) Waste management practices.

2. An examination designed and administered by the instructor.
3. Written material covering the training course topics that can serve as reference material following completion of the course.

(d) The operator training course shall be completed by the later of the three dates specified in subparagraphs (d)1. through 3. of this paragraph below.

1. The final compliance date of December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010.

2. Six months after CISWI unit startup.

3. Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

(e) To maintain qualification, the operator shall complete an annual review or refresher course covering, at a minimum, the five topics described in subparagraphs (e)1. through 5. of this paragraph below.

1. Update of regulations.

2. Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.

3. Inspection and maintenance.

4. Prevention and correction of malfunctions or conditions that may lead to malfunction.

5. Discussion of operating problems encountered by attendees.

(f) A lapsed operator qualification shall be renewed by one of the two methods specified in subparagraphs (f)1. and 2. of this paragraph below.

1. For a lapse of less than 3 years, the operator shall complete a standard annual refresher course described in subparagraph (e) of this paragraph above.

2. For a lapse of 3 years or more, the operator shall repeat the initial qualification requirements in subparagraphs (b) and (c) of this paragraph above.

(g) Requirements for site specific documentation.

1. Site specific documentation shall be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in subparagraphs (g)1.(i) through (x) of this paragraph below. The owner or operator shall maintain this information and the training records required by subparagraph (g)3. of this paragraph below in a manner that they can be readily accessed and are suitable for inspection upon request.

- (i) Summary of the applicable standards under this rule.
- (ii) Procedures for receiving, handling, and charging waste.
- (iii) Incinerator startup, shutdown, and malfunction procedures.
- (iv) Procedures for maintaining proper combustion air supply levels.
- (v) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this rule.
- (vi) Monitoring procedures for demonstrating compliance with the incinerator operating limits.
- (vii) Reporting and recordkeeping procedures.
- (viii) The waste management plan required under paragraph (4) of this rule.
- (ix) Procedures for handling ash.
- (x) A list of the wastes burned during the performance test.

2. The owner or operator shall establish a program for reviewing the information listed in subparagraph (g)1. of this paragraph above with each incinerator operator.

(i) The initial review of the information listed in subparagraph (g)1. of this paragraph shall be conducted by the later of the three dates specified in subparagraphs (g)2.(i)(I) through (III) of this paragraph below.

(I) The final compliance date of December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010.

(II) Six months after CISWI unit startup.

(III) Six months after being assigned to operate the CISWI unit.

(ii) Subsequent annual reviews of the information listed in subparagraph (g)1. of this paragraph shall be conducted no later than 12 months following the previous review.

3. The owner or operator shall also maintain the information specified in subparagraphs (g)3.(i) through (iii) below.

(i) Records showing the names of CISWI unit operators who have completed review of the information in subparagraph (g)1. of this paragraph above as required by subparagraph (g)2. of this paragraph, including the date of the initial review and all subsequent annual reviews.

(ii) Records showing the names of the CISWI operators who have completed the operator training requirements under this paragraph, met the criteria for qualification under subparagraphs (a), (b) and (c) of this paragraph, and maintained or renewed their qualification under subparagraphs (e) or (f) of this paragraph, respectively. Records shall include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(iii) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(h) If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within 1 hour), the owner or operator shall meet one of the two criteria specified in subparagraphs (h)1. and 2. of this paragraph below, depending on the length of time that a qualified operator is not accessible.

1. When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in subparagraph (g)1. of this paragraph within the past 12 months. However, the period when all qualified operators were not accessible shall be recorded and this deviation included in the annual report as specified under paragraph (11) of this rule.

2. When all qualified operators are not accessible for 2 weeks or more, the two actions that are described in subparagraphs (h)2.(i) and (ii) of this paragraph below shall be taken.

(i) Notify the Director of this deviation in writing within 10 days. In the notice, state what caused this deviation, what actions are being taken to ensure that a qualified operator is accessible, and when it is expected that a qualified operator will be accessible.

(ii) Submit a status report to the Administrator every 4 weeks outlining what actions are being taken to ensure that a qualified operator is accessible, stating when it is expected that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. The first status report shall be submitted 4 weeks after notification to the Director of the deviation under subparagraph (h)2.(i). If the Administrator notifies the owner or operator that the request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then shall cease operation. Operation of the unit may resume if the two requirements in subparagraphs (h)2.(ii)(I) and (II) of this paragraph below are met.

(I) A qualified operator is accessible as required under subparagraph (a) of this paragraph.

(II) The owner or operator notifies the Administrator that a qualified operator is accessible and operation is resuming.

(6) Emission Limitations and Operating Limits.

(a) The owner or operator shall meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in Table 1 of this rule or tables 5 through 8 of this rule by the final compliance date of December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010, as applicable. The emission limitations apply at all times the unit is operating including and not limited to startup, shutdown, or malfunction.

1. Units that do not use wet scrubbers shall maintain opacity to less than equal to the percent opacity (three 1-hour blocks consisting of ten 6-minute average opacity values) specified in table 1 of this rule, as applicable.

(b) Timelines for Operating Limits.

1. If a wet scrubber(s) is used to comply with the emission limitations, the owner or operator shall establish operating limits for up to four operating parameters (as specified in Table 2 of this rule) as described in subparagraphs (b)1.(i) through (iv) of this paragraph during the initial performance test.

(i) Maximum charge rate, calculated using one of the two different procedures in subparagraph (b)1.(i)(I) or (II) of this paragraph, as appropriate.

(I) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(II) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as lowest 1-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(iii) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(iv) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

2. The owner or operator shall meet the operating limits established during the initial performance test on the date the initial performance test is

required or completed (whichever is earlier). The owner or operator shall conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system.

3. If the owner or operator uses a fabric filter to comply with the emission limitations, each fabric filter system shall be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

4. If the owner or operator uses an electrostatic precipitator to comply with the emission limitations, the owner or operator shall measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage x secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

5. If the owner or operator uses an activated carbon sorbent injection to comply with the emission limitations, the owner or operator shall measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when the unit operates at lower loads, multiply the sorbent injection rate by the load fraction, as defined in this rule, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

6. If the owner or operator uses selective noncatalytic reduction to comply with the emission limitations, the owner or operator shall measure the charge rate, the secondary chamber temperature (if applicable to the CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest 1-hour average charge rate, lowest secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

7. If the owner or operator uses a dry scrubber to comply with the emission limitations, the owner or operator shall measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest 1-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when the unit operates at lower loads, multiply the sorbent injection rate by the load

fraction, as defined in this rule, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

8. If the owner or operator does not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitation, and if the owner or operator does not determine compliance with the particulate matter emission limitation with a particulate matter CEMS, the owner or operator shall maintain opacity to less than or equal to ten percent opacity (1-hour block average).

9. If the owner or operator uses a PM CPMS to demonstrate compliance, the owner or operator shall establish a PM CPMS operating limit and determine compliance with it according to subparagraphs (b)9.(i) through (v) of this paragraph below.

(i) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record all hourly average output values (milliamps) from the PM CPMS for the periods corresponding to the test runs (e.g., three 1-hour average PM CPMS output values for three 1-hour test runs).

(I) The owner or operator's PM CPMS shall provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements shall be determined in units of milliamps.

(II) The owner or operator's PM CPMS operating range shall be capable of reading PM concentrations from zero to a level equivalent to at least two times the allowable emission limit. If the owner or operator's PM CPMS is an auto ranging instrument capable of multiple scales, the primary range of the instrument shall be capable of reading PM concentrations from zero to a level equivalent to two times the allowable emission limit.

(III) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all the PM CPMS output values for three corresponding 2-hour Method 51 test runs).

(ii) If the average of the three PM performance test runs are below 75% of the PM emission limit, the owner or operator shall calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in subparagraphs (b)9.(i) through (v) of this paragraph.

(I) Determine the instrument zero output with one of the following procedures:

I. Zero point data for *in-situ* instruments shall be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

II. Zero point data for extractive instruments shall be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

III. The zero point can also be obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when the process is not operating, but the fans are operating or the source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

IV. If none of the steps in subparagraphs (b)9.(ii)(I) through (IV) of this paragraph are possible, the owner or operator shall use a zero output value provided by the manufacturer.

(II) Determine the PM CPMS instrument average in milliamps, and the average of the corresponding three PM compliance test runs, using Equation 1 of this rule:

$$\text{(Eq. 1)} \quad \bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \quad \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i$$

Where:

X_i = the PM CPMS data points for the three runs constituting the performance test;

Y_i = the PM concentration value for the three runs constituting the performance test; and

n = the number of data points.

(III) With the instrument zero expressed in milliamps, the three run average PM CPMS milliamp value, and the three run average PM concentration from the three compliance tests, determine a relationship of lb/Mmbtu per milliamp with Equation 2 of this rule:

$$\text{(Eq. 2)} \quad R = \frac{Y_i}{(X_i - z)}$$

Where:

R = the relative mg/dscm per milliamp for the PM CPMS;

Y_i = the three run average mg/dscm PM concentration;

X_i = the three run average milliamp output from the PM CPMS; and

z = the milliamp equivalent of the instrument zero determined from subparagraph (b)9.(ii)(I) of this paragraph.

(IV) Determine the source specific 30-day rolling average operating limit using the mg/dscm per milliamp value from Equation 2 in Equation 3, below. This sets the operating limit at the PM CPMS output value corresponding to 75% of the emission limit.

$$(Eq. 3) \quad O_1 = z + \frac{0.75(L)}{R}$$

Where:

O_1 = the operating limit for the PM CPMS on a 30-day rolling average, in milliamps;

L = the source emission limit expressed in lb/Mmbtu;

z = the instrument zero in milliamps, determined from subparagraph (b)9.(ii)(I) of this paragraph; and

R = the relative mg/dscm per milliamp for the PM CPMS, from Equation 2 of this rule..

(iii) If the average of the three PM compliance test runs is at or above 75% of the PM emission limit the owner or operator shall determine the operating limit by averaging the PM CPMS milliamp output corresponding to the three PM performance test runs that demonstrate compliance with the emission limit using Equation 4 and shall submit all compliance test and PM CPMS data according to the reporting requirements in subparagraph (b)9.(v) of this paragraph.

$$(Eq. 4) \quad O_h = \frac{1}{n} \sum_{i=1}^n X_i$$

Where:

X_i = the PM CPMS data points for all runs i ;

n = the number of data points; and

O_h = the site specific operating limit, in milliamps.

(iv) To determine continuous compliance, the owner or operator shall record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The owner or operator shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps, PM concentration, raw data signal) on a 30-day rolling average basis.

(v) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g., beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(c) If the owner or operator uses an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric

filter, an electrostatic precipitator, or a dry scrubber or limit emissions in some other manner, including mass balances, to comply with the emission limitations under subparagraph (a) of this paragraph, the owner or operator shall petition the Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall submit the petition at least sixty days before the performance test is scheduled to begin. The petition shall include the five items listed in subparagraphs (c)1. through 5. of this paragraph below.

1. Identification of the specific parameters the owner or operator proposes to use as additional operating limits.

2. A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

3. A discussion of how the owner or operator will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters.

4. A discussion identifying the methods the owner or operator will use to measure and the instruments that will be used to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

5. A discussion identifying the frequency and methods for recalibrating the instruments that will be used for monitoring these parameters.

(7) Performance Testing.

(a) All performance tests shall consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) The owner or operator shall document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in paragraph (11) of this rule) and the types of waste burned during the performance test.

(c) All performance tests shall be conducted using the minimum run duration specified in Table 1 and Tables 5 through 8 of this rule.

(d) Method 1 of Appendix A, 40 CFR 60 shall be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of Appendix A, 40 CFR 60 shall be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of Appendix A, 40 CFR 60 shall be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, shall be adjusted to 7 percent oxygen using Equation 5 of this rule:

$$\text{(Eq. 5) } C_{\text{adj}} = C_{\text{meas}} (20.9 - 7) / (20.9 - \%O_2)$$

Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen;

C_{meas} = pollutant concentration measured on a dry basis; $(20.9 - 7) = 20.9$ percent oxygen - 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$ = oxygen concentration measured on a dry basis, percent.

(g) The owner or operator shall determine dioxins/furans toxic equivalency by following the procedures in subparagraphs (g)1. through 4. of this paragraph below.

1. Measure the concentration of each dioxin/furan tetra- through octa-isomer emitted using EPA Method 23 at 40 CFR part 60, Appendix A.

2. Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. The owner or operator shall quantify the isomers per Section 9.0 of Method 23. (Note: the owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5)

3. For each dioxin/furan (tetra- through octa-chlorinated) isomer measured in accordance with subparagraph (g)1. and 2. of this paragraph above, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 3 of this rule.

4. Sum the products calculated in accordance with subparagraph (g)3. of this paragraph above to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(h) Method 22 at 40 CFR part 60, appendix A-7 shall be used to determine compliance with the fugitive ash emission limit in table 1 of this rule or tables 5 through 8 of this rule.

(i) If the owner or operator has an applicable opacity operating limit, the owner or operator shall determine compliance with the opacity limit using Method 9 at 40 CFR part 60, appendix A-4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless the owner or operator is required to install a continuous opacity monitoring system, consistent with paragraphs (9) and (10).

(j) The owner or operator shall determine dioxins/furans total mass basis by following the procedures in subparagraphs (j)1. through 3. of this paragraph below.

1. Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A-7.

2. Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. The owner or operator shall quantify the isomers per Section 9.0 of Method 23. (Note: The owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5).

3. Sum the quantities measured in accordance with subparagraphs (j)1. and 2. of this paragraph to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

(k) The results of performance tests are used to demonstrate compliance with the emission limitations in Table 1 or tables 5 through 8 of this rule.

(8) Initial Compliance Requirements.

(a) The owner or operator shall conduct a performance test, as required under paragraphs (6) and (7) of this rule, to determine compliance with the emission limitations in Table 1 and tables 5 through 8 of this rule, to establish compliance with any opacity operating limits in subparagraph (6)(b) of this rule, and to establish operating limits using the procedures in subparagraphs (6)(b) or (6)(c) of this rule. The performance test shall be conducted using the test methods listed in Table 1 and table 5 through 8 of this rule and the procedures in paragraph (7) of this rule. The use of the bypass stack during a performance test shall invalidate the performance test. The owner or operator shall conduct a performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

(b) The initial performance test shall be conducted no later than 180 days after the final compliance date. The final compliance date is specified in subparagraph (3)(a)2. of this rule.

(c) If the owner or operator commences or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and conducted a test consistent with the provisions of this rule while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, retesting is not needed until 6 months from the date the solid waste is reintroduced.

(d) If the owner or operator commences combusting or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and has not conducted a performance test consistent with the provisions of this rule while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, the owner or operator shall conduct a performance test within 60 days commencing or recommencing solid waste combustion.

(e) The initial air pollution control device inspection shall be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

(f) Within 10 operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Director establishing a date whereby all necessary repairs of the designated facility shall be completed.

(g) If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, initial compliance shall be demonstrated pursuant to 40 CFR § 63.1348(a)(5). The initial compliance test must begin on the first operating day following completion of the field testing and data collection that demonstrates that the continuous emissions monitoring system has satisfied the relevant performance acceptance criteria of Performance Specifications 12A or 12B of Appendix B of 40 CFR Part 60. The notification required by subparagraph (11)(aa) of this rule shall also include the owner or operators intention to comply with the equivalent production-based mercury emission limit in Table 7. For waste-burning kilns choosing to comply with the equivalent production-based mercury emission limit in Table 7, the term operating day in 40 CFR § 63.1348(a)(5), 40 CFR § 63.1348(b)(7) and 40 CFR § 63.1349(b)(5) means any 24-hour period beginning at 12:00 midnight during which the kiln produces any amount of clinker.

(9) Continuous Compliance Requirements.

(a) Compliance with standards.

1. The emission standards and operating requirements set forth in this rule apply at all times.

2. If the combusting of solid waste is ceased the owner or operator may opt to remain subject to the provisions of this rule. Consistent with the definition of CISWI unit, the owner or operator is subject to the requirements of this rule at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

3. If the combusting of solid waste is ceased the owner or operator shall be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by the owner or operator, that shall be at least 6 months from the date that combusting solid waste is ceased, consistent with subparagraph (9)(a)2. of this paragraph above. The source shall remain in compliance with this rule until the effective date of the waste-to-fuel switch.

4. Any owner or operator of an existing commercial or industrial combustion unit that combusted a fuel or no-waste material, and commences or recommences combustion of solid waste, the owner or operator is subject to the provisions of this rule as of the first day solid waste is introduced or reintroduced to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. The owner or operator shall complete all initial compliance demonstrations for any Section 112 standards that are applicable to the facility before commencing or recommencing combustion of solid waste. The owner or

operator shall provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification shall identify:

(i) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(ii) The currently applicable subcategory under this rule, and any 40 CFR part 63 subpart and subcategory that will be applicable after the combusting of solid waste is ceased;

(iii) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(iv) The date on which the unit became subject to the currently applicable emission limits;

(v) The date upon which combusting solid waste is ceased, and the date (if different) that any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with subparagraphs (9)(a)2. and 3. of this paragraph.

5. All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.

6. All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks shall be performed as of the effective date of the waste-to-fuel, or fuel-to waste switch. Relative accuracy tests shall be performed as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with section 112 monitoring requirements or monitoring requirements under this rule.

(b) The owner or operator shall conduct an annual performance test for the pollutants listed in table 1 or tables 5 through 8 of this rule and opacity for each CISWI unit as required under paragraph (7) of this rule. The annual performance test shall be conducted using the test methods listed in Table 1 or table 5 through 8 of this rule and the procedures in paragraph (7) of this rule. Opacity shall be measured using EPA Reference Method 9 at 40 CFR part 60. Annual performance tests are not required if the owner or operator uses CEMS or continuous opacity monitoring systems to determine compliance.

(c) The owner or operator shall continuously monitor the operating parameters specified in subparagraph (6)(b) or established under subparagraph (6)(c) of this rule and as specified in subparagraph (10)(d) of this rule. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under subparagraph (6)(c) of this rule or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in subparagraph (9)(a) of this paragraph constitutes a deviation from the operating limits established under this rule, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

(d) The owner or operator shall burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test.

(e) For energy recovery units, incinerators, and small remote units, the owner or operator shall perform annual visual emissions test for ash handling.

(f) For energy recovery units, the owner or operator shall conduct an annual performance test for opacity using EPA Reference Method 9 at 40 CFR part 60 (except where particulate matter continuous monitoring system or continuous parameter monitoring systems are used) and the pollutants listed in table 6 of this rule.

(g) For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, compliance with the carbon monoxide emission limit may be demonstrated by using the CEMS according to the following requirements:

1. The owner or operator shall measure emissions according to §60.13 to calculate 1-hour arithmetic averages corrected to 7 percent oxygen. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The owner or operator shall demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this rule, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7.

2. Operate the carbon monoxide continuous emissions monitoring system in accordance with the applicable requirements of performance specification 4A of appendix B and the quality assurance procedures of appendix F of 40 CFR part 60.

(h) Coal and liquid/gas energy recovery units with annual average heat input rates greater than 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in subparagraph (10)(n) of this rule, instead of the continuous parameter monitoring system specified in subparagraph (9)(i) of this paragraph. Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in subparagraph (10)(n) of this rule, instead of particulate matter testing with EPA Method 5 at 40 CFR part 60, appendix A-3 and, if applicable, the continuous opacity monitoring requirements in subparagraph (9)(i) of this paragraph.

(i) For energy recovery units with annual average heat input rates greater than or equal to 10 MMBTU/hour but less than 250 MMBtu/hr the owner or operator shall install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in paragraph (10) in this rule.

(j) For waste-burning kilns, the owner or operator shall conduct an annual performance test for the pollutants (except mercury and particulate matter, and hydrogen chloride if no acid gas wet scrubber is used) listed in table 7 of this rule. If the waste-burning kiln is not equipped with an acid gas wet scrubber or dry scrubber, the owner or operator shall determine compliance with the hydrogen chloride emission limit according to the requirements in subparagraph (j)1. of this rule. The owner or operator shall determine compliance with the mercury emissions limit using a mercury CEMS according to subparagraph (j)2. of this rule. The owner or operator shall determine compliance with particulate matter using CPMS:

1. If compliance is monitored with the HCl emissions limit by operating an HCl CEMS, the owner or operator shall do so in accordance with Performance Specification 15 (PS 15) of appendix B to 40 CFR part 60, or, PS 18 of appendix B to 40 CFR part 60. The owner or operator shall operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to 40 CFR part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. The owner or operator shall operate, maintain and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of appendix F to 40 CFR part 60. For any performance specification used, the owner or operator shall use Method 321 of appendix A to 40 CFR part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in subparagraphs (j)1.(i) and (ii) of this paragraph apply to all HCl CEMS used under this rule:

(i) The owner or operator shall use a measurement span value for any HCl CEMS of 0-10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values

which would include those expected during "mill off" conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records; and

(ii) In order to quality assure data measured above the span value, the owner or operator shall use one of the three options in subparagraphs (j)1.(ii)(I) through (III) of this paragraph:

(I) Include a second span that encompasses the HCl emission concentrations expected to be encountered during "mill off" conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required;

(II) Quality assure any data above the span value by proving instrument linearity beyond the span value established in subparagraph (j)1.(i) of this paragraph using the following procedure. Conduct a weekly "above span linearity" calibration challenge of the monitoring system using a reference gas with a certified value greater than the highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The "above span" reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as would be done for a daily calibration. The "above span linearity" challenge is successful if the value measured by the HCl CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new "above span linearity" challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in (j)1.(ii)(IV) of this paragraph. In this manner values measured by the HCl CEMS during the above span linearity challenge exceeding ± 20 percent of the certified value of the reference gas must be normalized using equation 6;

(III) Quality assure any data above the span value established in subparagraph (j)1.(i) of this paragraph using the following procedure. Any time two consecutive one-hour average measured concentration of HCl exceeds the span value the owner or operator shall, within 24 hours before or after, introduce a higher, "above span" HCl reference gas standard to the HCl CEMS. The "above span" reference gas shall meet the requirements of the applicable performance specification and target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and shall be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as would be done for a daily calibration. The "above span" calibration is successful if the value measured by the HCl CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the

HCl CEMS is not within 20 percent of the certified value of the reference gas, then the owner or operator shall normalize the stack gas values measured above span as described in paragraph (j)1.(ii)(IV) of this paragraph. If the "above span" calibration is conducted during the period when measured emissions are above span and there is a failure to collect the one data point in an hour due to the calibration duration, then the owner or operator shall determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an "above span" calibration is being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour; and

(IV) In the event that the "above span" calibration is not successful (*i.e.*, the HCl CEMS measured value is not within 20 percent of the certified value of the reference gas), then the owner or operator shall normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the "above span" calibration for reporting based on the HCl CEMS response to the reference gas as shown in equation 6:

$$\text{(Eq. 6)} \quad \frac{\text{Certified reference gas value}}{\text{Measured value of reference gas}} = \text{Measured stack gas} = \text{Normalized stack gas result}$$

2. Compliance with the mercury emissions limit must be determined using a mercury CEMS according to the following requirements:

(i) The owner or operator shall operate a CEMS in accordance with performance specification 12A at 40 CFR part 60, appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B at 40 CFR part 60, appendix B. The duration of the performance test shall be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data and stack gas volumetric flow rate data must be obtained. The owner or operator shall demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content;

(ii) Owners or operators using a mercury continuous emissions monitoring systems shall install, operate, calibrate and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A at 40 CFR part 60, appendix B and quality assurance procedure 5 at 40 CFR part 60, appendix F; and

(iii) The owner or operator of a waste-burning kiln shall demonstrate initial compliance by operating a mercury CEMS while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.

(k) If the owner or operators uses an air pollution control device to meet the emission limitations in this rule, an initial and annual inspection of the air pollution control device shall be conducted. The inspection shall include, at a minimum, the following:

1. Inspect air pollution control device(s) for proper operation.

2. Develop a site-specific monitoring plan according to the requirements in subparagraph (9)(l) of this paragraph. This requirement also applies if the owner or operator petition the Administrator for alternative monitoring parameters under §60.13(i) of 40 CFR part 60.

(l) For each CMS required in this paragraph, the owner or operator shall develop and submit to the Administrator for approval a site-specific monitoring plan according to the requirements of this subparagraph (l) that addresses subparagraphs (9)(l)1.(i) through (vi) of this paragraph.

1. The owner or operator shall submit this site-specific monitoring plan at least 60 days before the initial performance evaluation of the continuous monitoring system.

- (i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

- (ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.

- (iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

- (iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.11(d).

- (v) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13.

- (vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §60.7(b), (c), (c)(1), (c)(4), (d), (e), (f) and (g).

2. The owner or operator shall conduct a performance evaluation of each continuous monitoring system in accordance with the site-specific monitoring plan.

3. The owner or operator shall operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(m) If the owner or operator has an operating limit that requires the use of a flow monitoring system, the owner or operator shall meet the requirements in subparagraphs (9)(l) and (9)(m)1. through 4. of this paragraph.

1. Install the flow sensor and other necessary equipment in a position that provides a representative flow.

2. Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent.

3. Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

4. Conduct a flow monitoring system performance evaluation in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.

(n) If the owner or operator has an operating limit that requires the use of a pressure monitoring system, the owner or operator shall meet the requirements in subparagraphs (9)(l) and (9)(n)1. through 6. Of this paragraph.

1. Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

2. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

3. Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

4. Perform checks at the frequency outlined in the site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).

5. Conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.

6. If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in the monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(o) If the owner or operator has an operating limit that requires a pH monitoring system, the owner or operator shall meet the requirements in subparagraphs (9)(l) and (9)(o)1. through 4. of this paragraph.

1. Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

2. Ensure the sample is properly mixed and representative of the fluid to be measured.

3. Conduct a performance evaluation of the pH monitoring system in accordance with the monitoring plan at least once each process operating day.

4. Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than quarterly.

(p) If the owner or operator has an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, the owner or operator shall meet the requirements in subparagraphs (9)(l) and (9)(p) 1. through 2. of this paragraph.

1. Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

2. Conduct a performance evaluation of the electric power monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.

(q) If the owner or operator has an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), the owner or operator shall meet the requirements in subparagraphs (9)(l) and (9)(q) 1. through 2. of this paragraph.

1. Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

2. Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequent than annually.

(r) If the owner or operator elect to use a fabric filter bag leak detection system to comply with the requirements of this rule, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in subparagraphs (9)(l) and (9)(r) 1. through 5. of this paragraph.

1. Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

2. Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

3. Conduct a performance evaluation of the bag leak detection system in accordance with the monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §60.17).

4. Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor.

5. Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate matter emissions over a preset level is detected. The alarm shall be located where it is observed readily by plant operating personnel.

(s) For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in paragraph (10) of this rule to measure sulfur dioxide. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The owner or operator shall calculate a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this rule, using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. The sulfur dioxide CEMS shall be operated according to performance specification 2 in appendix B of 40 CFR part 60 and shall follow the procedures and methods specified in this subparagraph. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater.

1. During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of 40 CFR part 60, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in subparagraphs (9)(s)1.(i) and (ii) of this paragraph.

(i) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) shall be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, shall be used.

2. The span value of the CEMS at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule. The span value of the CEMS at the outlet of the sulfur dioxide control device shall be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule.

3. Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of 40 CFR part 60.

(t) For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in paragraph (10) to measure nitrogen oxides. CEMS data during startup and shutdown as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The owner or operator shall calculate a 30-day rolling average of the 1-hour arithmetic average emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. The nitrogen oxides CEMS shall be operated according to performance specification 2 in appendix B of 40 CFR part 60 and shall follow the procedures and methods specified in subparagraphs (9)(t)1. through 5. of this paragraph.

1. During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of 40 CFR part 60, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in subparagraphs (9)(t)1.(i) and (ii) of this paragraph.

(i) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR part 60, appendix A-4 shall be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, shall be used.

2. The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of unit.

3. Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of 40 CFR part 60.

4. The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluents corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial performance test according to the procedures and methods specified in subparagraphs (9)(t)4.(i) through (iv) of this paragraph below. This relationship may be reestablished during performance compliance tests.

(i) The fuel factor equation in Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A, 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

(ii) Samples shall be taken for at least 30 minutes in each hour.

(iii) Each sample shall represent a 1-hour average.

(iv) A minimum of 3 runs shall be performed.

(u) For facilities using a continuous emissions monitoring system to demonstrate continuous compliance with any of the emission limits of this rule, the owner or operator shall complete the following:

1. Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this rule, calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content.

2. Operate all CEMS in accordance with the applicable procedures under appendices B and F of 40 CFR part 60.

(v) Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO_x, SO₂, and dioxin/furans.

(w) For energy recovery units with a design heat input capacity of 100MMBtu per hour or greater that do not use a carbon monoxide CEMS, the owner or operator shall install, operate, and maintain an oxygen analyzer system as defined in paragraph (1) of this rule according to the procedures in subparagraph (9)(w)1. through 4. below.

1. The oxygen analyzer system shall be installed by the initial performance test date specified in subparagraph (6)(b) of this rule.

2. The owner or operator shall operate the oxygen trim system within compliance with subparagraph (9)(w)3. of this paragraph below at all times.

3. The owner or operator shall maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.

4. The owner or operator shall calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR part 60.

(x) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in subparagraphs (9)(x)1. through 8. of this paragraph below. For other energy recovery units, the owner or operator may elect to use PM CPMS operated in accordance with this paragraph. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

1. Install, calibrate, operate, and maintain the PM CPMS according to the procedures in the approved site-specific monitoring plan developed in accordance with subparagraphs (9)(l) and (9)(x)1.(i) through (iii) of this paragraph.

(i) The operating principle of the PM CPMS shall be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS shall be expressed as milliamps.

(ii) The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS shall be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

2. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, the owner or operator shall adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in subparagraph (6)(b) of this rule.

3. Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps.

4. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps).

5. The owner or operator shall collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subparagraph (9)(x)1.(ii) of this paragraph, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the site-specific monitoring plan.

6. The owner or operator shall use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with the operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in the annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in the annual deviation report);

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this rule.

7. The owner or operator shall record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the site-specific monitoring plan.

8. For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, the owner or operator shall:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify. Within 45 days of the deviation, the owner or operator shall re-establish the CPMS operating limit. Conducting of additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this subparagraph is not required.

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this rule.

(y) When there is an alkali bypass and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, the owner or operator shall:

1. Calculate a kiln-specific emission limit using equation 7:

$$(Eq. 7) C_{ks} = ((Emission\ Limit \times (Q_{ab} + Q_{cm} + Q_{ks})) - (Q_{ab} \times C_{ab}) - (Q_{cm} \times C_{cm}))/Q_{ks}$$

Where:

C_{ks} = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O₂.)

Q_{ab} = Alkali bypass flow rate (volume/hr)

C_{ab} = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O₂.)

Q_{cm} = In-line coal mill flow rate (volume/hr)

C_{cm} = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O₂.)

Q_{ks} = Kiln stack flow rate (volume/hr)

2. Particulate matter concentration shall be measured downstream of the in-line coal mill. All other pollutant concentrations shall be measured either upstream or downstream of the in-line coal mill.

3. For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or in-line coal mill stack, the results of the initial and subsequent performance test can be used to demonstrate compliance with the relevant emissions limit. A performance test shall be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test).

(z) The owner or operator shall conduct annual performance tests between 11 and 13 months of the previous performance test.

(aa) On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), the owner or operator shall complete the air pollution control device inspection as described in subparagraphs (8)(e) and (f) of this rule.

(bb) The owner or operator shall conduct annual performance tests according to the schedule specified in subparagraph (9)(z) in this paragraph, with the following exceptions:

1. The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in subparagraphs (9)(cc) and (dd) of this paragraph. The Director may request a repeat performance test at any time.

2. The owner or operator shall repeat the performance test within 60 days of a process change, as defined in paragraph (1) of this rule.

3. If the initial or any subsequent performance test for any pollutant in table 1 or tables 5 through 8 of this rule, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in subparagraph (9)(bb)3.(i) or (bb)3.(ii) of this paragraph, as applicable, and the owner or operator is not required to conduct a performance test for the pollutant in response to a request by the Director in subparagraph (9)(bb)1. of this paragraph or a process change in subparagraph (9)(bb)2. of this paragraph, the owner or operator may elect to skip conducting a performance test for the pollutant for the next 2 years. The owner or operator shall conduct a performance test for the pollutant during the third year and no more than 37 months following the previous performance test for the pollutant. For cadmium and lead, both cadmium and lead shall be emitted at emission levels no greater than their respective emission levels specified in subparagraph (9)(bb)3.(i) of this paragraph to qualify for less frequent testing under this paragraph.

(i) For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 1 or tables 5 through 8 of this rule, as applicable, to this rule.

(ii) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observation periods.

4. If the owner or operator is conducting less frequent testing for a pollutant as provided in subparagraph (9)(bb)3. of this paragraph and a subsequent performance test for the pollutant indicates that the CISWI unit does not meet the emission level specified in subparagraph (9)(bb)3.(i) or (9)(bb)3.(ii) of this paragraph, as applicable, the owner or operator shall conduct annual performance tests for the pollutant according to the schedule specified in subparagraph (9)(bb) of this paragraph until qualification for less frequent testing for the pollutant as specified in subparagraph (9)(bb)3. of this paragraph.

(cc) The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits. The Director may request a repeat performance test at any time.

(dd) The owner or operator shall repeat the performance test if the feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

(ee) If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, continuous compliance shall be demonstrated pursuant to the procedures of 40 CFR § 63.1348(b)(7.) and 40 CFR § 63.1349(b)(5).

(10) Monitoring.

(a) If a wet scrubber is used to comply with the emission limitation under subparagraph (6)(a) of this rule, the owner or operator shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 2 of this rule. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 2 of this rule at all times except as specified in subparagraph (t)1.(i) of this paragraph.

(b) If a fabric filter is used to comply with the requirements of this rule, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in subparagraphs (b)1. through 8. of this rule.

1. The owner or operator shall install and operate a bag leak detection system for each exhaust stack of the fabric filter.

2. Each bag leak detection system shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

3. The bag leak detection system shall be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

4. The bag leak detection system sensor shall provide output of relative or absolute particulate matter loadings.

5. The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.

6. The bag leak detection system shall be equipped with an alarm system that will alert automatically an operator when an increase in relative particulate matter emissions over a preset level is detected. The alarm shall be located where it is observed easily by plant operating personnel.

7. For positive pressure fabric filter systems, a bag leak detection system shall be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.

8. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If a device other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator, or a dry scrubber is used to comply with the emission limitations under subparagraph (6)(a) of this rule, the owner or operator shall install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in subparagraph (6)(c) of this rule.

(d) If activated carbon injection is used to comply with the emission limitations in this rule, the owner or operator shall measure the minimum sorbent flow rate once per hour.

(e) If selective noncatalytic reduction is used to comply with the emission limitations, the owner or operator shall complete the following:

1. Following the date on which the initial performance test is completed or is required to be completed under paragraph (7) of this rule, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI unit) or the minimum reagent flow rate measured as 3-hour block averages at all times.

2. Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent

flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

(f) If an electrostatic precipitator is used to comply with the emission limits of this rule, the owner or operator shall monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

(g) For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR part 63, appendix A, an owner or operator shall install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate, monitoring the minimum scrubber liquor pH.

(h) To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the particulate matter annual performance test and other CMS monitoring for PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

(i) To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. The owner or operator shall record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR part 60, appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR part 60, appendix A-7 shall install, calibrate, maintain and operate a continuous automated sampling system and shall comply with the requirements specified in § 60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.

(j) To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system for the mercury annual performance test. The owner or operator shall record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet performance specification 12B criteria. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to mercury from monitors is published in the Federal Register. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40 CFR part 60, appendix A-8, ASTM D6784-02

(Reapproved 2008) (incorporated by reference, see § 60.17), or an approved alternative method for measuring mercury emissions, shall install, calibrate, maintain and operate a continuous automated sampling system and shall comply with the requirements specified in § 60.58b(p) and (q). A facility may substitute continuous mercury monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. The owner or operators of waste-burning kilns shall install, calibrate, maintain, and operate a mercury CEMS as specified in subparagraph(9)(j) of this rule.

(k) To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits.

1. Install, calibrate, maintain and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of 40 CFR part 60, the quality assurance procedure 1 of appendix F of 40 CFR part 60 and the procedures under § 60.13 shall be followed for installation, evaluation and operation of the CEMS.

2. Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under paragraph (7) of this rule, compliance with the emission limit for nitrogen oxides required under § 60.52b(d) shall be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The 1-hour arithmetic averages shall be expressed in parts per million by volume corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average concentrations. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2).

(l) To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test to demonstrate compliance with the sulfur dioxide emissions limits.

1. Install, calibrate, maintain and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of 40 CFR part 60, the quality assurance requirements of procedure 1 of appendix F of 40 CFR part 60 and the procedures under § 60.13 must be followed for installation, evaluation and operation of the CEMS.

2. Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under paragraph (7) of this rule, compliance with the sulfur dioxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data. The 1-hour arithmetic averages shall be

expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2).

(m) For energy recovery units 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system, or particulate matter CEMS, the owner or operator shall install, operate, certify and maintain a continuous opacity monitoring system according to the procedures in subparagraphs (10)(m)1. through 5. of this paragraph by the compliance date specified in paragraph (6) of this rule. Energy recovery units that use a particulate matter CEMS to demonstrate initial and continuing compliance according to the procedures in subparagraph (10)(n) are not required to install a continuous opacity monitoring system and shall perform the annual performance tests for opacity consistent with subparagraph (9)(f) of this rule.

1. Install, operate and maintain each continuous opacity monitoring system according to performance specification 1 at 40 CFR part 60, appendix B.

2. Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in § 60.13 and according to performance specification 1 at 40 CFR part 60, appendix B.

3. As specified in § 60.13(e)(1), each continuous opacity monitoring system shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

4. Reduce the continuous opacity monitoring system data as specified in § 60.13(h)(1).

5. Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.

(n) For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR part 60, appendix A-3 or, as applicable, monitor with a particulate matter CPMS according to subparagraph (10)(r) of this paragraph, shall install, calibrate, maintain and operate a CEMS and shall comply with the requirements specified in subparagraphs (10)(n)1. through 13. of this paragraph below.

1. Notify the Director 1 month before starting use of the system.

2. Notify the Director 1 month before stopping use of the system.

3. The monitor shall be installed, evaluated and operated in accordance with the requirements of performance specification 11 of appendix B of 40 CFR part 60 and quality assurance requirements of procedure 2 of appendix F of 40 CFR part 60 and § 60.13.

4. The initial performance evaluation shall be completed no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified under paragraph (7) of this rule or within 180 days of notification to the Director of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 at 40 CFR part 60, appendix A-3 performance tests, whichever is later.

5. The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established according to the procedures and methods specified in subparagraphs (9)(s)5.(i) through (iv).

6. The owner or operator of an affected facility shall conduct an initial performance test for particulate matter emissions as required under paragraph (7) of this rule. Compliance with the particulate matter emission limit, if PM CEMS are elected for demonstrating compliance, shall be determined by using the CEMS specified in subparagraph (10)(n) of this paragraph to measure particulate matter. The owner or operator shall calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this rule, using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7.

7. Compliance with the particulate matter emission limit shall be determined based on the 30-day rolling average calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, Appendix A-7 from the 1-hour arithmetic average of the CEMS outlet data.

8. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified subparagraph (10)(t) of this paragraph.

9. The 1-hour arithmetic averages required under subparagraph (10)(n)7. of this paragraph shall be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (or carbon dioxide)(dry basis) and shall be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2).

10. All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of subparagraph (10)(n)8. of this paragraph are not met.

11. The CEMS shall be operated according to performance specification 11 in appendix B of 40 CFR part 60.

12. During each relative accuracy test run of the CEMS required by performance specification 11 in appendix B of 40 CFR part 60, particulate matter and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30-to 60-minute period) by both the CEMS and the following test methods.

(i) For particulate matter, EPA Reference Method 5 at 40 CFR part 60, appendix A-3 shall be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR part 60, appendix A-2, as applicable, shall be used.

13. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of 40 CFR part 60.

(o) To demonstrate continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a continuous automated sampling system for the carbon monoxide annual performance test to demonstrate compliance with the carbon monoxide emissions limits.

1. Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4B of appendix B of 40 CFR part 60, the quality assurance procedure 1 of appendix F of 40 CFR part 60 and the procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

2. Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under paragraph (7) of this rule, compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this rule, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in this rule, the 1-hour arithmetic averages shall be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data collected during startup or shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2).

(p) The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration.

(q) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, the owner or operator shall install, operate and maintain an oxygen analyzer system as defined in paragraph (1) of this rule according to the procedures in subparagraphs (10)(q)1. through 4. of this paragraph below.

1. The oxygen analyzer system shall be operated by the initial performance test date specified in subparagraph (6)(b) of this rule.

2. The owner or operator shall operate the oxygen trim system within compliance with subparagraph (q)3. below at all times.

3. The owner or operator shall maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to subparagraph (q)4. below is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test..

4. The owner or operator shall calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR part 60.

(r) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in subparagraphs (10)(r)1. through 8. of this paragraph below. For other energy recovery units, the owner or operator may elect to use PM CPMS operated in accordance with this paragraph. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

1. Install, calibrate, operate, and maintain the PM CPMS according to the procedures in the approved site-specific monitoring plan developed in accordance with paragraph (9)(l) and subparagraphs (10)(r)1.(i) through (iii) of this rule.

(i) The operating principle of the PM CPMS shall be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS shall be expressed as milliamps.

(ii) The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS shall be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

2. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, the owner or operator shall adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in subparagraph (6)(b) of this rule.

3. Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps.

4. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps).

5. The owner or operator shall collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subparagraph (10)(r)1.(ii) of this paragraph, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the site-specific monitoring plan.

6. The owner or operator shall use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with the operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in the annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in the annual deviation report);

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this rule.

7. The owner or operator shall record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the site-specific monitoring plan.

8. For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, the owner or operator shall:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify. Within 45 days of the

deviation, the owner or operator shall re-establish the CPMS operating limit. It is not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this subparagraph.

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this rule.

(s) If a dry scrubber is used to comply with the emission limits of this rule, the owner or operator shall monitor the injection rate of each sorbent and maintain the 3-hour block averages at or above the operating limits established during the hydrogen chloride performance test.

(t) The minimum amount of monitoring data obtained is determined as follows:

1. For each continuous monitoring system required or optionally allowed under paragraph (10) of this rule, the owner or operator shall monitor and collect data according to subparagraphs (10)(t)1.(i) through (iii) below:

(i) The owner or operator shall operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in subparagraph (11)(cc)15. of this rule), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator is required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(ii) The owner or operator may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(iii) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

(u) If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, it must also

monitor mercury pursuant to 40 CFR § 63.1350(k), the clinker production rate pursuant to 40 CFR § 63.1350(d), and the flow rate pursuant to 40 CFR § 63.1350(n). An owner or operator of a waste burning kiln is not required to develop an emissions monitoring plan pursuant 40 CFR § 63.1350(p)(1) through (p)(4) if the owner or operator prepares the emissions monitoring plan required pursuant to subparagraphs (9)(k) and (9)(l) of this rule.

(11) Recordkeeping and Reporting. The following items shall be maintained (as applicable) as specified in subparagraphs (a), (b), and (e) through (w) of this paragraph for a period of at least 5 years:

(a) Calendar date of each record.

(b) Records of the data described in subparagraphs (b)1. through 6. of this paragraph:

1. The CISWI unit charge dates, times, weights, and hourly charge rates.

2. Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.

3. Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable.

4. Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.

5. For affected CISWI units that establish operating limits for controls other than wet scrubbers under subparagraph (6)(b)4. through 7. or (6)(c) of this rule, the owner or operator shall maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, the owner or operator shall also maintain records of the load fraction and corresponding sorbent injection rate records.

6. If a fabric filter is used to comply with the emission limitations, the owner or operator shall record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. The owner or operator shall also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in subparagraph (6)(b)3. of this rule.

(c) Reserved.

(d) Reserved.

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in Table 2 of this rule or a deviation from other operating limits established under subparagraph (6)(b)4. through 7. or (6)(c) of this rule with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations.

(g) Records showing the names of CISWI unit operators who have completed review of the information in subparagraph (5)(g)1. as required by subparagraph (5)(g)2. of this rule, including the date of the initial review and all subsequent annual reviews.

(h) Records showing the names of the CISWI operators who have completed the operator training requirements, met the criteria for qualification, and maintained or renewed their qualification under paragraph (5) of this rule. Records shall include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(i) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(j) Records of calibration of any monitoring devices as required under paragraph (10) of this rule.

(k) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.

(l) The information listed in subparagraph (5)(g) of this rule.

(m) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).

(n) Maintain records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in table 1 of this rule or tables 5 through 8 of this rule, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Director.

(o) For continuously monitored pollutants or parameters, the owner or operator shall document and keep a record of the following parameters measured using continuous monitoring systems.

1. All 6-minute average levels of opacity.

2. All 1-hour average concentrations of sulfur dioxide emissions. The owner or operator shall indicate which data are CEMS data during startup and shutdown.

3. All 1-hour average concentrations of nitrogen oxides emissions. The owner or operator shall indicate which data are CEMS data during startup and shutdown.

4. All 1-hour average concentrations of carbon monoxide emissions. The owner or operator shall indicate which data are CEMS data during startup and shutdown.

5. All 1-hour average concentrations of particulate matter emissions. The owner or operator shall indicate which data are CEMS data during startup and shutdown.

6. All 1-hour average concentrations of mercury emissions. The owner or operator shall indicate which data are CEMS data during startup and shutdown.

7. All 1-hour average concentrations of hydrogen chloride emissions. The owner or operator shall indicate which data are CEMS data during startup and shutdown.

8. All 1-hour average percent oxygen concentrations.

9. All 1-hour average PM CPMS readings or particulate matter CEMS outputs.

(p) Records indicating use of the bypass stack, including dates, times and durations.

(q) If choosing to stack test less frequently than annually, consistent with subparagraph (9)(bb) of this rule, the owner or operator shall keep annual records that document that the emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(r) Records of the occurrence and duration of each malfunction of operation (i.e. , process equipment) or the air pollution control and monitoring equipment.

(s) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(t) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 60.11(d) of 40 CFR part 60, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(u) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1), the owner or operator shall keep a record which documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1). If the owner or operator combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4), the owner or operator shall keep records as to how the operations that produced the fuel satisfies the definition of processing in § 241.2 and each of the legitimacy criteria in § 241.3(d)(1). If the fuel received a non-waste determination pursuant to the

petition process submitted under § 241.3(c), the owner or operator shall keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4, the owner or operator shall keep records documenting that the material is a listed non-waste under § 241.4(a).

(v) Records of the criteria used to establish that the unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous.

(w) Records of the criteria used to establish that the unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous.

(x) All records shall be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Director.

(y) A summary of the reporting requirements can be found in Table 4 of this rule.

(z) The waste management plan shall be submitted no later than the date specified in subparagraph (3)(a)1. of this rule for submittal of the final control plan.

(aa) The information specified in subparagraphs (aa)1. through 3. of this paragraph below shall be submitted no later than 60 days following the initial performance test. All reports shall be signed by the responsible official.

1. The complete test report for the initial performance test results obtained under paragraph (8) of this rule, as applicable.

2. The values for the site-specific operating limits established in subparagraphs (6)(b) or (c) of this rule.

3. If a fabric filter is being used to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by subparagraph (10)(b) of this rule.

(bb) An annual report shall be submitted no later than 12 months following the submission of the information in subparagraph (aa) of this paragraph above. Subsequent reports shall be submitted no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, the owner or operator may be required by the permit to submit these reports more frequently.)

(cc) The annual report required under subparagraph (bb) of this paragraph above shall include the ten items listed in subparagraphs (cc)1. through 10. of this paragraph below. If there is a deviation from the operating

limits or the emission limitations, deviation reports shall also be submitted as specified in subparagraph (dd) of this paragraph below.

1. Company name and address.
2. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
3. Date of report and beginning and ending dates of the reporting period.
4. The values for the operating limits established pursuant to subparagraphs (6)(b) or (6)(c) of this rule.
5. If no deviation from any emission limitation or operating limit that applies has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period.
6. The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported.
7. Information recorded under subparagraphs (b)6. and (e) of this paragraph for the calendar year being reported.
8. If a performance test was conducted during the reporting period, the results of that test.
9. If the requirements of subparagraphs (9)(bb) were met, and did not conduct a performance test during the reporting period, the owner or operator shall state that the requirements of subparagraphs (9)(bb) were met, and, therefore, were not required to conduct a performance test during the reporting period.
10. Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks.
11. If there was a malfunction during the reporting period, the compliance report shall include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 60.11(d), including actions taken to correct a malfunction.
12. For each deviation from an emission or operating limitation that occurs for a CISWI unit for which a CMS is not being used to comply with the emission or operating limitations in this rule, the annual report shall contain the following information.
 - (i) The total operating time of the CISWI unit at which the deviation occurred during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

13. If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in subparagraph (11)(cc)15. of this paragraph, the annual report shall contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which a continuous monitoring system is being used to comply with the emission and operating limitations in this rule.

(i) The date and time that each malfunction started and stopped.

(ii) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken.

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period.

(viii) An identification of each parameter and pollutant that was monitored at the CISWI unit.

(ix) A brief description of the CISWI unit.

(x) A brief description of the continuous monitoring system.

(xi) The date of the latest continuous monitoring system certification or audit.

(xii) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

14. If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in subparagraph (ll)(cc)15. of this paragraph, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.

15. A continuous monitoring system is out of control if any of the following occur.

(i) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.

(ii) The continuous monitoring system fails a performance test audit (e.g. , cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.

(iii) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.

16. For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies.

(dd) Reporting of deviations from the operating limits or the emission limitations.

1. A deviation report shall be submitted if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this rule, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

2. The deviation report shall be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data collected during the second half of the calendar year (July 1 to December 31).

3. In each report required under this subparagraph, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this rule, include the items described in subparagraphs (dd)3.(i) through (iv) of this paragraph below.

(i) The calendar dates and times the CISWI unit deviated from the emission limitations or operating limit requirements.

(ii) The averaged and recorded data for those dates.

(iii) Duration and causes of the following:

(I) Each deviation from emission limitations or operating limits and corrective actions taken.

(II) Bypass events and corrective actions taken.

(iv) A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels.

4. If all qualified operators are not accessible for 2 weeks or more, the two actions in subparagraphs (dd)4.(i) and (ii) of this paragraph below shall be taken.

(i) Submit a notification of the deviation within 10 days that includes the three items in subparagraphs (dd)4.(i)(I) through (III) of this paragraph below.

(I) A statement of what caused the deviation.

(II) A description of what actions are being taken to ensure that a qualified operator is accessible.

(III) The date when it is anticipated that a qualified operator will be available.

(ii) Submit a status report to the Director every 4 weeks that includes the three items in subparagraphs (dd)4.(ii)(I) through (III) of this paragraph below.

(I) A description of what actions are being taken to ensure that a qualified operator is accessible.

(II) The date when it is anticipated that a qualified operator will be accessible.

(III) Request approval from the Director to continue operation of the CISWI unit.

(iii) If the CISWI unit was shut down by the Administrator, under the provisions of subparagraph (5)(h)2.(ii) of this rule, due to a failure to provide an accessible qualified operator, the owner or operator shall notify the Administrator that operations will resume once a qualified operator is accessible.

(ee) Notifications provided by 40 CFR, § 60.7 [as incorporated by reference under ADEM Admin. Code r. 335-3-10-.02(1)] shall be submitted.

(ff) If the owner or operator cease combusting solid waste but continue to operate, the owner or operator shall provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with paragraph (9)(a) of this rule. The notification must identify:

1. The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

2. The currently applicable subcategory under this rule, and any 40 CFR part 63 subpart and subcategory that will be applicable after combusting solid waste is ceased;

3. The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

4. The date on which the unit became subject to the currently applicable emission limits;

5. The date upon which the unit will cease combusting solid waste, and the date (if different) that the owner or operator intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with subparagraphs (ff)2. and 3. of this paragraph.

(gg) Initial, annual, and deviation reports shall be submitted electronically or in paper format, postmarked on or before the submittal due dates. Submit the reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Use the appropriate electronic report in CEDRI for this rule or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this rule is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in 40 CFR, §60.4. Once the form has been available in CEDRI for 90 calendar days, the owner or operator shall begin submitting all subsequent reports via CEDRI. The reports shall be submitted by the deadlines specified in this rule, regardless of the method in which the report is submitted.

(hh) Submit results of performance tests and CEMS performance evaluation tests as follows.

1. Within 60 days after the date of completing each performance test as required by this rule, the owner or operator shall submit the results of the performance tests following the procedure specified in either subparagraph (hh)1.(i) or (hh)1.(ii) of this paragraph:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, the owner or operator shall submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) Performance test data shall be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site. If the owner or operator claim that some of the performance test information being submitted is confidential business information (CBI), the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site,

including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this subparagraph; and

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR, §60.4.

2. Within 60 days after the date of completing each CEMS performance evaluation the owner or operator shall submit the results of the performance evaluation following the procedure specified in either subparagraph (hh)1. Or (hh)2. of this paragraph:

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, the owner or operator shall submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data shall be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If the owner or operator claim that some of the performance evaluation information being submitted is CBI, the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this subparagraph; and

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, the owner or operator shall submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR, §60.4.

(ii) The Director may change the semiannual or annual reporting dates. Procedures for seeking approval to change reporting dates are found in 40 CFR, § 60.19(c) [as incorporated by reference under ADEM Admin. Code r. 335-3-10-.02(1)].

(jj) If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, it shall also keep records of all data collected from the continuous flow rate monitoring system

required by 40 CFR § 63.1350(n), all data collected from the clinker production monitoring system required by 40 CFR § 63.1350(d), and all calculated 30-day operating day rolling average values derived from the mercury monitoring system. Units in the waste-burning kiln subcategory complying with the equivalent production-based mercury emission limit in Table 7 must also report all deviations from the equivalent production-based mercury limit in accordance with subparagraphs (10)(a) through (10)(dd) of this rule.

(12) Major Source Operating Permits. Each CISWI unit and air curtain incinerator subject to standards under this rule (excluding rules in paragraph (13) below) shall operate pursuant to the requirements of chapter 335-3-16 by December 1, 2003.

(13) Air Curtain Incinerators.

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

(b) Air curtain incinerators that burn only the materials listed in subparagraphs (b)1. through 3. of this paragraph below are only required to meet the requirements under this paragraph.

1. 100 percent wood waste.
2. 100 percent clean lumber.
3. 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

(c) For owners or operators planning to achieve compliance more than one year following the effective date of EPA's approval of these rules, the two increments of progress specified in subparagraphs (c)1. and 2. of this paragraph below shall be met.

1. Submit a final control plan no later than one year following the effective date of EPA's approval of these rules.

2. Achieve final compliance no later than December 1, 2005.

(d) The owner or operator shall submit to the Director, notifications for achieving increments of progress. The notifications shall be postmarked no later than 10 business days after the compliance date for the increment. These notifications shall include the three items specified in subparagraphs (d)1. through 3. of this paragraph below:

1. Notification that the increment of progress has been achieved.

2. Any items required to be submitted with each increment of progress.
3. Signature of the owner or operator of the incinerator unit.

(e) If an owner or operator fails to meet an increment of progress, a notification to the Director shall be submitted and postmarked within 10 business days after the date for that increment of progress in subparagraph (c) of this paragraph above. The owner or operator shall inform the Director that the increment was not met, and reports shall be submitted each subsequent calendar month until the increment of progress is met.

(f) For the control plan increment of progress, the owner or operator shall satisfy the two requirements specified in subparagraphs (f)1. and 2. of this paragraph below.

1. Submit the final control plan, including a description of any devices for air pollution control and any process changes that will be used to comply with the emission limitations and other requirements of this paragraph.

2. Maintain an onsite copy of the final control plan.

(g) For the final compliance increment of progress, the owner or operator shall complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed.

(h) Closing and restarting an air curtain incinerator.

1. If the incinerator is closed but will be restarted prior to the final compliance date of December 1, 2005, the increments of progress specified in subparagraph (c) of this paragraph shall be met.

2. If the incinerator is to restart after the final compliance date, the owner or operator shall complete emission control retrofits and meet the emission limitations on the date the incinerator restarts operation.

(i) Permanent closure of an air curtain incinerator. If the owner or operator plans to close the incinerator rather than comply with this rule, submit a closure notification, including the date of closure, to the Director within 90 days after EPA approval of these rules.

(j) Emission limitations for air curtain incinerators.

1. After the date the initial stack test is required or completed (whichever is earlier), the owner or operator shall meet the limitations in subparagraphs (j)1.(i) and (ii) of this paragraph below.

(i) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in subparagraph (j)1.(ii) of this paragraph below.

(ii) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

(k) Monitoring opacity for air curtain incinerators.

1. Use Method 9 of 40 CFR 60, Appendix A to determine compliance with the opacity limitation.

2. Conduct an initial test for opacity as specified in 40 CFR, § 60.8 no later than 180 days after the final compliance date.

3. After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of the previous test.

(l) Recordkeeping and reporting requirements for air curtain incinerators.

1. Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Director approves another format, for at least 5 years.

2. Make all records available for submittal to the Director or for an inspector's onsite review.

3. Submit an initial report no later than 60 days following the initial opacity test that includes the information specified in subparagraphs (l)3.(i) and (ii) of this paragraph below.

(i) The types of materials planned to be combusted in the air curtain incinerator.

(ii) The results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests.

4. Submit annual opacity test results within 12 months following the previous report.

5. Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of 5 years.

TABLE 1. EMISSION LIMITS FOR INCINERATORS THAT COMMENCED CONSTRUCTION ON OR BEFORE NOVEMBER 30, 1999, AND WERE NOT MODIFIED OR RECONSTRUCTED AFTER JUNE 1, 2001

Pollutant	Units (7 percent oxygen, dry basis, except opacity)	Averaging Time	Compliance Method 40 CFR 60 Appendix A
Cadmium	0.004 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 29
Carbon Monoxide	157 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Methods 10, 10A, or 10B
Dioxins/furans (toxic equivalency basis)	0.41 Nanograms per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 23
Hydrogen Chloride	62 Parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Method 26 or 26A
Lead	0.04 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 29
Mercury	0.47 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	388 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Methods 7 or 7E
Particulate Matter	70 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 5 or 29
Sulfur Dioxide	20 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 6 or 6c
Opacity	10 Percent	Three 1-hour blocks consisting of ten 6-minute average opacity values	Method 9

TABLE 2. OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	Establish these operating limits	And Monitor Using These Minimum Frequencies		
		Data Measurement	Data Recording	Averaging Time (Calculated each hour as the average of the previous 3 operating hours.)
Charge rate.	Maximum charge rate.	Continuous	Every hour	Daily (batch units). 3-hour rolling (continuous and intermittent units).
Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous	Every 15 minutes	3-hour rolling.
Scrubber liquor flow rate.	Minimum flow rate.	Continuous	Every 15 minutes	3-hour rolling.
Scrubber liquor pH.	Minimum pH.	Continuous	Every 15 minutes	3-hour rolling.

TABLE 3. TOXIC EQUIVALENCY FACTORS

Dioxin/Furan Isomer	Toxic Equivalency Factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8- pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

TABLE 4. REPORTING REQUIREMENTS

Report	Due Date	Contents	Reference 335-3-.05
Waste Management Plan	No later than the date specified for submittal of the final control plan.	•Waste Management Plan.....	(11)(z)
Initial Test Report	No later than 60 days following the initial performance test.	<ul style="list-style-type: none"> •Complete test report for the initial performance test. •The values for the site-specific operating limits. •Installation of bag leak detection systems for fabric filters. 	(11)(aa)
Annual Report	<p>No later than 12 months following the submission of the initial test report.</p> <p>Subsequent reports are to be submitted no more than 12 months following the previous report.</p>	<ul style="list-style-type: none"> •Name and address..... •Statement and signature by responsible official. •Date of report. •Values for the operating limits. •Highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported. •If a performance test was conducted during the reporting period, the results of the test. •If a performance test was not conducted during the reporting period, a statement that the requirements of (9)(e) were met. •Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks. •If performance tests are being conducted once every 3 years consistent with (9)(aa), the date of the last 2 performance tests, a comparison of the emission level achieved in the last 2 performance tests to the 75 percent emission limit threshold required in (9)(aa) and a statement as to whether there have been any operational changes since the last performance test that could increase emissions 	(11)(bb) & (cc)
Emission Limitation or Operating Limit Deviation Report	<p>By August 1 of that year for data collected during the first half of the calendar year.</p> <p>By February 1 of the following year for data collected during the second half of the calendar year.</p>	<ul style="list-style-type: none"> •Dates and times of deviations..... •Averaged and recorded data for these dates. •Duration and causes for each deviation and the corrective actions taken. •Copy of operating limit monitoring data and any test reports. •Dates, times, and causes for monitor downtime incidents. • 	(11)(t)1. - 3.

TABLE 4. REPORTING REQUIREMENTS CONT'D

Report	Due Date	Contents	Reference 335-3-.05
Qualified Operator Deviation Notification.	Within 10 days of deviation.	<ul style="list-style-type: none">•Statement of cause of deviation.•Description of efforts to have an accessible qualified operator.•The date a qualified operator will be accessible.	(11)(dd)4.(i)
Qualified Operator Deviation Status Report.	Every 4 weeks following deviation.	<ul style="list-style-type: none">•Description of efforts to have an accessible qualified operator.•The date a qualified operator will be accessible.•Request for approval to continue operation.	(11)(dd)4.(ii)
Qualified Operator Deviation Notification of Resumed Operation.	Prior to resuming operation.	<ul style="list-style-type: none">•Notification that operation will resume.	(11)(dd)4.(iii)

TABLE 5. EMISSION LIMITS FOR INCINERATORS THAT COMMENCED CONSTRUCTION AFTER NOVEMBER 30, 1999, BUT NO LATER THAN JUNE 4, 2010, OR COMMENCED MODIFICATION OR RECONSTRUCTION AFTER JUNE 1, 2001 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limitation	Averaging Time	Compliance Method 40 CFR 60 Appendix A
Cadmium	0.0026 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Carbon Monoxide	17 Parts per million dry volume	3-run average (1 hour minimum sample time per run)	Methods 10
Dioxins/furans (toxic mass basis)	4.6 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 23
Dioxins/furans (toxic equivalency basis)	0.13 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 23
Hydrogen Chloride	29 Parts per million dry volume	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Method 26 or 26A
Lead	0.015 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Mercury	0.0048 Milligrams per dry standard cubic meter	3-run average (For Method 29 an ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 2 dry standard cubic meters. For Method 30B, collect a minimum sample as specified in Method 30B)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)

Nitrogen Oxides	53 Parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Methods 7 or 7E
Particulate Matter	34 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Method 5 or 29
Sulfur Dioxide	11 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 6 or 6c
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period	Three 1-hour observation periods	Method 22 (Visible emission test)

TABLE 6. EMISSION LIMITS FOR ENERGY RECOVERY UNITS THAT COMMENCED CONSTRUCTION ON OR BEFORE JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER JUNE 4, 2010 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limit (Liquid/Gas)	Emission Limit (Solids)	Averaging Time	Compliance Method 40 CFR 60 Appendix A
Cadmium	0.023 Milligrams per dry standard cubic meter	Biomass—0.0014 milligrams per dry standard cubic meter. Coal—0.0017 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Carbon Monoxide	35 Parts per million dry volume	Biomass—260 parts per million dry volume Coal—95 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Methods 10
Dioxins/furans (total mass basis)	2.9 nanograms per dry standard cubic meter	Biomass—0.52 nanograms per dry standard cubic meter. Coal—5.1 nanograms per dry standard cubic meter. c	3-run average (collect a minimum volume of 4 dry standard cubic meter)	Method 23
Dioxins/furans (toxic equivalency basis)	0.32 Nanograms per dry standard cubic meter	Biomass—0.12 nanograms per dry standard cubic meter Coal—0.075 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23

Hydrogen Chloride	14 Parts per million by dry volume	Biomass—0.20 parts per million dry volume Coal—58 parts per million dry volume	3-run average (for Method 26, collect a minimum of 120 liters; for Method 26A, collect a minimum volume of 1 dry standard cubic meter)	Method 26 or 26A
Lead	0.096 Milligrams per dry standard cubic meter	Biomass—0.014 milligrams per dry standard cubic meter. Coal—0.057 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Mercury	0.0024 Milligrams per dry standard cubic meter	Biomass—0.0022 milligrams per dry standard cubic meter Coal—0.013 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) d, collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B.	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	76 Parts per million dry volume	Biomass—290 parts per million dry volume Coal—460 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Methods 7 or 7E
Particulate Matter Filterable	110 milligrams per dry standard cubic meter	Biomass—11 milligrams per dry standard cubic meter Coal—130 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Method 5 or 29 if the unit has an annual average heat input rate less than or equal to 250 MMBtu/hr; or PM CPMS (as specified in § 60.2710(x)) if the unit has an annual average heat input rate greater than 250 MMBtu/hr.
Sulfur Dioxide	720 Parts per million dry volume	Biomass—7.3 parts per million dry volume Coal—850 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Method 6 or 6c

Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Method 22 (Visible emission test)
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TABLE 7. EMISSION LIMITS FOR WASTE-BURNING KILNS THAT COMMENCED CONSTRUCTION ON OR BEFORE JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER JUNE 4, 2010 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limitation	Averaging Time	Compliance Method 40 CFR 60 Appendix A
Cadmium	0.0014 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29
Carbon Monoxide	110 (long kilns)/790 (preheater/precalciner) parts per million dry volume	3-run average (1 hour minimum sample time per run)	Methods 10
Dioxins/furans (total mass basis)	1.3 Nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23
Dioxins/furans (toxic equivalency basis)	0.075 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23
Hydrogen Chloride	3.0 Parts per million by dry volume	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCl CEMS is being used	Performance test (Method 321 at 40 CFR part 63, appendix A of this part) or HCl CEMS if a wet scrubber or dry scrubber is not used, as specified in §60.2710(j).
Lead	0.014 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29

Mercury	0.011 Milligrams per dry standard cubic meter <u>OR</u> <u>*58 Pounds per Million Tons of Clinker</u>	30-day rolling average	Mercury CEMS or sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B of 40 CFR 60.)
Nitrogen Oxides	630 Parts per million by dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Methods 7 or 7E
Particulate Matter Filterable	13.5 Milligrams per dry standard cubic meter	30-day rolling average	PM CPMS (as specified in 60.2710(x))
Sulfur Dioxide	600 Parts per million by dry volume	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1 hour minimum sample time per run)	Method 6 or 6c

***Equivalent Production-Based Limit – See rules 335-3-3-.05(8)(g), 335-3-3-.05(9)(ee), 335-3-3-.05(10)(u), and 335-3-3-.05(11)(jj) for additional requirements.**

TABLE 8. EMISSION LIMITS FOR SMALL, REMOTE INCINERATORS THAT COMMENCED CONSTRUCTION ON OR BEFORE JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER JUNE 4, 2010 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Units (7 percent oxygen, dry basis, except opacity)	Averaging Time	Compliance Method 40 CFR 60 Appendix A
Cadmium	0.95 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Method 29
Carbon Monoxide	64 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Methods 10
Dioxins/furans (total mass basis)	4,400 nanograms per dry standard cubic meter b	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Method 23
Dioxins/furans (toxic equivalency basis)	180 nanograms per dry standard cubic meter b	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Method 23
Hydrogen Chloride	300 parts per million dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Method 26 or 26A
Lead	2.1 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)

Mercury	0.0053 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	190 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Methods 7 or 7E
Particulate Matter (Filterable)	270 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Method 5 or 29
Sulfur Dioxide	150 parts per million dry volume	3-run average (for Method 6, collect a minimum of 20 liters per run; for Method 6C, 1 hour minimum sample time per run)	Method 6 or 6c
Fugitive Ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Method 22 (Visible emissions test)

Author: Ronald W. Gore.

Statutory Authority: Code of Alabama 1975, §§22-28-14, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective Date: March 14, 2002.

Amended: October 2, 2003; July 11, 2006; April 1, 2014; June 09, 2017; XXXXXX, 2017.

Attachment 8

**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 335-6 of the Department's Water Division's Water Quality Program Rules and Regulations 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 335-6 [rules 335-6-15-.02/Definitions (Amend); 335-6-15-.03/Applicability (Amend); 335-6-15-.04/Installation Requirements for Partially Excluded UST Systems (Amend); 335-6-15-.05/Notification Requirements (Amend); 335-6-15-.06/Performance Standard for New USTs, Piping, UST Systems, and/or Dispensers (Amend); 335-6-15-.07/Upgrading of Existing UST

**ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION**

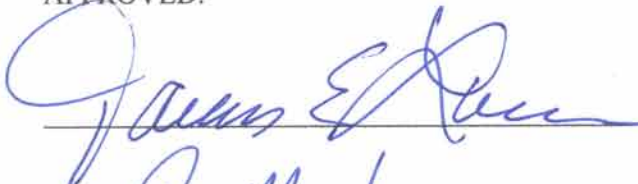
Systems (Amend); 335-6-15-.08/Plans and Specifications (Amend); 335-6-15-.09/Operation, Maintenance, and Testing or Inspection of Spill and Overfill Prevention Equipment and Containment Systems; and Walkthrough Inspections (Amend); 335-6-15-.10/Operation and Maintenance of Corrosion Protection (Amend); 335-6-15-.11/Compatibility (Amend); 335-6-15-.12/Repairs Allowed (Amend); 335-6-15-.13/Reporting and Recordkeeping (Amend); 335-6-15-.14/General Release Detection Requirements for All UST Systems (Amend); 335-6-15-.15/Release Detection Requirements for Petroleum UST Systems (Amend); 335-6-15-.16/Release Detection Requirements for Hazardous Substance UST Systems (Amend); 335-6-15-.17/Methods Of Release Detection For Underground Storage Tanks (Amend); 335-6-15-.18/Methods of Release Detection for Underground Piping (Amend); 335-6-15-.19/Release Detection Recordkeeping (Amend); 335-6-15-.20/Reporting of Suspected Releases (Amend); 335-6-15-.22/Release Investigation and Confirmation Steps (Amend); 335-6-15-.24/Initial Release Response (Amend); 335-6-15-.25/Initial Abatement Measures and Preliminary Investigation (Amend); 335-6-15-.26/Preliminary Investigation Requirements (Amend); 335-6-15-.27/Free Product Removal (Amend); 335-6-15-.28/Secondary Investigation Requirements (Amend); 335-6-15-.29/Corrective Action Plan (Amend); 335-6-15-.30/Corrective Action Requirements (Amend); 335-6-15-.31/Public Participation (Amend); 335-6-15-.32/Analytical Requirements (Amend); 335-6-15-.33/Temporary Closure (Amend); 335-6-15-.35/Site Closure or Change-In-Service Assessment (Amend); 335-6-15-.37/Closure Records (Amend); 335-6-15-.39/Availability to Public of Records, Reports or Information (Amend); 335-6-15-.42/Underground Storage Tank Regulation Fee (Amend); 335-6-15-.43/Financial Responsibility for Petroleum UST Owners and Operators (Amend); 335-6-15-.45/Delivery Prohibition (Amend); 335-6-15-.46/Operator Training (Amend); 335-6-15-.47/Certification Requirements for Individuals Who Supervise Installation, Closure, and Repair of UST Systems (Amend); 335-6-15-.48/UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems (Amend); 335-6-15-.49/Severability (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 Reference Service.


**ENVIRONMENTAL MANAGEMENT COMMISSION
RESOLUTION**


ADEM Admin. Code division 335-6 – Water Quality Program

IN WITNESS WHEREOF, we have affixed our signatures below on this 20th day of
October 2017.

APPROVED:





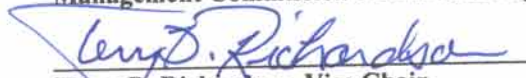




DISAPPROVED:

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 20th day of October 2017.



Terry D. Richardson, Vice Chair
Environmental Management Commission
Certified this 20th day of October 2017

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION - WATER QUALITY PROGRAM

CHAPTER 335-6-15
TECHNICAL STANDARDS, CORRECTIVE ACTION REQUIREMENTS AND
FINANCIAL RESPONSIBILITY FOR OWNERS AND OPERATORS OF
UNDERGROUND STORAGE TANKS

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- 335-6-15-.45 Delivery Prohibition
- 335-6-15-.46 Operator Training
- 335-6-15-.47 Certification Requirements for Individuals Who Supervise Installation, Closure, and Repair of UST Systems
- [335-6-15-.48 UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems](#)
- 335-6-15-.489 Severability

335-6-15-.02 Definitions. The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise:

(a) "Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

(b) "ADEM" means the Alabama Department of Environmental Management.

(c) "Airport hydrant fuel distribution system" means an UST system which fuels aircraft and operates under high pressure with large diameter underground piping that typically terminates into one or more hydrants (fill stands). The airport hydrant fuel distribution system begins where fuel enters one or more tanks from an external source such as a pipeline, barge, rail car, or other motor fuel carrier.

(d) "Ancillary equipment" means any devices including, but not limited to, such devices as underground piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

(e) "Belowground release" means any release to the subsurface of the land, including releases to groundwater. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.

(f) "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.

(g) "Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, an underground storage tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

(h) "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and underground storage tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and underground storage tank systems. Such persons must also be certified, and then recertified every 3 years, as successfully completing in-class and field training from a corrosion expert. Certification may no longer be recognized by the Department and/or the certifying organization if a certified individual is not recertified within 90 days or another time period approved by

the Department after expiration of their certification, there is evidence of fraud, or the tester is determined by the Department to not be capable of properly performing cathodic protection testing. At a minimum, certification training shall encompass all of the following and recertification training shall include the training outlined in ~~items~~subparagraphs (h)3. ~~T~~through 5. of this rule, or be in accordance with NACE International certification and recertification requirements:

1. Basics of corrosion which include the following discussions:
 - (i) What corrosion is;
 - (ii) Significance and costs of corrosion;
 - (iii) Conditions for corrosion to occur;
 - (iv) Electrochemical aspects of corrosion;
 - (v) Environmental effects on UST systems such as oxygen, temperature, corrosivity of the environment, concentration of corrosive element, and galvanic coupling;
 - (vi) Types of corrosion;
 - (vii) Galvanic series and Electromotive Force series; and
 - (viii) Corrosion properties of different metals and nonmetals.
2. Underground corrosion discussion which includes the following:
 - (i) Chemical and physical properties of soils;
 - (ii) Factors affecting underground corrosion such as:
 - (I) Soil particle size and composition; and
 - (II) Electrolyte moisture content, resistivity, and acidity/alkalinity;
 - (iii) Factors in underground corrosion of ferrous metals such as burial depth, area effects, and time buried; and
 - (iv) Behavior of coatings in soils.
3. Corrosion prevention discussion which includes the following:
 - (i) Impressed current cathodic protection system mechanism, economics, continuity and structure-to-soil testing, anode selection, life of anode, anode environment, design and installation of anodes;

(ii) Sacrificial anode (galvanic) cathodic protection system mechanism, economics, continuity and structure-to-soil testing, anode selection, life of anode, anode environment, design and installation of anodes;

(iii) Sources of power for cathodic protection;

(iv) When to use an impressed current cathodic protection system versus a sacrificial anode cathodic protection system;

(v) Misconceptions about cathodic protection;

(vi) Purpose of cathodic protection monitoring and testing, criterion used for monitoring steel, and criterion for monitoring other metals;

(vii) Reference cell purpose, practical test locations, test stations, and maintenance;

(viii) Stray current sources, detection, testing, and prevention;

(ix) Use of coatings in underground applications to prevent corrosion;
and

(x) UST internal corrosion problems and prevention.

4. Discussion of regulatory requirements for corrosion protection as follows:

(i) Federal and state [of Alabama](#) corrosion protection requirements;

(ii) Qualifications required to perform corrosion protection work as a corrosion expert and cathodic protection tester;

(iii) Integrity assessment prior to addition of cathodic protection such as internal inspection and acceptable alternatives;

(iv) Corrosion protection upgrading options; and

(v) Monitoring and recordkeeping requirements.

5. Discussion of standards and recommended practices such as NACE International, American Petroleum Institute, Petroleum Equipment Institute, National Fire Prevention Association, American Society for Testing and Materials, and Steel Tank Institute.

6. Hands-on field inspection and testing session featuring galvanic versus impressed current systems, reference electrodes, rectifiers, instrumentation, test stations, structure-to-soil and continuity testing, what to look for to determine compliance with cathodic requirements, cathodic protection system problems, and what to do if cathodic protection system does not meet minimum criteria.

(hi) "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

(ij) "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the underground storage tank system under conditions likely to be encountered in the UST.

(jk) "Connected piping" means all underground piping including valves, elbows, joints, flanges and flexible connectors attached to an underground storage tank system through which regulated substances flow. For the purpose of determining how much underground piping is connected to any individual UST system, the underground piping that joins two UST systems should be allocated equally between them.

(kl) "Consumptive use" with respect to heating oil means consumed on the premises.

(m) "Containment sump" means a liquid-tight container that protects the environment by containing leaks and spills of regulated substances from underground piping, dispensers, pumps and related components in the containment area. Containment sumps may be single walled or secondarily contained and located at the top of the UST (UST top or submersible turbine pump sump), underneath the dispenser (under-dispenser containment sump), or at other points in the underground piping run (transition or intermediate sump).

(ln) "Contaminant" means a regulated substance which has been released into the environment.

(mo) "Continuous interstitial monitoring" means performing interstitial monitoring on an uninterrupted basis.

(np) "Corrective action limits (CAL)" means those contaminant concentrations which must be achieved in order for corrective action to be deemed complete by the Department.

(eq) "Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal underground storage tanks. Such a person must be accredited or certified as being qualified by NACE International or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal underground storage tanks. Such person is qualified to test cathodic protection systems without becoming certified and recertified as defined in subparagraph (gh) above of this rule.

(~~p~~r) "Critical J_iunctures" means the steps taken to install, close, and repair UST systems which, if done improperly, could result in the greatest risk of a release.

~~(q) "De minimis concentration" means that amount of a substance mixed with another substance that is so little, small, minuscule, or tiny that it does not alter the properties of the substance with which it is mixed.~~

(~~r~~s) "Department" means the Alabama Department of Environmental Management.

(~~s~~t) "Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., underground storage tank from underground piping).

(~~t~~u) "Director" means the Director of the Alabama Department of Environmental Management.

~~(v) "Dispenser" is a device designed to dispense motor fuels and kerosene means equipment located aboveground that dispenses regulated substances from the UST system.~~

~~(w) "Dispenser system" means the dispenser as defined in paragraph (v) of this rule and the equipment necessary to connect the dispenser to the underground storage tank system.~~

(~~w~~x) "Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

(~~w~~y) "Excavation zone" means the volume containing the underground storage tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

(~~x~~z) "Existing tank system" means an underground storage tank system used to contain an accumulation of regulated substances or for which installation has commenced ~~on or~~ before April 5, 1989. Installation is considered to have commenced if:

1. ~~t~~The owner or operator has obtained all federal, state of Alabama, and local approvals or permits necessary to begin physical construction of the site or installation of the underground storage tank system; and if,

2. ~~e~~Either a continuous on-site physical construction or installation program has begun; or,

3. ~~t~~The owner or operator has entered into contractual obligations--which cannot be cancelled or modified without substantial loss--for physical

construction at the site or installation of the underground storage tank system to be completed within a reasonable time.

(~~y~~aa) "Farm tank" is an underground storage tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

(~~z~~bb) "Field-constructed tank" means a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field-constructed.

(~~z~~cc) "Flow-through process tank" is an underground storage tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process underground storage tanks do not include underground storage tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

(~~a~~add) "Free product" refers to a regulated substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water).

(~~b~~bee) "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

(~~e~~eff) "Groundwater" means water below the land surface in a zone of saturation.

(~~g~~gg) "Hazard quotient" means a ratio of the level of exposure of a chemical over a specified time period to a "reference dose", as defined in subparagraph (~~j~~jj) of this rule, for that chemical of concern derived for a similar exposure period.

(~~d~~hh) "~~Hazardous substance UST system~~" means ~~an underground storage tank system that contains~~ a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under division 14 of the ADEM Administrative Code) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

(~~j~~ii) "Hazardous substance UST system" means an underground storage tank system that contains any substance defined as a hazardous substance in subparagraph (hh) of this rule.

(~~j~~jj) "Health Advisory Level" or "(HAL)-A" means a level established by the United States Environmental Protection Agency which provides the level of a

contaminant in drinking water at which adverse non-carcinogenic health effects would not be anticipated with a margin of safety.

(ee) "Heating oil" means petroleum that is No. 1, No. 2, No. 4--light, No. 4--heavy, No. 5--light, No. 5--heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

(ff) "Hydraulic lift tank" means an underground storage tank holding hydraulic fluid for a closed-loop mechanical system that used compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

(mm) "Individual Excess Lifetime Cancer Risk" or "IELCR" means the increase over background in an individual's probability of getting cancer over a lifetime due to exposure to a chemical.

(gg) "Interstitial monitoring" is a method of routinely checking at regular intervals for leaks into the space between the primary wall of an UST or underground piping and an outer secondary barrier.

(hh) "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

(ii) "Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product.

(qq) "Maximum Contaminant Level" or "MCL" means a level established by the United States Environmental Protection Agency which is the maximum permissible level of a contaminant in drinking water that is delivered to any user of a public water system.

(jj) "Motor fuel" means ~~petroleum, petroleum-based substance or petroleum blend with more than a de minimis concentration of petroleum that~~ is a complex blend of hydrocarbons typically used for combustion in the operation of a motor or engine such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, ~~any grade of gasoline, biodiesel, or any blend containing one or more of these substances (for example: motor gasoline blended with alcohol).~~

(kk) "New dispenser system" is either a newly manufactured or operational dispenser and the equipment necessary to connect the dispenser to the underground storage tank system, which includes check valves, shear valves, unburied risers, flex connectors, or other transitional components which connect the dispenser to the underground piping, which is installed for the first time or at a new location on August 6, 2007 and thereafter.

(~~tt~~) "New ~~tank~~UST system" means an underground storage tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced on or after April 5, 1989. {See also "Existing tank system" in subparagraph (z) of this rule.}

(~~uu~~) "Noncommercial purposes" with respect to motor fuel means not for resale.

(~~vv~~) "On the premises where stored" with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

(~~ww~~) "Operational life" refers to the period beginning when installation of the underground storage tank system has commenced until the time the underground storage tank system is properly closed under rules 335-6-15-.~~33~~4 through 335-6-15-.37.

(~~xx~~) "Operator" means any person in control of, or having responsibility for, the daily operation of the UST system.

(~~yy~~) "Operator, Class A" means any person who is, or is employed by, the underground storage tank owner, underground storage tank facility owner, or lessee, who has primary responsibility to operate and maintain underground storage tank systems. The Class A operator's responsibilities include managing resources and personnel, such as establishing work assignments to achieve and maintain compliance with Department underground storage tank regulatory requirements. In general, this person focuses on the broader aspects of the regulations and standards necessary to operate and maintain underground storage tank systems in accordance with this chapter. For example, this person typically ensures that responsible person(s):

1. Are trained to operate and maintain underground storage tank systems and keep records in accordance with the requirements in this chapter;
2. Operate and maintain underground storage tank systems in accordance with the requirements in this chapter;
3. Maintain records in accordance with the requirements of this chapter;
4. Respond to emergencies caused by releases or spills from underground storage tank systems in accordance with the requirements of this chapter; and
5. Make financial responsibility documents available to the Department as required by rules 335-6-15-.13 and 335-6-15-.43.

(~~zz~~) "Operator, Class B" means any person who is, or is employed by, the underground storage tank owner, underground storage tank facility owner, or lessee, who implements underground storage tank regulatory requirements and standards in the field in accordance with this chapter. This person

implements day-to-day aspects of operating, maintaining, and recordkeeping for underground storage tank systems at one or more facilities. For example, this person typically monitors, maintains, and ensures:

1. Compliance with release detection, recordkeeping, and reporting requirements;
2. Compliance with release prevention, recordkeeping, and reporting requirements;
3. Compliance with performance standards for all relevant equipment; and
4. Training of responsible persons to respond to emergencies caused by releases or spills in accordance with the requirements of this chapter.

(ssaaa) "Operator, Class C" means any person who is, or is employed by, the underground storage tank owner, underground storage tank facility owner, or lessee, who is generally the first line of response to events indicating emergency conditions. This person is responsible for responding to alarms or other indications of emergencies caused by spills or releases from underground storage tank systems, and for notifying the Class B or Class A operator and appropriate emergency responders when necessary. Not all employees of the facility are necessarily Class C operators. This person typically:

1. Controls or monitors the dispensing or sale of regulated substances; or
2. Is responsible for initial response to alarms or releases.

(ttbbb) "Overfill release" is a release that occurs when an underground storage tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

(uuccc) "Owner" means: in the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and in the case of any UST system in use before November 8, 1984, but no longer in use on that date, the present owner of the underground storage tank and any person who owned such underground storage tank immediately before the discontinuation of its use.

(vvddd) "Person" means an individual, trust, firm, joint stock company, federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. "Person" also includes a consortium, a joint venture, a commercial entity, and the United States Government.

(wweee) "~~Petroleum-UST system~~" means ~~an underground storage tank system that contains petroleum~~ crude oil or any fraction thereof that is

liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), petroleum-based substances comprised of a complex blend of hydrocarbons or a mixture of petroleum with de minimis concentrations of other regulated substances. ~~Such as systems include those containing~~ motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

(fff) "Petroleum UST system" means an underground storage tank system that contains "petroleum" as defined in subparagraph (eee) of this rule.

~~(xxxggg)~~ "Pipe" or "Piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials that routinely contains and conveys regulated substances from the underground storage tank(s) to the dispenser(s) or other end-use equipment. Such "pipe" or "piping" includes any elbows, couplings, unions, valves, or other in-line fixtures that contain and convey regulated substances from the underground storage tank(s) to the dispenser(s). This definition excludes vent, vapor recovery, or fill lines that do not routinely contain regulated substances.

(yyhhh) "Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

(zziii) "Red tag" means a tamper resistant device or mechanism which can be placed on an underground storage tank's fill pipe that clearly identifies the underground storage tank as being prohibited from accepting regulated substance delivery. The device or mechanism is easily visible to the regulated substance deliverer and clearly conveys that it is unlawful to deliver to, or accept product into the underground storage tank.

(jjj) "Reference dose" means an estimate of a daily exposure to the general human population that is likely to be without an appreciable risk of deleterious effects during a lifetime of exposure.

~~(aaa kkk)~~ "Regulated substance" means any substance defined as a hazardous substance in subparagraph (hh) of this rule or any substance defined as petroleum in subparagraph (eee) of this rule. ~~in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under division 14 of the ADEM Administrative Code); and petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term "regulated substance" includes but is not limited to petroleum and petroleum based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.~~

(bbblll) "Regulated substance deliverer" means any person who delivers a regulated substance to an underground storage tank.

(~~eee~~mmm) "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into groundwater, surface water or subsurface soils.

(~~ddd~~nnn) "Release detection" means determining whether a release of a regulated substance has occurred from the UST system into the environment or a leak has occurred into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

(~~eee~~ooo) "Repair" means to restore to proper operating condition an underground storage tank, underground pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, release detection equipment, or other a defective or damaged component of a UST system component that has caused or could cause a release of product from the UST system or has failed to function properly, that is not "routine maintenance" as defined in subparagraph (~~ggg~~qqq) of this rule.

(~~fff~~ppp) "Residential tank" is an underground storage tank located on property used primarily for dwelling purposes.

(~~ggg~~qqq) "Routine maintenance" means an activity ~~involving work designed to maintain on~~ an UST system that is completed without breaking concrete, asphalt, or other paved surface and/or ground, and that is not a "repair" as defined in subparagraph (~~eee~~ooo) of this rule, ~~replacement, installation, or closure. This includes replacing or repair of~~ work on or replacing spill catchment basins, automatic line leak detectors, automatic tank gauge probes, suction or submersible pumps, overfill prevention devices, drop tubes, check valves, underground storage tank fill adaptors, caps, lids, and manhole covers, fuses, dispenser components above shear valve, all without breaking concrete, asphalt or other paved surface, and/or ground.

(~~hhh~~rrr) "SARA" means the Superfund Amendments and Reauthorization Act of 1986.

(~~sss~~) "Secondary containment" or "Secondarily contained" means a release prevention and release detection system for an underground storage tank or underground piping. This system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes containment sumps when used for interstitial monitoring of underground piping.

(~~iii~~ttt) "Septic tank" is a water-tight covered underground receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the underground tank are pumped out periodically and hauled to a treatment facility.

(~~jjj~~uuu) "Significant noncompliance requiring delivery prohibition" means a failure of an owner or operator to comply with any of the following requirements of this chapter that will result in the Department prohibiting delivery of regulated substances to an underground storage tank facility, after

being given notice: installation of spill prevention, overfill prevention, leak detection, or corrosion protection equipment on an underground storage tank system as required by rules 335-6-15-.03, ~~rule~~ 335-6-15-.04, ~~rule~~ 335-6-15-.06, 335-6-15-.07, ~~rules~~ 335-6-15-.09 through 335-6-15-.12, and ~~rules~~ 335-6-15-.14 through 335-6-15-.18.

(~~kkk~~vvv) "Significant noncompliance subject to delivery prohibition" means a failure of an owner or operator to comply with any of the following requirements of this chapter that may result in the Department prohibiting delivery of regulated substances to an underground storage tank facility, after being given notice and appropriate time by the Department to comply:

1. Notification requirements for an underground storage tank system with the Department in accordance with rule 335-6-15-.05;

2. Operation and/or maintenance of spill prevention, overfill prevention, leak detection, or corrosion protection equipment on an underground storage tank system as required by rules 335-6-15-.03, ~~rule~~ 335-6-15-.04, ~~rule~~ 335-6-15-.06, ~~rule~~ 335-6-15-.07, ~~rule~~ 335-6-15-.09, ~~rule~~ 335-6-15-.10, and ~~rules~~ 335-6-15-.14 through 335-6-15-.18;

3. Installation, operation and/or maintenance of under dispenser containment or submersible pump containment on an underground storage tank system as required by rules 335-6-15-.03, ~~rule~~ 335-6-15-.06, and ~~rule~~ 335-6-15-.09;

4. Compatibility, and repair requirements on an underground storage tank system as required by rules 335-6-15-.11 and ~~rule~~ 335-6-15-.12;

5. Submittal of documentation or reports relating to spill prevention, overfill prevention, leak detection, corrosion protection, under dispenser containment, submersible pump containment, compatibility and repairs for an underground storage tank system within the time frame required by this chapter or within a reasonable time frame upon request by the Department;

6. Payment of the yearly underground storage tank regulation fee in accordance with rule 335-6-15-.42;

7. Taking appropriate action in response to a release or suspected release of product as outlined by rules 335-6-15-.20 through 335-6-15-.25; or

8. Investigation, and/or clean up a release from an underground storage tank system in a timely manner, in accordance with rules 335-6-15-.26 through 335-6-15-.30 and 335-6-15-.35.

9. Training of operators of UST systems in accordance with rule 335-6-15-.46.

10. Use of an individual or individuals certified by a Department approved certifying organization to exercise supervisory control over installation, closure, and repair of UST systems in accordance with rule 335-6-15-.47.

(~~HH~~www) "Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

(~~mmm~~xxx) "Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

(~~nnn~~yyy) "Tank" is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

(~~zzz~~) "Training program" means any program that provides information to and evaluates the knowledge of a Class A, Class B, or Class C operator through testing, practical demonstration, or another approach acceptable to the Department regarding requirements for UST systems that meet the requirements of rule 335-6-15-.46.

(~~aaaa~~) "Under dispenser containment" means containment underneath a dispenser system designed to prevent leaks from the dispenser and underground piping within or above the under dispenser containment from reaching soil or groundwater.

(~~ooo~~bbbb) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

(~~ppp~~cccc) "Underground release" means any belowground release.

(~~qqq~~dddd) "Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. Tank used for storing heating oil for consumptive use on the premises where stored;
3. Septic tank;

4. Pipeline facility (including gathering lines) ~~regulated under:~~
 - (i) ~~The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.)~~ Which is regulated under chapter 601 of Title 49, or
 - (ii) ~~The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.)~~ Which is an intrastate pipeline facility regulated under state laws as provided in chapter 601 of Title 49, and which is determined by the Secretary of Transportation to be connected to a pipeline, or to be operated or intended to be capable of operating at pipeline pressure or as an integral part of a pipeline, or
 - (iii) State of Alabama laws comparable to the provisions of law in subparagraph (ddd)4.(i) or (ii) above;
5. Surface impoundment, pit, pond, or lagoon;
6. Storm-water or wastewater collection system;
7. Flow-through process tank;
8. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
9. Storage tank situated in an underground area (such as a basement cellar, mine working, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.
10. Other tanks exempted by the administrator of the United States Environmental Protection Agency; and
11. Piping connected to any of the above exemptions.

~~(f)eee~~ "Underground storage tank facility" is a single site or location containing one or more underground storage tank systems.

~~(s)fff~~ "Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overflow controls to improve the ability of an underground storage tank system to prevent the release of product.

~~(t)ggg~~ "UST system" or "Underground Storage Tank system" means an underground storage tank, connected to and including underground piping, underground ancillary equipment, and containment system, if any, as well as underground vent, vapor recovery, or fill lines.

~~(u)hhh~~ "Wastewater treatment tank" means an underground tank that is designated to receive and treat an influent wastewater through physical, chemical, or biological methods.

~~(v)iii~~ "Waters" means all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state

of Alabama, 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.

~~(www) Individual Excess Lifetime Cancer Risk (IELCR) — The increase over background in an individual's probability of getting cancer over a lifetime due to exposure to a chemical.~~

~~——(xxx) Hazard Quotient — a ratio of the level of exposure of a chemical over a specified time period to a reference dose for that chemical of concern derived for a similar exposure period.~~

~~——(yyy) Reference Dose — An estimate of a daily exposure to the general human population that is likely to be without an appreciable risk of deleterious effects during a lifetime of exposure.~~

~~——(zzz) Health Advisory Level (HAL) A level established by EPA which provides the level of a contaminant in drinking water at which adverse non-carcinogenic health effects would not be anticipated with a margin of safety.~~

~~——(aaaa) Maximum Contaminant Level (MCL) — A level established by EPA which is the maximum permissible level of a contaminant in drinking water, which is delivered to any user of a public water system.~~

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Statutory Authority: Code of Alabama 1975, §§ 22-36-2, 22-36-3.

History April 5, 1989.

Amended: October 2, 2003; August 6, 2007; April 25, 2008; November 24, 2009; January 16, 2012; April 1, 2014; XXXXXX, 2017.

335-6-15-.03 Applicability.

(1) The requirements of this chapter apply to all owners and operators of an UST system as defined in rule 335-6-15-.02 except as otherwise provided for in paragraphs (2) and, (3) and (4) of this rule. ~~Any UST system listed in paragraph (3) of this rule must meet the requirements of rule 335-6-15-.04.~~

(a) Previously deferred UST systems. UST systems with field-constructed tanks, UST systems with airport hydrant fuel distribution systems, and UST systems that store fuel solely for use by emergency power generators must meet the requirements of this part as follows:

1. UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems must meet the requirements in rule 335-6-15-.48.

2. UST systems that store fuel solely for use by emergency power generators installed before August 6, 2007 must meet rules 335-6-15-.14 through 335-6-15-.19 on or before October 13, 2018.

3. UST systems that store fuel solely for use by emergency power generators installed on or after August 6, 2007 must meet all applicable requirements of rules 335-6-15-.14 through 335-6-15-.19 at installation.

4. If UST systems installed before August 6, 2007 that store fuel solely for use by emergency power generators have new underground piping installed on or after August 6, 2007, the new underground piping is subject to all the rules in this chapter.

(2) Exclusions. The following UST systems are excluded from the requirements of this chapter:

(a) Any UST system holding hazardous wastes listed or identified under division 14 of the ADEM Administrative Code, or a mixture of such hazardous wastes and other regulated substances.

(b) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under chapters 335-6-5 or 335-6-6 of the ADEM Administrative Code.

(c) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

(d) Any UST system whose capacity is 110 gallons or less.

(e) Any UST system that contains a de minimis concentration of regulated substances.

(f) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

(3) ~~Deferrals~~Partial Exclusions. The following UST systems are only subject to rules 335-6-15-.04, ~~and~~ 335-6-15-.20 through 335-6-15-.31~~2~~, and 335-6-15-.43:

(a) Wastewater treatment tank systems not covered in subparagraph (2)(b) of this rule;

(b) Aboveground storage tanks associated with:

1. UST systems with airport hydrant fuel distribution systems regulated under rule 335-6-15-.48; and

2. UST systems with field-constructed tanks regulated under rule 335-6-15-.48;

(~~bc~~) Any UST system containing radioactive materials that are regulated under the Atomic Energy Act of 1954 (42 USC 2011 and following); and

(~~ed~~) Any UST system that is part of an emergency generator system at nuclear power generation facilities ~~regulated~~licensed by the Nuclear Regulatory Commission ~~under~~and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria, including but not limited to 10 CFR part 50 Appendix A;

~~(d) — Airport hydrant fuel distribution systems; and~~

~~— (e) — UST systems with field-constructed tanks.~~

~~(4) — Deferrals. Any existing UST system that stores fuel solely for use by emergency power generators is not subject to rules 335-6-15-.14 through 335-6-15-.19. Beginning August 6, 2007 and thereafter, when a UST system is installed that stores fuel solely for use by emergency power generators, the UST system is subject to all rules in this chapter. Beginning August 6, 2007 and thereafter, when piping is installed on an existing UST system that stores fuel solely for use by emergency power generators, only the piping is subject to all the rules in this chapter.~~

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; XXXXXX, 2017.

335-6-15-.04 ~~Interim~~ ~~Prohibition~~ Installation Requirements for ~~Deferred~~ Partially Excluded UST Systems. ~~No person may~~ Owners and operators ~~must~~ install an UST system listed in rule 335-6-15-.02(~~ttt~~).03(3)(a),(c), or (d) for the purpose of storing regulated substances ~~unless the UST system~~ (whether of single- or double- wall construction) ~~that meets the following requirements:~~

(a) Will prevent releases due to corrosion or structural failure for the operational life of the UST system;

(b) Is protected by one of the following methods: cathodically protected against corrosion; constructed of non~~corrodible~~metallic material; steel clad with a non~~corrodible~~metallic material; or designed in a manner to prevent the release or threatened release of any stored substance; and

(c) Is constructed or lined with material that is compatible with the stored substance.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; April 25, 2008; November 24, 2009; January 16, 2012; [XXXXXX, 2017](#).

335-6-15-.05 Notification Requirements.

(1) ~~Any~~After April 5, 1989, an owner or operator of an underground storage tank system for which a notification has not been provided to the Department ~~as of April 5, 1989, must within 30 days of that date,~~ submit, in a form approved by the Department, a notice of the existence of such underground storage tank system to the ADEMDepartment within 30 days of bringing the underground storage tank system into use. ~~Notification shall include the information identified in paragraph (2) below.~~

(2) ~~Any owner who brings an underground storage tank system into use after April 5, 1989, must within 30 days of bringing such tank into use, submit, in a form approved by the Department, a notice of the existence of such tank system to the ADEM.~~ Notification required in paragraph (1) of this rule shall include the following information:

(a) Owner and operator name, address, ~~and~~ telephone number, and e-mail address.

(b) Type of owner (e.g., sole proprietor, partnership, corporation).

(c) Location of underground storage tank.

1. Description of facility location;

2. Mailing address of facility at which underground storage tank is located (where applicable);

(d) Telephone number at the underground storage tank facility where the underground storage tank is located (where applicable).

(e) Operational status of underground storage tank.

(f) Estimated ~~age of date~~ the underground storage tank and underground piping were installed.

(g) Estimated total capacity in gallons.

(h) Material of construction of underground storage tank and underground piping.

(i) ~~Type of~~ Whether or not the underground storage tank is internally lined ~~protection.~~

(j) Type of underground storage tank system external corrosion protection, if applicable.

(k) Whether spill prevention is installed.

(l) Method of overfill prevention.

(~~km~~) Type of release detection method or methods.

(~~ln~~) Substance currently stored.

(~~mo~~) Type of product dispensing system; pressure or suction.

(~~np~~) Location of check valve and slope of underground piping for suction systems.

(~~eq~~) Regulated substance deliverer name, address, ~~and~~ telephone number and e-mail address.

(~~pr~~) Other such information determined to be necessary by the Department.

(3) An owner of an UST system which has had a modification which has changed any of the information reported originally under paragraph (1) or (2) of this rule must submit an amended notification to the ~~d~~Department within 30 days of the completion of that modification.

(4) Owners required to submit notices under paragraphs (1) and (2) of this rule must provide notices to the Department for each underground storage tank they own. Owners may provide notice for several underground storage tanks using one notification form, but owners who own underground storage tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

(5) A notification of installation or modification, containing information determined to be necessary by the Department, shall be submitted to the Department, in a form acceptable to the Department, 30 days prior to the anticipated date of installation or modification for each underground storage tank or underground storage tank system ~~in a form which is acceptable to the Department~~.

(6) All owners and operators of new UST systems must certify in the notification, that they are in compliance with the following requirements:

(a) Installation of underground storage tanks and underground piping under rules 335-6-15-.06(e) and 335-6-15-.47;

(b) Cathodic protection of steel underground storage tanks and underground piping under rule 335-6-15-.06(a) and (b);

(c) Financial responsibility under rules 335-6-15-.44~~3~~ and 335-6-15-.4~~5~~~~4~~;

(d) Release detection under rules 335-6-15-.15 and 335-6-15-.16.

(7) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the installation was installed in

accordance with the requirements in rules 335-6-15-.06(e) and 335-6-15-.47, and submit the notification form in accordance with paragraph (1) of this rule.

(8) Any person who ~~sellstransfers ownership of an~~ underground storage tank ~~intended to be used as an underground storage tank~~ must notify the ~~purchaser of such tank~~ person assuming ownership within 30 days of the new owner's notification obligations under paragraphs (1) and (2) of this rule.

(9) Any person who ~~sellstransfers ownership of~~ an UST system that is already in service must provide the Department the following within 30 days:

(a) ~~notify the Department~~ Notification of such ~~sale~~ transfer;

(b) ~~provide p~~ Proof of transfer of ownership of the UST system; and

(c) ~~provide t~~ The name, and address, telephone number, and e-mail address of the new UST system owner ~~to the Department~~.

(10) ~~A~~ Within 30 days of acquisition, any person receiving who assumes ownership of an regulated UST system ~~under the conditions of paragraph (9) of this rule~~ must comply with the notification requirements of paragraphs (1), (2) and (3) of this rule.

(11) Owners and operators must notify the Department at least 30 days prior to switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel, or any other regulated substance identified by the Department.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; April 25, 2008; January 16, 2012; XXXXXX, 2017.

335-6-15-.06 Performance Standards for New USTs, Piping, UST Systems, and/or Dispensers.

In order to prevent releases due to structural failure, corrosion, leakage from submersible pumps and dispensers or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new USTs, underground piping, UST systems and/or dispensers must install this equipment in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and meet the following requirements:

(a) USTs. USTs installed on August 6, 2007 and thereafter must be manufactured so that any portion of the underground storage tank that is underground and routinely contains product has an inner and outer wall, and interstitial space. The USTs must be designed to allow monitoring of the integrity of both the inner and outer wall, contain a leak into the interstitial space until it is detected and removed, and prevent a release to the environment at any time during its operational life. Each UST must be properly designed and constructed, and any portion in contact with the ground that routinely contains product, as well as the metal outer wall of double wall underground storage tank which is in contact with the ground, must be protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

1. The UST is constructed of fiberglass-reinforced plastic; or
2. The UST is constructed of steel and cathodically protected in the following manner:
 - (i) The UST is coated with a suitable dielectric material;
 - (ii) Field-installed cathodic protection systems are designed by a corrosion expert;
 - (iii) Cathodic protection systems are designed to allow determination of current operating status according to the requirements of rule 335-6-15-.10; and
 - (iv) Cathodic protection systems are operated and maintained in accordance with rule 335-6-15-.10.
3. The UST is constructed of ~~a steel-fiberglass reinforced plastic composite~~ and clad or jacketed with a nonmetallic material; or
4. The UST construction and corrosion protection are determined by the Department to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements of subparagraphs (a)1. through 3. of this rule.

(b) Underground Piping. All underground piping, other than suction underground piping that meets the requirements specified in rule 335-6-15-.15(b)2.(i), (ii), (iii), (iv), and (v), installed under the ground on August 6, 2007 and

thereafter must be manufactured so that underground piping has an inner and outer wall and interstitial space. Such underground piping must be designed to allow monitoring of the integrity of both the inner and outer wall, contain a leak into the interstitial space until it is detected and removed, and prevent a release to the environment at any time during its operational life. All metal underground piping that routinely contains regulated substances and is in contact with the ground, as well as the metal outer wall of double wall underground piping which is in contact with the ground, must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, as specified below:

1. The underground piping is ~~nonmetallic and is~~ constructed of either a nonmetallic material such as fiberglass-reinforced plastic (rigid) or thermoplastic (flexible). Nonmetallic underground piping installed on January 10, 2006, and thereafter, must meet the requirements of the most current edition of Underwriters Laboratories Inc. "Standard for Safety for Nonmetallic Underground Piping for Flammable Liquids", "UL 971". Performance claims must be demonstrated by an evaluation properly conducted in accordance with "UL 971"; or

2. The underground piping is constructed of steel and cathodically protected in the following manner:

(i) The underground piping is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Cathodic protection systems are designed to allow determination of current operating status according to the requirements of rule 335-6-15-.10; and

(iv) Cathodic protection systems are operated and maintained in accordance with rule 335-6-15-.10.

3. The underground piping construction and corrosion protection are determined by the Department to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in subparagraphs (b)1. and 2. of this rule.

(c) Spill and Overfill Prevention Equipment. Except as provided for in sub-paragraphs (c)3. and 4. ~~Below of this rule~~, to prevent spilling and overfilling associated with product transfer to the UST, owners and operators must use the following spill and overfill prevention equipment or preventive measures in subparagraphs (c)1. and 2. Below of this rule:

1. Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for

example, a spill catchment basin) operated and maintained in accordance with rule 335-6-15-.09; and

2. Overfill prevention equipment that will:

(i) Automatically shut off flow into the underground storage tank when the underground storage tank is no more than 95 percent full; or

(ii) Alert the transfer operator when the underground storage tank is no more than 90 percent full by restricting the flow into the underground storage tank or triggering a high-level alarm.

3. Owner and operators are not required to use the spill and overfill prevention equipment specified in subparagraphs (c)1. and 2. ~~above of this rule~~ if:

(i) ~~a~~ Alternative equipment is used that is determined by the Department to be no less protective of human health and the environment than the equipment specified in subparagraph (c)1. or 2. of this rule; or

(ii) ~~t~~ The UST system is filled by transfers of no more than 25 gallons at one time.

4. Flow restrictors used in vent lines may not be used to comply with subparagraph (c)2. of this rule when overfill prevention is installed or replaced on or after [the effective date of rule].

5. Spill and overfill prevention equipment must be periodically tested or inspected in accordance with rule 335-6-15-.09(1)(a)1. and (b)1.

(d) Submersible Pump, ~~and~~ Under Dispenser, and Piping Transition Containment. USTs installed with submersible pumps on August 6, 2007 and thereafter, must have submersible pump containment sumps; ~~new~~ dispenser systems installed on August 6, 2007 and thereafter, must have under dispenser containment sumps; and piping transitions installed on or after [the effective date of rule] must have containment sumps as follows.

1. The sumps must be operated and maintained in accordance with rule 335-6-15-.09(2), (3), ~~and (4)~~. Containment sumps must be designed, constructed, installed, and maintained to:

(i) Be liquid-tight on all sides, bottom and all penetrations to contain leakage and prevent release of regulated substances from equipment related to dispensers and submersible pumps until the regulated substance is detected and removed; and

(ii) Be compatible with the substance conveyed by the underground piping to prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

(iii) Be able to allow access to the components in the containment sumps, and be periodically visually inspected for evidence of a leakage into the sumps.

(e) Installation. ~~All tanks and piping~~ UST systems must be properly installed:

1. Under the supervisory control of an individual or individuals certified in accordance with the requirements in rule 335-6-15-.47;

2. In accordance with codes of practice developed by nationally recognized associations or independent testing laboratories;

3. In accordance with the manufacturer's instructions; and

4. In accordance with plans and specifications required under rule 335-6-15-.08 and reviewed by the Department to include any modifications required to be made by the Department.

(f) The Department reserves the right to inspect an UST system within 30 days of submission of plans or notification of installation prior to the UST system being fully backfilled and placed into operation. The Department may authorize a representative to make this inspection.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: January 10, 2006; August 6, 2007; April 25, 2008; January 16, 2012; April 1, 2014; XXXXXX, 2017.

335-6-15-.07 Upgrading of Existing UST Systems. Owners and operators must permanently close (in accordance with rules 335-6-15-.34 through 335-6-15-.39) any UST system that does not meet the new UST system performance standards in rule 335-6-15-.06 or has not been upgraded in accordance with subparagraphs (b) through (d) of this rule. This does not apply to previously deferred UST systems described in rule 335-6-15-.48 and where an upgrade is determined to be appropriate by the Department.

~~(1a)~~ Alternatives Allowed. ~~Not later than December 22, 1998, a~~All existing UST systems must comply with one of the following requirements:

~~(a)1.~~ New UST system performance standards under rule 335-6-15-.06;

~~(b)2.~~ The upgrading requirements in subparagraphs (2b) through (4d) below of this rule; or

~~(c)3.~~ Closure requirements under rules 335-6-15-.334 through 335-6-15-.39, including applicable requirements for corrective action under rules 335-6-15-.25 through 335-6-15-.31.

~~(2b)~~ Underground Storage Tanks Upgrading Requirements. ~~SteelMetal~~ underground storage tanks must be have been upgraded to meet one of the following requirements cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory that:

~~(a)~~ Interior Lining. A tank may be upgraded by internal lining if:

~~1.~~ The lining is installed in accordance with the requirements of rule 335-6-15-.12, and

~~2.~~ Within 10 years after lining, and every 5 years thereafter, except as indicated in subparagraph 3. below, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

~~3.~~ Tanks that had internal lining installed to comply with the December 22, 1998 upgrade deadline must meet the requirements of paragraph (c) below or be permanently closed in accordance with rules 335-6-15-.34 and 335-6-15-.35 within one year of the first required interior lining inspection after January 16, 2012.

~~(b)~~ Cathodic Protection. A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of rule 335-6-15-.06(a)2.(ii), (iii), and (iv), and have the integrity of the underground storage tank is ensured using one of the following methods:

1. The underground storage tank iswas internally inspected and assessed to ensure that the tank iswas structurally sound and free of corrosion holes prior to installing the cathodic protection system; or

2. The underground storage tank ~~has had~~ been installed for less than 10 years and is monitored ~~monthly~~ for releases at least every 30 days in accordance with rule 335-6-15-.17(d) through ~~(h)~~; or

3. The underground storage tank ~~has had~~ been installed for less than 10 years and ~~is was~~ assessed for corrosion holes by conducting two ~~(2)~~ tightness tests that meet the requirements of rule 335-6-15-.17(c). The first tightness test must ~~be have been~~ conducted prior to installing the cathodic protection system. The second tightness test must ~~be have been~~ conducted between three ~~(3)~~ and six ~~(6)~~ months following the first operation of the cathodic protection system; or

4. The underground storage tank ~~is was~~ assessed for corrosion holes by a method that is determined by the Department to prevent releases in a manner that is no less protective of human health and the environment than the requirements of subparagraphs ~~(2)~~(b)1. through 3. of this rule.

~~(c) Internal Lining Combined With Cathodic Protection. A tank may be upgraded by both internal lining and cathodic protection if:~~

~~1. The lining is installed in accordance with the requirements of rule 335-6-15-.12; and~~

~~2. The cathodic protection system meets the requirements of rule 335-6-15-.06(a)2.(ii), (iii), and (iv).~~

(3c) Piping Upgrading Requirements. Metal underground piping that routinely contains regulated substances and is in contact with the ground, as well as the metal outer wall of double wall underground piping which is in contact with the ground, must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, and must meet the requirements of rule 335-6-15-.06(b)2.(ii), (iii), and (iv).

(4d) Spill and Overfill Prevention Equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in rule 335-6-15-.06(c).

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; January 16, 2012; XXXXXX, 2017.

335-6-15-.08 Plans and Specifications.

(1) Submission of Plans. The Department may require the submission of plans, specifications, and other technical data pursuant to rule 335-6-15-.06, 335-6-15-.07, or any other requirement by the Department relating to the construction of UST systems, upgrading of UST systems, installation of release detection equipment, corrosion protection measures, or engineering design related to the implementation of a corrective action plan.

(a) Plans and specifications shall be submitted at least 30 days prior to the anticipated date of construction or installation.

(b) Where plans and specifications are not required, a notification of installation shall be submitted 30 days prior to the anticipated date of installation.

(c) Plan and specification submissions shall be in a form which is acceptable to the Department.

(d) The Department may require modification of submitted plans and specifications, where necessary, to demonstrate compliance with applicable requirements.

(2) Preparation of Plans, Specifications, and Technical Data. Plans, specifications, and technical data submitted to the Department for review shall bear the seal or number of a professional engineer, in accordance with Alabama law concerning engineering practices, who is competent to perform work in this field of engineering.

(3) Plans and specifications submitted for construction and upgrading of UST systems shall, where applicable, adequately describe:

(a) Site sketch with boundaries and structures approximately to scale.

(b) Underground storage tank excavation dimensions and location.

(c) Underground storage tank capacity, dimensions, materials of construction, and material to be stored, and whether of single or double wall construction.

(d) Type and size of backfill material.

(e) Depth of backfill to be placed under the underground storage tank.

(f) Water table data for the site, including the annual high and low water table elevations as determined from nearby water supply wells, piezometers, or other available hydrogeologic data.

(g) Supports and anchorage design if applicable.

(h) Underground pPiping dimensions, materials of construction, layout, location of dispensers, and slope of underground piping for suction systems.

(i) Release detection method to be used, to include:

1. Number, location and construction details for any monitoring wells, whether for groundwater monitoring, vapor monitoring or monitoring of an interstitial space.

2. Description of and manufacturer's performance specifications for any continuous monitoring equipment to be used where required by the Department.

3. For non-continuous monitoring, (other than manual sampling of groundwater monitoring wells), a description of and manufacturer's performance specifications for the type of equipment to be used where required by the Department.

4. Manufacturer specifications for any secondary barrier to be used in interstitial monitoring.

(j) Wiring and conduit associated with monitoring systems.

(k) Information regarding the cathodic protection method to be used, to include:

1. Design plans and specifications for field installed cathodic protection systems shall be submitted to the Department for approval at least 30 days prior to the anticipated date of installation and must include, at a minimum:

~~1.~~(i) Type of cathodic protection, galvanic or impressed current.

~~2.~~(ii) Test or monitoring station for cathodic protection system.

~~3.~~(iii) Location and weight of sacrificial anodes.

~~4.~~(iv) The corrosion expert responsible for the design of a field installed cathodic protection system.

_____ (v) Calculations of the:

_____ (I) Surface area to be protected,

_____ (II) Current required,

_____ (III) Number of anodes required, and

_____ (IV) Rectifier rating.

(vi) Material list including a description of the:

(I) Rectifier,

(II) Anodes,

(III) Anode wiring,

(IV) Negative ground wires,

(V) Grounding mechanism,

(VI) Shunt box, and

(VII) Other materials to be used.

(vii) Drawing providing the location of the:

(I) Tanks,

(II) Anodes,

(III) Anode wiring,

(IV) Ground wiring,

(V) Rectifier box, and

(VI) Shunt box.

(l) Spill and overflow containment devices.

(m) For groundwater monitoring well systems, the hydraulic conductivity of the soils in which the monitoring wells will be placed.

(n) Type of secondary containment, where applicable.

(o) Whether or not the UST system will be within 300 feet of a private domestic water supply or 1000 feet of a public water supply well.

(p) Any other information that may be required by the Department.

(4) Existing Systems. When plans and specifications are submitted for existing systems, all available information should be submitted regarding the above items.

(5) Modifications or Alterations. Any proposed modification or alteration of plans, specifications, or technical data previously submitted to and reviewed by the Department which could affect the UST system's compliance with this chapter must also be forwarded to the Department for review.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#), [David Batchelor](#).
Statutory Authority: [Code of Alabama 1975, §§ 22-36-3, 22-36-4](#).
History: April 5, 1989.
Amended: August 6, 2007; [XXXXXX, 2017](#).

335-6-15-.09 Operation, and Maintenance, and Testing or Inspection of Spill and Overfill Control, Prevention Equipment and Containment Systems; and Walkthrough Inspections.

(1) Owners and operators of UST systems must comply with the following operation, maintenance, and testing or inspection requirements for spill prevention equipment, overfill prevention equipment, and containment sumps and sensors to ensure that releases due to leaking, spilling or overfilling do not occur; submit testing and inspection results in accordance with rule 335-6-15-.13(a)5.; and keep testing and inspection records in accordance with rule 335-6-15-.13(b)5.; unless a UST system is temporarily closed in accordance with rule 335-6-15-.33.;

~~_____ (a) _____ The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.~~

~~(b)(a) Spill Prevention Equipment. Spill prevention equipment must be periodically checked in accordance with the walkthrough inspection requirements in paragraph (2) of this rule and meet the following requirements:~~

~~1. _____ Spill catchment basins Single walled spill prevention equipment shall be checked tested for leakage to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing at least once every 3 three years, or upon repair or replacement, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, unless a UST system is temporarily closed in accordance with rule 335-6-15-.33 using one of the following options:~~

~~(i) _____ Testing requirements developed by the manufacturer (Note: Owners and operators may use this option only if the manufacturer has developed requirements);~~

~~(ii) _____ Test methods from a code of practice developed by a nationally recognized association or independent testing laboratory; or~~

~~(iii) _____ Testing requirements determined by the Department to be no less protective of human health and the environment than the testing requirements listed in subparagraphs (1)(a)1.(i) and (ii) of this rule.~~

~~2. _____ Double walled spill prevention equipment with an interstitial space shall have the integrity of both walls periodically checked in accordance with the walkthrough inspection requirements in paragraph (2) of this rule. If this periodic checking is discontinued, owners and operators must begin using one of the testing options provided for single walled spill catchment basins in subparagraph (1)(a)1. of this rule and conduct a test within 30 days.~~

~~(e)3. If a spill catchment basin prevention equipment is used, ensure that it is~~ must be emptied before the transfer of regulated substance to the underground storage tank so that all the ~~catchment basin~~ volume is available to contain a spill. If a breach in the spill ~~catchment basin~~ prevention equipment is visible or if a spill ~~catchment basin~~ prevention equipment leak test fails, it must be repaired or replaced prior to receiving any further deliveries of a regulated substance ~~within a time period acceptable to the Department.~~

~~(d)4.~~ When a regulated substance is being released or is suspected to have been released from ~~the catchment basin~~ spill prevention equipment to the surrounding surface or subsurface, notify the Department of a suspected release in accordance with rule 335-6-15-.20.

(b) Overfill Prevention Equipment. Overfill prevention equipment in use before [the effective date of rule], shall be inspected not later than October 13, 2018 and at least once every three years thereafter; when brought into use on or after [the effective date of rule], shall be inspected upon installation and at least once every three years thereafter; and must meet the following inspection requirements:

1. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in rule 335-6-15-.06(c)2. and will activate when regulated substance reaches that level. Inspections must be conducted using one of the following options:

(i) Inspection requirements developed by the manufacturer (Note: Owners and operators may use this option only if the manufacturer has developed requirements);

(ii) Inspection methods from a code of practice developed by a nationally recognized association or independent testing laboratory; or

(iii) Inspection requirements determined by the Department to be no less protective of human health and the environment than the inspection requirements listed in subparagraphs (1)(b)1.(i) and (ii) of this rule.

2. Owners and operators must ensure that the volume available in the underground storage tank is greater than the volume of product to be transferred to the underground storage tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

(c) Under Dispenser, Submersible Pump, and Other UST System Containment Sumps. These containment sumps must be periodically checked in accordance with the walkthrough inspection requirements in paragraph (2) of

~~this rule and meet the following requirements: (2) — Beginning on August 6, 2007 and thereafter, owners or operators of UST systems with under dispenser and/or submersible pump containment sumps which are not used to meet leak detection requirements and beginning on *(insert the effective date of this rule)* and thereafter, owners and operators of UST systems with any other type of containment sumps which are not used to meet leak detection requirements, must comply with the following requirements:~~

~~(a) — Inspect containment sumps annually and keep a log of the results of the annual inspection, unless a UST system is temporarily closed in accordance with rule 335-6-15-.33.~~

~~1. When a regulated substance is discovered in a containment sumps:~~

~~1.(i) Remove the regulated substance within 24 hours; any regulated substance which is removed must be disposed of in accordance with all state of Alabama and federal requirements; and~~

~~2.(ii) Repair or replace any necessary equipment to prevent further leakage of regulated substance into the containment sumps. within a time period acceptable to the Department, and immediately after repair or replacement, test the sump for leakage to ensure it is liquid tight in accordance with one of the vacuum, pressure, or liquid testing options provided in subparagraphs (1)(a)1.(i),(ii), (iii) of this rule within a time period acceptable to the Department.~~

~~(e)2. When a regulated substance is being released or is suspected to have been released from a containment sumps to the surrounding surface or subsurface:~~

~~1.(i) Shut off the submersible pump; and~~

~~2.(ii) Notify the Department of a suspected release in accordance with rule 335-6-15-.20.~~

~~(b)3. Containment sumps used for interstitial monitoring of underground piping must be maintained so that they continuously remain free of water, regulated substance and debris.~~

~~(c) — When a regulated substance is discovered in containment sumps:~~

~~1. — Remove the regulated substance within 24 hours; any regulated substance which is removed must be disposed of in accordance with all state and federal requirements;~~

~~2. — Repair any necessary equipment to prevent further leakage of regulated substance into containment sumps.~~

~~(d) — When a regulated substance is being released or is suspected to have been released from containment sumps to the surrounding surface or subsurface:~~

~~1. — Shut off the submersible pump;~~

~~2. Notify the Department of a suspected release in accordance with rule 335-6-15-20.~~

~~(e)4. The operation of any liquid sensors in a containment sumps sensors used for interstitial monitoring of underground piping must be checked tested annually to ensure that they are working properly. Beginning [the effective date of rule], testing must be conducted in accordance with one of the testing options provided in subparagraphs (1)(a)1.(i),(ii), (iii) of this rule.~~

~~(f)5. Breaches discovered in a containment sumps used for interstitial monitoring of underground piping which may result in a release of a regulated substance must immediately be repaired immediately or the containment sump replaced. After repair or replacement, the containment sump must be tested using a vacuum, pressure or liquid method in accordance with one of the options provided in subparagraphs (1)(a)1.(i), (ii), or (iii) of this rule to ensure the sump is liquid tight.~~

~~26. Beginning October 13, 2018 for UST systems in use before [the effective date of rule] and beginning [the effective date of rule] for UST systems brought into use on or after [the effective date of rule], all containment sumps used for interstitial monitoring of underground piping must prevent releases to the environment by meeting one of the following:~~

~~(i) To ensure single walled containment sumps used for interstitial monitoring of underground piping are liquid tight, those installed prior to the [the effective date of rule] must have and initial test not later than October 13, 2018 and must be tested at least once every three years thereafter, and those brought into use on or after the [the effective date of rule] must be tested upon installation and be tested at least once every three years thereafter. Testing must be conducted using a vacuum, pressure, or liquid method in accordance with one of the options provided in subparagraphs (1)(a)1.(i), (ii), or (iii) of this rule; or~~

~~(ii) When containment sumps used for interstitial monitoring of underground piping are double walled, the integrity of both walls must be periodically checked in accordance with the walkthrough inspection requirements in subparagraph (2) of this rule. If this periodic checking is discontinued, owners and operators must begin using one of the testing options provided for single walled containment sumps in subparagraph (1)(c)6.(i) of this rule and conduct a test within 30 days.~~

~~(2) Walkthrough Inspections. To properly operate and maintain UST systems, owners and operators of UST systems must conduct walkthrough~~

inspections beginning not later than October 13, 2018 and thereafter. Conduct walkthrough inspections in accordance with either subparagraphs (2)(a), and (2)(b) or (c) of this rule and keep inspection records in accordance with rule 335-6-15-.13(b)11., unless a UST system is temporarily closed in accordance with rule 335-6-15-.33.

(a) Conduct a walkthrough inspection that, at a minimum, checks the following equipment as specified in subparagraphs (2)(a)1. and 2. of this rule:

1. Every 30 days (Exception: spill prevention equipment at UST systems receiving deliveries at intervals greater than every 30 days may be checked prior to each delivery):

(i) Visually check spill prevention equipment for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it is securely on the fill pipe; and for double walled spill prevention equipment with interstitial monitoring, also check the integrity of both walls by checking for leakage in the interstitial space, and

(ii) Check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present; and ensure records of release detection testing are reviewed, passing and current, and

2. Annually:

(i) Visually check all containment sumps for damage or leaks to the containment area, or releases to the environment, and remove liquid or debris; and for double walled sumps with interstitial monitoring, also check the integrity of both walls by checking for leakage in the interstitial space, and

(ii) Check hand held release detection equipment devices such as tank gauge sticks or groundwater bailers for operability and serviceability;

(b) Conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory that checks equipment comparable to that indicated in subparagraph (2)(a) of this rule; or

(c) Conduct operation and maintenance walkthrough inspections developed by the Department that checks equipment comparable to that indicated in subparagraph (2)(a) of this rule.

(43) The owner and operator must report, investigate, and clean up any leaks, spills and overfills in accordance with rule 335-6-15-.23.

Author: Sonja Massey, [Curt Johnson, Lee Davis](#).

Statutory Authority: [Code of Alabama 1975, § 22-36-3](#).

History: April 5, 1989.

Amended: August 6, 2007; January 16, 2012; April 1, 2014; [XXXXXX, 2017](#).

335-6-15-.10 Operation and Maintenance of Corrosion Protection. All owners and operators of ~~steel~~metal UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented until the UST system is permanently closed or undergoes change-in-service in accordance with rule 335-6-15-.34:

(a) All corrosion protection systems must be operated, maintained, inspected and tested to continuously provide and demonstrate corrosion protection of the metal components of that portion of the underground storage tank and underground piping that routinely contain regulated substances and are in contact with the ground, as well as the metal outer wall of double wall underground storage tanks and underground piping which are in contact with the ground. Operating UST systems for which impressed current cathodic protection has not been adequately operated and maintained to provide corrosion protection for a continuous period of 12 months must be either:

1. Internally inspected and found to be structurally sound in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory, or

2. Permanently closed within 90 days from the end of this 12-month period in accordance with rules 335-6-15-.34 and 335-6-15-.35.

(b) All UST systems equipped with cathodic protection systems must be inspected and tested for proper operation by a qualified cathodic protection tester who maintains current certification in accordance with the requirements in rule 335-6-15-.02(g), in accordance with the following requirements:

1. Frequency. All cathodic protection systems must be inspected and tested within ~~1-month~~30 days of installation and at least every ~~3~~three years thereafter; and

2. Inspection and Testing Criteria. The criteria that are used to determine that cathodic protection is adequate as required by subparagraphs (a) and (b) of this rule must be in accordance with the most current version of codes of practice established by ~~the~~NACE International and STI/SPFA (Steel Tank Institute/Steel Plate Fabricators Association).

(c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is operating properly.

(d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained in accordance with rule 335-6-15-.13 to demonstrate compliance with the performance standards in this section. These records must provide the following:

1. The results of the last three inspections or checks required in subparagraph (c) of this rule; and

2. The results of testing from the last two tests required in subparagraph (b) of this rule.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: November 24, 2009; January 16, 2012; [XXXXXX, 2017](#).

335-6-15-.11 Compatibility.

(1) Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system. ~~Compatibility shall be in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory when such codes of practice are available.~~

(2) Owners and operators must notify the Department in accordance with rule 335-6-15-.05(11). In addition, owners and operators with UST systems storing these regulated substances must meet one of the following:

(a) Demonstrate compatibility of the UST system (including the underground storage tank, underground piping, containment sumps, pumping equipment, release detection equipment, spill equipment, and overfill equipment). Owners and operators may demonstrate compatibility of the UST system by using one of the following options:

1. Certification or listing of UST system equipment or components by a nationally recognized independent testing laboratory for use with the regulated substance stored; or

2. Equipment or component manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the equipment or component is compatible with, and be from the equipment or component manufacturer; or

(b) Use another option determined by the Department to be no less protective of human health and the environment than the options listed in subparagraph (2)(a) of this rule.

(3) Owners and operators must maintain records in accordance with rule 335-6-15-.13(b)10, documenting compliance with paragraph (2) of this rule for as long as the UST system is used to store the regulated substance.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989; April 25, 2008; [XXXXXX](#), 2017.

335-6-15-.12 Repairs Allowed. Owners and operators of UST systems must ensure the repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

(a) Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory and in accordance with the requirements in rule 335-6-15-.47.

(b) Repairs to fiberglass-reinforced plastic underground storage tanks must be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(c) Metal underground pipe sections and fittings that have released product as a result of corrosion or other damage must be ~~replaced with permanently closed in accordance with rules 335-6-15-.34 through 335-6-15-.37 and new underground~~ piping installed in accordance with rule 335-6-15-.06(b). Repairs to nonmetallic fiberglass-reinforced plastic (rigid) or nonmetallic thermoplastic (flexible) underground piping and fittings must be made in accordance with the manufacturer's specifications. ~~Beginning on January 10, 2006, and thereafter, materials used to repair the underground piping must be in accordance with rule 335-6-15-.06(b)1. or replace nonmetallic piping must conform to the most current edition of Underwriters Laboratories Inc. "Standard for Safety for Nonmetallic Underground Piping for Flammable Liquids", "UL 971". Performance claims must be demonstrated by an evaluation properly conducted in accordance with "UL 971".~~

(d) Repairs may be made to existing underground piping only if one repair of less than 5 ft can be made to one run of underground piping within a 30 day period. Otherwise, for a given underground piping run, underground piping must be installed in accordance with rule 335-6-15-.06(b).

(e) Repaired underground storage tanks and underground piping must be tightness tested in accordance with rules 335-6-15-.17(c) and ~~rule 335-6-15-.18(b) prior to returning the underground storage tanks or underground piping to service or~~ within 30 days following the date of the completion of the repair, ~~whichever comes first, except as provided in paragraphs 1. through 3., below:~~

~~1. The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory, and certification of this inspection provided to the Department by the owner or operator and the party performing the internal inspection; or~~

~~2. The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in rule 335-6-15-.17(d) through (h); or~~

~~3. Another test method is used that is determined by the Department to be no less protective of human health and the environment than those listed above.~~

(f) Repairs to secondary containment areas of underground storage tanks and underground piping used for interstitial monitoring and to containment sumps used for interstitial monitoring of underground piping must have the secondary containment tested for tightness in accordance with the manufacturer's instructions or a code of practice developed by a nationally recognized association or independent testing laboratory within 30 days following the date of completion of the repair.

(fg) Within ~~1-month~~30 days following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with rule 335-6-15-.10(b) and (c) to ensure that it is operating properly.

(h) Within 30 days following any repair to spill or overfill prevention equipment, the repaired spill or overfill prevention equipment must be tested or inspected, as appropriate, in accordance with rule 335-6-15-.13(b)2. to ensure it is operating properly.

(gi) UST system owners and operators must maintain records in accordance with rule 335-6-15-.13(b)2. ~~of~~ for each repair for the remaining operating life of until the UST system that demonstrate compliance with the requirements of this rule is permanently closed or undergoes a change-in-service in accordance with rules 335-6-15-.34 through 335-6-15-.37.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: January 10, 2006; August 6, 2007; January 16, 2012; XXXXXX, 2017.

335-6-15-.13 Reporting and Recordkeeping. Owners and operators of UST systems, and contractors certified to install, repair or permanently close UST systems must cooperate fully with inspections, monitoring and testing conducted by the Department as well as requests for document submission, submission of engineering or technical data, operator training, and testing and monitoring performed by the owner or operator at the request of the Department.

(a) **Reporting.** Owners and operators must submit the following information to the ~~ADEM~~Department:

1. Notification for all UST systems in accordance with rule 335-6-15-.05, which includes certification of installation for new UST systems (rule 335-6-15-.05(7)) and notification when any person assumes ownership of an UST system (rule 335-6-15-.05(10));

2. Reports of all releases including suspected releases (rule 335-6-15-.20), spills and overfills (rule 335-6-15-.23(2)), and confirmed releases (rule 335-6-15-.24(2));

3. Release investigation and confirmation report (rule 335-6-15-.22), ~~C~~corrective actions planned or taken including initial abatement measures (rule 335-6-15-.25(2)), conducting a preliminary investigation (rule 335-6-15-.26(5)), free product removal (rule 335-6-15-.27(d)), conducting a secondary investigation (rule 335-6-15-.28(6)) and corrective action plan (rule 335-6-15-.29(1)); and

4. A notification before permanent closure or change-in-service (rule 335-6-15-.34(1)) and upon completion of final closure or change-in-service assessment report (rule 335-6-15-.35(1)).

5. Results of all tightness testing (rules 335-6-15-.17(c) and 335-6-15-.18(b)), cathodic protection testing (rule 335-6-15-.10(b)), spill catchment basinprevention equipment testing (rule 335-6-15-.09(1)(a)1.), containment sump testing (rule 335-6-15-.09(1)(c)6.), liquid sensor and probe testing (rules 335-6-15-.09(1)(c)4. and 335-6-15-.14(1)(c)2.), ~~and~~ leak detector testing (rule 335-6-15-.14(1)(c)3.), and overflow prevention equipment inspections (rule 335-6-15-.09(1)(b)) of a UST system within 30 days after completion ~~of testing~~ or as directed by the Department.

6. Annual summary of ~~test~~ results no later than January 31st of each year or as directed by the Department for the statistical inventory reconciliation~~any approved~~ method of leak detection ~~under~~ (rule 335-6-15-.17(h)) ~~as required by the Department.~~

7. Notification prior to UST systems switching to regulated substances containing greater than 10 percent ethanol or greater than 20 percent biodiesel (rule 335-6-15-.05(11)).

(b) **Recordkeeping.** Owners and operators of UST systems must maintain ~~the following information~~records as follows:

1. Documentation of inspection or check of operation of corrosion protection equipment (rule 335-6-15-10(d)1.);

2. Documentation of UST system repairs ~~{(rule 335-6-15-12(g))}~~;

3. Documentation of cCompliance with release detection recordkeeping requirements (rule 335-6-15-19);

4. Documentation of all tightness testing (rules 335-6-15-19(b)2.), cathodic protection testing (rule 335-6-15-10(d)2.), and leak detector testing (rule 335-6-15-19(b)1.) performed for an UST system;

5. Documentation of spill ~~catchment basin~~ prevention equipment testing (rule 335-6-15-09(1)(a)), containment sump testing (rule 335-6-15-09(1)(c)6.(i) and (ii)), liquid sensor and probe testing (rules 335-6-15-09(1)(c)4. and 335-6-15-14(1)(c)2.), and overflow prevention equipment inspections (rule 335-6-15-09(1)(b)1.) performed for an UST system- as follows:

(i) All records of testing or inspection for this equipment must be maintained for three years, and

(ii) For spill prevention equipment and containment sumps used for interstitial monitoring of underground piping not tested every three years, documentation showing that the prevention equipment is double walled and the integrity of both walls is periodically monitored must be maintained for as long as the equipment is periodically monitored.

~~56.~~ Results of the site investigation conducted at permanent closure (rule 335-6-15-37).

~~67.~~ Documentation of release detection equipment maintenance and calibrations (rule 335-6-15-19(c)).

~~78.~~ Documentation of compliance with notification requirements (rule 335-6-15-05).

~~89.~~ Documentation of operator training (rule 335-6-15-46(2)).

10. Documentation of compatibility for UST systems (rule 335-6-15-11(3));

11. Documentation of periodic walkthrough operation and maintenance inspections (rule 335-6-15-09(2)) must be maintained for one year as follows;

(i) Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries.

(c) Availability and Maintenance of Records. Owners and operators must keep the records required either:

1. At the UST site and immediately available for inspection by the Department; or

2. At a readily available alternative site and be provided for inspection to the Department upon request.

3. In the case of permanent closure, records required under rule 335-6-15-.37 may be mailed to the Department if they cannot be kept at the site or an alternative site.

(d) Current proof of underground storage tank registration shall be displayed at active retail petroleum facilities.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, §§ 22-36-3, 22-36-4.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; April 25, 2008; November 24, 2009; January 16, 2012; April 1, 2014; XXXXXX, 2017.

335-6-15-.14 General Release Detection Requirements for All UST Systems.

(1) Owners and operators of ~~new and existing~~ UST systems must provide a method, or combination of methods, of release detection that:

(a) Can detect a release from any portion of the underground storage tank and the connected underground piping that routinely contains product;

(b) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; ~~and~~

(c) Is operated and maintained, and electronic and mechanical components are tested for proper operation, in accordance with one of the following: manufacturer's instructions; a code of practice developed by a nationally recognized association or independent testing laboratory; or requirements determined by the Department to be no less protective of human health and the environment than the two options listed above. A test of the proper operation must be performed at least annually and must cover the following components and criteria:

1. Automatic Tank Gauge and Other Controllers. Beginning on October 13, 2018 and thereafter; test alarm, verify system configuration, test battery backup;

2. Probes and Sensors. Beginning on October 13, 2018 and thereafter; inspect for residual buildup, ensure floats move freely, ensure shaft is not damaged, ensure cables are free of kinks and breaks, test alarm operability and communication with controller, ensure that they are positioned properly;

3. Automatic Line Leak Detector. Test operation to meet criteria in rule 335-6-15-.18(a) by simulating a leak;

4. Vacuum Pumps and Pressure Gauges. Beginning on October 13, 2018 and thereafter; ensure proper communication with sensors and controller; and

5. Hand-held Electronic Sampling Equipment Associated with Groundwater and Vapor Monitoring. Beginning on October 13, 2018 and thereafter; ensure proper calibration and operation.

(ed) Meets the performance requirements in rules 335-6-15-.17, or rule 335-6-15-.18, or 335-6-15-.48, as applicable, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, the methods used after December 22, 1990, except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in rules

335-6-15-.17(b), (c), ~~(d), (h)~~ and ~~(e)~~, ~~or rule~~ 335-6-15-.18(a) and (b), ~~and~~ 335-6-.48 with a probability of detection of 0.95 and a probability of false alarm of 0.05.

(2) When a release detection method operated in accordance with the performance standards in rules 335-6-15-.17, ~~and rule~~ 335-6-15-.18, ~~or~~ 335-6-15-.48 indicates a release may have occurred, owners and operators must notify the Department in accordance with rule 335-6-15-.20.

~~(3) Owners and operators of all UST systems must comply with the release detection requirements of this chapter by December 22 of the year listed in Table A.~~

~~(4)~~ Any ~~existing~~ UST system that cannot apply a method of release detection that complies with the requirements of this chapter must ~~temporarily close the UST system in accordance with rule 335-6-15-.33 and must complete the closure procedures in~~ permanently close the UST system in accordance with rules 335-6-15-.34 through 335-6-15-.37 except as follows:

~~(a) For UST systems storing fuel solely for the use of emergency power generators installed before August 6, 2007, UST systems with field-constructed tanks, and UST systems with airport hydrant fuel distribution systems, paragraph (3) of this rule applies beginning on October 13, 2018 and thereafter.~~

~~(4)~~ Owners ~~or operators~~ of ~~existing~~ UST systems ~~storing fuel solely for the use of emergency power generators installed before August 6, 2007, UST systems with airport hydrant fuel distribution systems, and UST systems with field-constructed tanks~~ shall submit to the Department a description of the type of release detection method or methods which will be used at each site at which ~~an~~ the UST system is located. This description and any required plans and specifications ~~required by rule 335-6-15-.08~~ shall be submitted ~~on or before September 12, 2018~~ at least 60 days prior to the date for which release detection is required according to Table A.

~~(5)~~ Release detection on UST systems employing ~~the methods of~~ vapor monitoring, groundwater monitoring, or interstitial monitoring ~~using a secondary barrier,~~ shall be installed ~~according to~~ in accordance with the plans and specifications ~~required by rule 335-6-15-.08~~ reviewed by the Department, where required.

~~(7) Owners and operators must ensure that personnel who are familiar with the monitoring, operation, maintenance and calibration requirements of release detection equipment for an UST system are routinely present at the location of the UST.~~

TABLE A

Schedule for Phase-in of Release Detection

Year System was Installed	Year When Release Detection is Required (By Dec. 22 of the year indicated.)				
	1989	1990	1991	1992	1993
Before 1965 or date unknown	RD	P			
1965-1969		P/RD			
1970-1974		P	RD		
1975-1979		P		RD	
1980-1988		P			RD
New Tanks	Immediately upon installation beginning April 5, 1989 and thereafter.				

P = Must begin release detection for all pressurized piping in accordance with rules 335-6-15-.15(b)1. and 335-6-15-.16(b)4.

RD = Must begin release detection for tanks and suction piping in accordance with rule 335-6-15-.15(a), 335-6-15-.15(b)2., and 335-6-15-.16.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama 1975](#), § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 25, 2008; [XXXXXX, 2017](#).

335-6-15-.15 Release Detection Requirements For Petroleum UST Systems. Owners and operators of petroleum UST systems must provide release detection for underground storage tanks and underground piping as follows:

(a) USTs. USTs installed beginning on August 6, 2007 and thereafter, must perform interstitial monitoring monthly at least every 30 days in accordance with rule 335-6-15-.17(g). ~~Otherwise, USTs installed prior to August 6, 2007 must be monitored for releases at least every 30 days for releases~~ using one of the methods listed in rule 335-6-15-.17(d) through ~~(h)~~, except that:

~~1. UST systems that meet the performance standards in rules 335-6-15-.06 or 335-6-15-.07, and the monthly inventory control requirements in rule 335-6-15-.17(a) or (b), may use tank tightness testing [conducted in accordance with rule 335-6-15-.17(c)] on USTs installed or upgraded under rule 335-6-15-.07(2) until January 16, 2013;~~

~~2. UST systems that do not meet the performance standards in rules 335-6-15-.06 or 335-6-15-.07 may use monthly inventory controls (conducted in accordance with rule 335-6-15-.17(a) or (b) and annual tank tightness testing (conducted in accordance with rule 335-6-15-.17(c) until December 22, 1998, when the tank must be upgraded under rule 335-6-15-.07 or permanently closed under rule 335-6-15-.34; and~~

3~~1~~. Underground storage tanks with nominal capacity of ~~1000~~550 gallons or less, and tanks with a nominal capacity of 551 to 1,000 gallons that meet the underground storage tank diameter criteria in rule 335-6-15-.17(b), may use weekly manual tank gauging (conducted in accordance with rule 335-6-15-.17(b)).

(b) Underground Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

1. Pressurized Underground Piping. Underground piping that conveys regulated substances under pressure must:

(i) Be equipped with an automatic line leak detector conducted in accordance with rule 335-6-15-.18(a); and

(ii) Pressurized underground piping installed beginning on August 6, 2007 and thereafter, must perform ~~monthly~~ interstitial monitoring at least every 30 days in accordance with rule 335-6-15-.18(c) and as described in rule 335-6-15-.17(g). Pressurized underground piping installed before August 6, 2007 must have an annual line tightness test conducted in accordance with rule 335-6-15-.18(b) or have ~~monthly~~ monitoring conducted at least every 30 days in accordance with rule 335-6-15-.18(c).

2. Suction Underground Piping. Underground piping that conveys regulated substances under suction installed on or after April 25, 2008 must perform monthly interstitial monitoring at least every 30 days in accordance with

rule 335-6-15-.18(c) and as described in rule 335-6-15-.17(g). Underground piping that conveys regulated substances under suction installed before April 25, 2008 must either have a line tightness test conducted at least every 3 years and in accordance with rule 335-6-15-.18(b), or use a ~~monthly~~ monitoring method conducted at least every 30 days in accordance with rule 335-6-15-.18(c). No release detection is required for suction underground piping that is designed and constructed to meet the following standards:

(i) The ~~below-grade~~suction underground piping operates at less than atmospheric pressure;

(ii) The ~~below-grade~~suction underground piping is sloped so that the contents of the underground pipe will drain back into the underground storage tank if the suction is released;

(iii) Only one check valve is included in each suction line;

(iv) The check valve is located directly below and as close as practical to the suction pump; and

(v) A method is provided that allows compliance with subparagraphs (b)2.(ii) through (iv) above, to be readily determined.

(c) Any petroleum UST systems installed prior to August 6, 2007 which are: located within 1000 feet of a public water supply well; located within 300 feet of a private domestic water supply; or which are located in an area which the Department has determined to be exceptionally vulnerable to groundwater contamination, may be required to take additional measures to prevent contamination of groundwater. Such measures may include: the installation of additional release detection methods in accordance with one of the methods in rule 335-6-15-.17(d) through ~~(h)~~ for underground storage tanks and (e) through (h) for underground piping and/or the implementation of more frequent monitoring of release detection systems.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; April 25, 2008; January 16, 2012; April 1, 2014; XXXXXX, 2017.

335-6-15-.16 Release Detection Requirements For Hazardous Substance UST Systems.

Owners and operators of hazardous substance UST systems must provide containment that meets the following requirements and monitor these UST systems using rule 335-6-15-.17(g) at least every 30 days:

~~(a) Hazardous substance UST systems installed beginning August 6, 2007 and thereafter must meet the release detection requirements for petroleum UST systems in rule 335-6-15-.15.~~

~~(b) By December 22, 1998, all existing hazardous substance UST systems must have secondary containment and meet the following release detection requirements:~~

~~1.(a) Secondary containment UST systems must be designed, constructed and installed to:~~

~~(i)1. Contain regulated substances released/leaked from the tank system/primary containment until they are detected and removed;~~

~~(ii)2. Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and~~

~~(iii)3. Be checked for evidence of a release/leak at least every 30 days.~~

~~2.(b) Double-walled underground storage tanks must be designed, constructed, and installed to:~~

~~(i)1. Contain a release/leak from any portion of the inner underground storage tank within the outer wall; and~~

~~(ii)2. Detect the failure of the inner wall.~~

~~3.(c) External underground storage tank liners (including vaults) must be designed, constructed, and installed to:~~

~~(i)1. Contain 100 percent of the capacity of the largest underground storage tank within its boundary;~~

~~(ii)2. Prevent the interference of precipitation of groundwater intrusion with the ability to contain or detect a release of regulated substances; and~~

~~(iii)3. Surround the underground storage tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).~~

~~4.(d) Underground piping must be equipped with secondary containment that satisfies the requirements of subparagraph (b)1. above this rule (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with rule 335-6-15-.18(a).~~

~~5-~~(c) For hazardous substance UST systems installed before August 6, 2007, other methods of release detection may be used if owners and operators:

(i)1. Demonstrate to the Department that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in rule 335-6-15-.17(d) through (h) can detect a release of petroleum;

(ii)2. Provide information to the Department on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

(iii)3. Obtain approval from the Department to use the alternate release detection method before the installation and operation of the new UST system.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: August 6, 2007; ~~XXXXXX~~, 2017.

335-6-15-.17 Methods of Release Detection for Underground Storage Tanks. Each method of release detection for underground storage tanks used to meet the requirements of rule 335-6-15-.15 must be conducted in accordance with the applicable requirements (a) through (h) of this rule. The Department may make a determination as to the capability of release detection equipment to meet the requirements of this rule.

(a) Inventory Control. Product inventory control (or another test of equivalent performance) must be conducted ~~monthly~~ at least every 30 days to detect a loss or gain of at least 1.0 percent of flow-through plus 130 gallons on a ~~monthly~~ 30 day basis in the following manner:

1. Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the underground storage tank are recorded each operating day;

2. The equipment used is capable of measuring the level of product over the full range of the underground storage tank's height to the nearest one-eighth of an inch;

3. The regulated substance inputs are reconciled with delivery receipts by measurement of the underground storage tank inventory volume before and after delivery;

4. Deliveries are made through a drop tube that extends to within one foot of the underground storage tank bottom;

5. Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

6. The measurement of any water or phase separated entrained water level in the bottom of the underground storage tank is made to the nearest one-eighth of an inch at least once ~~a month~~ every 30 days.

(b) Manual Tank Gauging. Manual tank gauging must meet the following requirements:

1. Underground storage Tank liquid level measurements are taken at the beginning and ending of ~~the~~ a period using the appropriate minimum duration of test value in the table shown in subparagraph (b)4. ~~Below of this rule,~~ during which no liquid is added to or removed from the underground storage tank;

2. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

3. The equipment used is capable of measuring the level of product over the full range of the underground storage tank's height to the nearest one-eighth of an inch;

4. A leak~~release~~ is suspected and subject to the requirements of rules 335-6-15-.20 through 335-6-15-.23 if the variation between beginning and ending measurements exceed the weekly or ~~monthly~~30 day standards in the following table:

Nominal Underground Storage Tank Capacity	Minimum Duration of Test	Weekly Standard (one test)	Monthly30 day Standard (average of 4 tests)
up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when <u>underground storage</u> tank diameter is 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (when <u>underground storage</u> tank diameter is 48")	58 hours	12 gallons	6 gallons

5. Only underground storage tanks of ~~1000~~550 gallons or less nominal capacity, and underground storage tanks with a nominal capacity of 551 to 1,000 gallons that meet the underground storage tank diameter criteria in the table in above subparagraph (b)4. of this rule, may use this as a method of release detection.

(c) Tank Tightness Testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the underground storage tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, underground storage tank deformation, evaporation or condensation, and the location of the water table.

1. The test must be performed by an individual having current certification of training from the manufacturer of the test method.

2. Unless waived by the Department the report of tightness testing of an underground storage tank must state whether or not the water table was above the base of the underground storage tank excavation pit at the time of testing and the method by which this determination was made. If it is above the base, the specific elevation of the water table shall be determined and recorded in the test report.

(d) Automatic Tank Gauging. Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

1. The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the underground storage tank that routinely contains product; ~~and~~

2. ~~The automatic tank gauging equipment must meet the inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of rule 335 6 15-17 subparagraph (a)6. of this rule (or other test of equivalent performance); and-~~

3. The test must be performed with the equipment operating in one of the following modes:

(i) In-tank static testing conducted at least once every 30 days; or

(ii) Continuous in-tank leak detection operating on an uninterrupted basis or operating within a process that allows the equipment to gather incremental measurements to determine the leak status of the underground storage tank at least once every 30 days.

(e) Vapor Monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following technical and procedural requirements:

1. A vapor monitoring plan with any required plans and specifications, must be submitted to the Department for review by the Department. The plan must be sufficient to demonstrate compliance with the requirements of subparagraphs (e)2. through 8. Below of this rule or modifications may be required by the Department.

2. The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

3. The stored regulated substance, or a tracer compound placed in the ~~U~~ST system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the underground storage tank. The Department may require testing of a vapor monitoring system with a tracer compound where a system's reliability is in question.

4. The measurement of vapors by the monitoring device is not rendered inoperative by the groundwater, rainfall, or soil moisture or other known interference's so that a release could go undetected for more than 30 days;

5. The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the UST system based upon information, to include volatile hydrocarbon concentrations, collected throughout the excavation zone where this method is proposed for use.

6. The vapor monitors and vapor monitoring wells are designed and operated in a manner sufficient to: detect any significant increase in concentration above background of the regulated substance stored in the ~~U~~ST system, a component or components of that substance, or a tracer compound placed in the ~~U~~ST system, and provide a vapor sample to the

vapor monitor that is representative of the concentration in the excavation zone. Construction details shall comply with subparagraphs [\(e\)7. through 13.](#) ~~Below of~~ [this rule.](#)

7. The well casing shall be constructed of a material which is compatible with the substance stored; and which has sufficient strength to prevent structural failure.

8. The well casing shall be a minimum of 2 inches in diameter and shall be large enough for the chosen monitoring device to be installed or operated properly in the well. A low permeability backfill may require the use of larger diameter casing.

9. The length and slot size of the slotted portion of the casing should be sufficient to obtain a representative vapor sample in accordance with the depth of excavation zone and site hydrogeology.

10. The well screen should be surrounded by a clean filter pack which allows for passage of vapors while preventing passage of materials which could clog the well screen. The filter pack should extend 1 to 2 feet above the well screen.

11. An annular seal shall extend up from the top of the filter pack for 1 to 2 feet.

12. The well annulus shall be grouted from the top of the bentonite to the ground surface.

13. Monitoring wells shall have a watertight cap or enclosure at the ground surface.

14. In the UST excavation zone, the site is assessed to ensure compliance with the requirements in subparagraphs (e)-2. through 5. of this rule and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the [underground storage tank](#) that routinely contains product;

15. Vapor monitoring wells are clearly marked with the wording "NOT FOR DELIVERIES" or other sufficient language and locked to avoid unauthorized access and tampering. Monitoring wells which are located in an area subject to traffic must be equipped with enclosures which will not be damaged by normal traffic.

16. In the event of permanent closure of the UST system, all monitoring wells shall be closed according to a method acceptable to the Department, unless otherwise directed by the Department.

17. If a monitoring well is determined to be improperly constructed, closure may be required according to a method acceptable to the Department.

(f) Groundwater Monitoring. Testing or monitoring for liquids on the groundwater must meet the following technical and procedural requirements:

1. A groundwater monitoring plan with any required plans and specifications, must be submitted for review. The plan must be sufficient to demonstrate that the requirements of [subparagraphs \(f\)2. through 20.](#) of this [subparagraph rule](#) will be complied with or modifications may be required by the Department.

2. The regulated substance stored is immiscible in water and has a specific gravity of less than one;

3. The level of background contamination in or near the excavation zone will not interfere with the method used to detect releases from the UST system based upon information collected throughout the excavation zone and in the proposed area of well placement if not in the excavation zone;

4. Groundwater is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

5. Monitoring wells used for the purpose of release detection by groundwater monitoring shall be constructed according to the requirements of [subparagraphs \(f\)6. through 15. and 20.](#) [Below of this rule;](#)

6. The well casing shall be a minimum of 2 inches in diameter when used for release detection, but shall be 4 inches in diameter if installed for corrective action. All wells shall be constructed with only threaded connections between sections;

7. The well casing shall be constructed of a material which is compatible with the substance stored; and which has sufficient strength to prevent structural failure;

8. The well casing shall be slotted from the bottom to at least two feet above the normal annual high water table where the depth to water will allow, and shall be designed to prevent migration of natural soils or filter pack into the well and to allow entry of a regulated substance on the water table into the well under both high and low groundwater conditions;

9. The well casing shall extend at least five feet below the water level at the time of drilling but no deeper than 25 feet;

10. The well annulus shall be backfilled with an appropriate clean filter pack adjacent to the slotted casing;

11. An annular seal shall extend from the top of the filter pack for 2 to 5 feet, where the depth to water will allow;

12. The well annulus shall be grouted from the top of the bentonite seal to the ground surface;

13. Monitoring wells shall have a watertight enclosure or cap with a grouted collar at the ground surface;

14. Monitoring wells shall be developed upon drilling until the water is clear and relatively sand free by over pumping, bailing, or surging with compressed air;

15. Monitoring wells shall be as close to the excavation zone as is technically feasible. If a monitoring well is located within the excavation zone, the base of the excavation zone shall not be penetrated;

16. If a continuous monitoring device is not used, manual monitoring shall consist of removal of fluid from the well, using a bailer, or a sampler of similar design. The fluid shall be taken from the surface of the water table. The fluid shall:

(i) Be poured into a clean, clear glass container kept for the purpose, and examined for signs of an oily layer or odor of pollutant; or

(ii) Be tested at the site; or

(iii) Be sent to a laboratory and tested.

17. A monitoring well must contain at least 6 inches of water or a sufficient depth to allow a sample to be obtained using a sampler selected in accordance with subparagraph (f)156. of this rule. If this requirement cannot be met for more than 30 days, the Department may require the monitoring well to be replaced, or another method of monitoring to be proposed to the Department for review;

18. The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the groundwater in the monitoring wells;

19. Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in subparagraphs (f)2. through 15. Above of this rule and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the UST system that routinely contains product. This is to include an evaluation of the direction of the groundwater gradient at a site;

20. Monitoring wells are clearly marked with the wording "NOT FOR DELIVERIES" or other sufficient language and locked to avoid unauthorized access and tampering. Monitoring wells which are located in an area subject to traffic must be equipped with enclosures which will not be damaged by normal traffic;

21. In the event of permanent closure of the UST system, all monitoring wells shall be closed according to a method acceptable to the Department; and

22. If a monitoring well is determined by the Department to be improperly constructed, closure may be required according to a method acceptable to the Department.

23. Existing groundwater monitoring wells which were completed prior to April 5, 1989 will be authorized for continued use if the Department determines that the minimum criteria of the federal UST regulations for monitoring wells are satisfied and the existing wells do not pose a threat of groundwater contamination due to poor construction.

(g) Interstitial Monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the underground storage tank that routinely contains product and also meets one of the following requirements:

1. For double-walled UST systems, the sampling or testing method can detect a releaseleak through the inner wall in any portion of the underground storage tank that routinely contains product;

2. For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can in the determination of the Department, detect a releaseleak between the UST system and the secondary barrier;

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10^{-6} cm/sec for the regulated substance stored) to direct a releaseleak to the monitoring point and permit its detection;

(ii) The barrier is compatible with the regulated substance stored so that a releaseleak from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(iii) For cathodically protected underground storage tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(iv) The groundwater, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(v) The site is assessed to ensure that the secondary barrier is always above the groundwater and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

(vi) Monitoring wells are clearly marked with the wording "NOT FOR DELIVERIES" or other sufficient language and locked to avoid unauthorized access and tampering; and when located in areas which are subject to traffic must be equipped with enclosures which will not be damaged by normal traffic; and

(vii) Monitoring wells extend to within 6 inches of the secondary barrier but shall not contact the barrier; and

3. For underground storage tanks with an internally fitted liner, an automated device can detect a ~~release~~leak between the inner wall of the underground storage tank and the liner, and the liner is compatible with the substance stored.

(h) Statistical inventory reconciliation. Release detection methods based on the application of statistical principles to inventory data similar to those described in paragraph (a) of this rule must meet the following requirements:

1. Report a quantitative result with a calculated leak rate;

2. Be capable of detecting a leak rate of 0.2 gallon per hour or a release of 150 gallons within 30 days;

3. Use a threshold that does not exceed one-half the minimum detectible leak rate; and

4. Meet the inventory control requirements of subparagraphs (a)1. through 6. of this rule.

(hi) Other methods. Any other type of release detection method, or combination of methods may be approved by the Department if:

1. It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within ~~a month~~30 days with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

2. The owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subparagraphs (c) through (h) above. In comparing methods, the Department shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the ADEM Department on its use to ensure the protection of human health and the environment.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama 1975, § 22-36-3](#).

History: April 5, 1989.

Amended: August 6, 2007; April 25, 2008; January 16, 2012; April 1, 2014;
[XXXXXX, 2017](#).

335-6-15-.18 Methods of Release Detection for Underground Piping.

Each method of release detection for underground piping used to meet the requirements of rule 335-6-15-.15 must be conducted in accordance with the following:

(a) Automatic line leak detectors. Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through underground piping may be used ~~only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. Systems which only trigger an audible or visual alarm must be modified to also include the ability to restrict or shut off the flow of regulated substances prior to~~ Beginning August 6, 2008 and thereafter, methods which alert the operator to the presence of a leak by triggering an audible or visual alarm may be used only if they also restrict or shut off the flow of regulated substances through underground piping; except beginning [effective date of rule], emergency power generator UST systems may use audible or visual alarm methods without restricting or shutting off flow. All automatic line leak detector methods must detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with ~~the manufacturer's requirements~~ rule 335-6-15-.14(1)(c).

(b) Line tightness testing. A periodic test of underground piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure. ~~When Thea~~ test method is required by the manufacturer to be performed manually, the test must be performed by an individual having current certification of training from the manufacturer of the test method.

(c) Applicable Underground storage tank methods applicable to piping. ~~Except as described in rule 335-5-15-.15(a), a~~ Any of the methods in rule 335-6-15-.17(e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: August 6, 2007; April 1, 2014; XXXXXX, 2017.

335-6-15-.19 Release Detection Recordkeeping. All UST system owners and operators must maintain records in accordance with rule 335-6-15-.13 demonstrating compliance with all applicable requirements of this chapter. These records must include the following:

(a) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer in accordance with rule 335-6-15-.14(1)(d), must be maintained for ~~five~~ years from the date of installation. Not later than October 13, 2018, records of site assessments required under rule 335-6-15-.17(e)14. and (f)19. must be maintained for as long as the release detection methods are used. Records of site assessments developed on or after October 2, 2003 must be signed by a professional engineer or professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline acceptable to the Department;

(b) The results of any sampling, testing, or monitoring must be maintained for at least ~~one~~ year except as follows:

1. The results of annual release detection equipment operation testing conducted in accordance with rule 335-6-15-.14(1)(c) must be maintained for three years. At a minimum, the results must list each component tested, indicate whether each component tested meets criteria in rule 335-6-15-.14(1)(c) or needs to have action taken, and describe any action taken to correct an issue; and

2. ~~that t~~The results of tank tightness testing conducted in accordance with rule 335-6-15-.17(c) and line testing conducted in accordance with rule 335-6-15-.15(b)2 must be retained until the next test is conducted; and

3. The results of tank tightness testing, line tightness testing, and vapor monitoring using a tracer compound placed in the UST system conducted in accordance with rule 335-6-15-.48(2)(d) and (e) must be retained until the next test is conducted.

4. The results of statistical inventory reconciliation (SIR), conducted in accordance with rule 335-6-15-.17(h) must be retained until the next test is conducted.

(c) Written documentation of all calibration, and maintenance, and repair of release detection equipment in accordance with rule 335-6-15-.14(1)(b) and (c) must be maintained for at least one year after the servicing calibration and maintenance work is completed. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation as long as the equipment is used for detection of releases.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989; ~~April 1, 2014~~.

Amended: [April 1, 2014](#); ~~XXXXXX~~, [2017](#).

335-6-15-.20 Reporting of Suspected Releases. Owners and operators of UST systems must report suspected releases to the Department immediately upon discovery but in no case later than 24 hours following discovery, and follow the procedures in rule 335-6-15-.22 for any of the conditions identified in subparagraphs (a) through (c) below of this rule.

(a) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area including but not limited to the presence of free or dissolved product or vapors in soils, groundwater, basements, sewer and utility lines, nearby surface water or a well contaminated with a regulated substance.

(b) Unusual operating conditions observed by owners and operators (including but not limited to the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, ~~or an unexplained presence of water in the underground storage tank, or liquid in the interstitial space of secondarily contained systems~~), ~~unless product dispensing equipment is found to be defective but not leaking, and is immediately repaired or replaced.:~~

1. The UST system equipment or component is found not to be releasing regulated substances to the environment;

2. Any defective UST system equipment or component is immediately repaired or replaced; and

3. For secondarily contained UST systems, except as provided for in rule 335-6-15-.17(g)2.(iv), any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed.

(c) Monitoring results, including investigation of an alarm, from a release detection method required under rules 335-6-15-.15 and 335-6-15-.16 that indicate a release may have occurred unless:

1. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial results; ~~or~~

2. The leak is contained in the secondary containment; and

(i) Except as provided for in rule 335-6-15-.17(g)2.(iv), any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed, and

(ii) Any defective system equipment or component is immediately repaired or replaced;

2.3. In the case of inventory control described in rule 335-6-15-.17(a), where the amount of calculated loss or gain for a month the previous 30 day

period is less than or equal to 1.0 percent of ~~monthly~~30 day flow-through plus 130 gallons- or the investigation determines no release has occurred; or

4. The alarm was investigated and determined to be a non-release event (for example, from a power surge or caused by filling the underground storage tank during release detection testing).

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989; ~~January 16, 2012.~~

Amended: January 16, 2012; XXXXXX, 2017.

335-6-15-.22 Release Investigation and Confirmation Steps. Unless corrective action is initiated in accordance with rules 335-6-15-.24 through 335-6-15-.31, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under rule 335-6-15-.20 within 7 days and submit the results to the Department within 10 days, or another reasonable time period specified by the Department, using either the following steps or another procedure approved by the Department:

(a) System test. Owners and operators must conduct tests (according to the requirements for tightness testing in rules 335-6-15-.17(c) and 335-6-15-.18(b) ~~that or as appropriate, secondary containment testing described in rule 335-6-15-.12(f)~~).

1. The test must determine whether:

(i) ~~a~~ leak exists in that portion of the underground storage tank, or the attached underground delivery piping, or both.

(ii) A breach of either wall of the secondary containment has occurred.

~~2.~~ If the UST system test confirms a leak into the interstice or a release, owners and operators must immediately temporarily close the UST system in accordance with rule 335-6-15-.33(1)(c), repair the UST system in accordance with rule 335-6-15-.12, replace or upgrade permanently close the UST system, in accordance with rules 335-6-15-.34 through 335-6-15-.37. In addition, owners and operators must begin corrective action if the test results for the system, (underground storage tank, and/or underground delivery piping) indicate that a leak release exists.

~~3.~~ The Department may release an owner or operator from any further investigation requirements if the underground storage tank tests tight after minor repairs to that portion of the underground storage tank that does not routinely contain product.

~~3.~~ Further investigation is not required if the test results for the system, (underground storage tank, and/or underground delivery piping) do not indicate that a leak release exists and if environmental contamination is not the basis for suspecting a release.

~~4.~~ Owners and operators must conduct a preliminary investigation as described in subparagraph (b) of this rule if the test results for the system, (underground storage tank, and/or underground delivery piping) do not indicate that a leak release exists but environmental contamination is the basis for suspecting a release.

(b) Preliminary investigation. Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST system site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill,

the depth of groundwater, and other factors appropriate for identifying the presence and source of the release. Specific requirements for a preliminary investigation are included in rule 335-6-15-.26.

1. If in the determination of the Department the results of the preliminary investigation indicate that a release has occurred, owners and operators must ~~and~~ initiate corrective action in accordance with rules 335-6-15-.24 through 335-6-15-.31. The Department may require a secondary investigation to be performed.

2. If in the determination of the Department the results of the preliminary investigation do not indicate that a release has occurred, further investigation is not required.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 1, 2014; [XXXXXX](#), 2017.

335-6-15-.24 Initial Release Response.

(1) Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of rules 335-6-15-.24 through 335-6-15-.31 except for UST systems excluded under rule 335-6-15-.03(2) and UST systems subject to corrective action requirements under division 14 of the ADEM Administrative Code.

(2) Upon confirmation of a release in accordance with rule 335-6-15-.22 or after a release is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by the Department:

(a) Report the release to the Department (notification by telephone is acceptable);

(b) Take immediate action to prevent any further release of the regulated substance into the environment; and

(c) Identify and mitigate fire, explosion, and vapor hazards.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 25, 2008; XXXXXX, 2017.

335-6-15-.25 Initial Abatement Measures and Preliminary Investigation.

(1) Upon confirmation of a release in accordance with rule 335-6-15-.22 or after a release is identified in any other manner, unless directed to do otherwise by the Department, owners and operators must perform the following abatement measures:

(a) Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;

(b) Visually inspect any aboveground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater;

(c) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);

(d) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable ADEM and local requirements;

(e) Perform a preliminary investigation in accordance with rule 335-6-15-.26;

(f) Investigate to determine the possible presence of free product, and if found, begin free product removal as soon as practicable and in accordance with rule 335-6-15-.27. Where free product is present, investigative and corrective actions must be initiated in accordance with rules 335-6-15-.24 through 335-6-15-.31;

(g) Where dissolved groundwater contamination is determined to occur, for example, the contamination of an on-site well with a regulated substance, investigative and corrective actions must be initiated in accordance with rules 335-6-15-.24 through 335-6-15-.31.

(2) Within 20 days after release confirmation, or within another reasonable period of time determined by the Department, owners and operators must submit a report of initial response to the Department summarizing the initial abatement steps taken under paragraph (1) ~~above of this rule~~, the nature and estimated quantity of the regulated substance lost, information regarding the presence of free or dissolved product, tightness testing results where applicable, or any other resulting information or data.

Author: Sonja Massey, [Curt Johnson, Lee Davis](#).

Statutory Authority: [Code of Alabama 1975, § 22-36-3](#).

History: April 5, 1989.

Amended: October 2, 2003; [XXXXXX, 2017](#).

335-6-15-.26 Preliminary Investigation Requirements.

(1) Unless directed to do otherwise by the Department, or under the conditions identified in paragraph (2) of this rule, owners and operators required to perform a preliminary investigation must obtain and provide information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in rule 335-6-15-.25. This information must include, but is not necessarily limited to the following:

(a) Type of surrounding population, e.g., urban, rural, residential;

(b) Results of a well inventory within 1000 feet of the site which includes the location, and where available, information on the depth and elevation and ownership of each well;

(c) Location of any public water supply wells which are within ~~one~~ one mile of the site;

(d) A description of the hydrogeologic environment, including type and nature of geologic materials, location of surface waters, surrounding land and water users, and the location of all underground utilities, water lines, sewers or other conduits;

(e) A determination of the uppermost aquifer and an initial evaluation of the potential for hydraulic interconnection with lower aquifers. This evaluation at this stage may be made based upon the results of site soil sampling and borings and available literature data-;

(f) Results of soil sampling collected from the area which is most likely to have been affected by a release of a regulated substance-;

1. A sufficient number of soil samples shall be collected to accurately represent the area and depths affected by a release;

2. Soil sampling shall be performed to a depth which adequately represents the zone most likely to have been contaminated by a release-; and

3. Soil sampling shall be sufficient to determine if free product is present on the water table.

(g) Where soils are encountered which have a total petroleum hydrocarbon concentration of greater than 100 ppm and such soils extend to within 5 feet of the seasonal high water table, groundwater samples shall be collected and analyzed at a minimum of one up-gradient and three down-gradient locations unless directed to do otherwise by the Department.

(2) Upon approval by the Department, the following procedures may be used in satisfying the requirement for a preliminary investigation or closure assessment when the underground storage tank excavation pit is completely open and available for representative sample collection. If the conditions

identified in [subparagraph \(2\)\(d\)1. and 2.](#) [Below of this rule](#) cannot be met; however, the preliminary investigation requirements of paragraph (1) [of this rule](#) must be complied with, unless directed to do otherwise by the Department.

(a) Soil samples shall be collected from the sides and base of the [underground storage](#) tank pit. At least one sample shall be collected from each side of the pit and at least one sample from the pit bottom for every [underground storage](#) tank that was present in the excavation. Side samples shall be collected from the lowest one-third of the [underground storage](#) tank wall. One sample per 10 lineal ~~feet~~ feet shall be collected from the base of [underground](#) piping trenches. Samples from the [underground storage](#) tank pit sides, base, and [underground](#) piping trenches shall be representative of the area being sampled.

(b) Analyze soil samples for the presence of total petroleum hydrocarbons.

(c) Determine the elevation of the groundwater table. Information on the elevation of the water table may be obtained from a boring located adjacent to the [underground storage](#) tank pit or from a nearby location. Water table elevation data may also be obtained when topographical features provide surface indications of the water table, and this data is substantiated by literature values.

(d) If the conditions identified in 1. and 2. [in the table](#) below are met, the Department may consider the investigation to be complete and no further action will be required. If the conditions identified in 1. and 2. [in the table](#) below cannot be met, the Department may require additional investigative actions or a preliminary investigation, in accordance with paragraph (1) of this rule, to be conducted.

Total Petroleum Hydrocarbon Concentration	Depth to Groundwater
1. 100 ppm or less for each sample	5 feet or more below base of underground storage tank excavation
2. 10 ppm or less for every sample	No restrictions

(3) Monitoring wells must be constructed in a manner acceptable to the Department or the Department may require them to be properly closed. Except where cross-contamination of aquifers is of concern, general construction details for monitoring wells should conform to the requirements of rules 335-6-15-.17(f)6. through 8. ~~and~~ 10. through 14. and 20., and where cross-contamination is of concern, monitoring well construction details must be reviewed in advance by the Department. The Department may require modification of proposed construction details.

(4) All samples shall be analyzed for parameters which are appropriate to the nature of the stored substance and according to the methods specified in rule 335-6-15-.32.

(5) Within 60 days of release confirmation, or notification by the Department that a Preliminary Investigation is required, under the conditions of paragraph (1) of this rule, the owners and operators must submit the information collected in compliance with this rule to the Department in a manner that demonstrates its applicability and technical adequacy, or in a format and according to a schedule required by the Department. If the procedures under paragraph (2) of this rule apply, the results of the investigation must be submitted within 45 days of release confirmation or notification by the Department that an investigation is required.

(6) Preliminary investigation and closure site assessments must be performed in accordance with accepted geologic practices by a licensed professional geologist or registered professional engineer experienced in hydrogeologic investigations.

(7) Upon review of the results of the Preliminary Investigation, the Department may require a Secondary investigation to be completed in accordance with rule 335-6-15-.28.

(8) The Department may require additional sampling and analyses to be performed if it is determined that the number or location of samples, or methods used in the analysis of such samples are not sufficient to characterize the area and soil depths most likely to have been contaminated by a release.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; [XXXXXX](#), [2017](#).

335-6-15-.27 Free Product Removal. At sites where investigations indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the Department while continuing, as necessary, any actions initiated under rules 335-6-15-.24 through 335-6-15-.26 or preparing for actions required under rules 335-6-15-.28 and 335-6-15-.29. In meeting the requirements of this section, owners and operators must:

(a) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, state of Alabama and federal regulations;

(b) Use abatement of free product migration and removal of free product in a reasonable period of time as a minimum objective for the design of the free product removal system;

(c) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(d) Unless directed to do otherwise by the Department, prepare and submit to the Department, within 45 days after confirming a release, a free product removal report that provides at least the following information:

~~(1.)~~ The name of the person(s) responsible for implementing the free product removal measures;

~~(2.)~~ The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

~~(3.)~~ The type of free product recovery system used;

~~(4.)~~ Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

~~(5.)~~ The type of treatment applied to, and the effluent quality expected from, any discharge;

~~(6.)~~ The steps that have been or are being taken to obtain necessary permits for any discharge; and

~~(7.)~~ The disposition of the recovered free product.

(e) The Department may require additional measures to be taken to achieve free product recovery, if it is determined that the objectives of subparagraphs (a) through (c) of this rule are not being accomplished.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama 1975, § 22-36-3](#).

History: April 5, 1989; ~~April 1, 2014~~.

Amended: [April 1, 2014](#); [XXXXXX, 2017](#).

335-6-15-.28 Secondary Investigation Requirements.

(1) When required in order to determine the full lateral and vertical extent and location of: soils contaminated by the release; the presence of free product; and the presence and concentrations of dissolved product contamination in the groundwater, the Department may require owners and operators to conduct a secondary investigation of the release site. This investigation must include the surrounding area possibly affected by the release if any of the following conditions exist:

(a) There is evidence that groundwater wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);

(b) Free product is found to need recovery in compliance with rule 335-6-15-.27;

(c) There is evidence that contaminated soils may be in contact with groundwater (e.g., as found during conduct of the initial response measures or investigations required under rules 335-6-15-.24 through 335-6-15-.26); and

(d) The Department requests an investigation, based on the potential effects of contaminated soil or groundwater on nearby surface water and groundwater resources.

(2) The investigations required by paragraph (1) of this rule shall:

(a) Be sufficient to define the full lateral and vertical extent of soil and groundwater contamination;

(b) Determine the rate and direction of pollutant and groundwater migration through the use of piezometers and/or monitoring wells;

(c) Include results of groundwater sampling and analysis from monitoring wells at one background and a minimum of three down-gradient locations. The location of the down-gradient wells should take into consideration the direction of groundwater flow and should be placed so as to define the plume of contamination and the outer limits of the plume of contamination;

(d) Include a determination of the uppermost aquifer and an initial evaluation of the potential for hydraulic interconnection with lower aquifers. This evaluation may be made based upon the results of site soil sampling and borings and available literature data but may also require installation of wells into underlying aquifers. If this becomes necessary proper well construction techniques must be used to ensure that wells do not serve as conduits for contamination of underlying aquifers;

(e) Include analytical results for soil and groundwater samples for parameters which are appropriate to the nature of the stored substance and according to methods specified in rule 335-6-15-.32; and

(f) Provide sufficient information for the selection and design of appropriate corrective actions.

(3) The Department may require additional sampling and analyses to be performed if it is determined that the number or location of samples, or methods used in the analysis of such samples, are not sufficient to define the full lateral and vertical extent of soil and groundwater contamination.

(4) Owners and operators must submit a plan of study sufficient to accomplish the objective of paragraphs (1) and (2) of this rule together with a schedule of implementation. The owners and operators shall make any modifications to the plan of study deemed necessary by the Department.

(5) The plan of study must contain construction details for monitoring wells. Monitoring wells must be constructed in a manner acceptable to the Department or the Department may require them to be properly closed. Except where cross-contamination of aquifers is of concern, general construction details for monitoring wells should conform to the requirements of rule 335-6-15-.17(f)6. through 8., ~~and~~ 10. through 14. and 20. The Department may require modification of proposed construction details.

(6) Owners and operators must submit the information collected under paragraphs (1) through (3) of this rule within the schedule submitted in [paragraph \(4\) above of this rule](#) or in accordance with a schedule established by the Department.

(7) The secondary site investigation must be performed in accordance with accepted geologic practices by a licensed professional geologist or registered professional engineer experienced in hydrogeologic investigations.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; August 6, 2007; [XXXXXX, 2017](#).

335-6-15-.29 Corrective Action Plan.

(1) At any point after reviewing the information submitted in compliance with rules 335-6-15-.24 through 335-6-15-.28, the Department may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the Department. Alternatively, owners and operators may, after fulfilling the requirements of rules 335-6-15-.24 through 335-6-15-.28, choose to submit a corrective action plan for responding to contaminated soil and groundwater. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the Department, and must modify their plan as necessary to meet the requirements of the Department for achieving this standard.

(2) The corrective action plan must:

(a) Address the full lateral and vertical extent of soil and groundwater contamination;

(b) Address mitigation of soil contamination either through soil removal, or treatment in place, or another method which is determined by the Department to be no less protective of health and the environment, to standards identified in rule 335-6-15-.30;

(c) Provide for removal of free product in an effective and timely manner;

(d) Provide for treatment of dissolved groundwater contamination in an effective and timely manner to standards identified in rule 335-6-15-.30;

(e) Provide a rationale for selection of the proposed corrective actions and design criteria which address such items as equipment selection, flow rates and pumping rates;

(f) Address measures necessary to meet local, state [of Alabama](#) or federal requirements for control of surface or air discharges or disposal of soil; [and](#)

(g) Include a proposed schedule of implementation and monitoring plan.

(3) The Department will approve the corrective action plan only when satisfied that implementation of the plan provides for measures considered adequate to protect human health, safety, and the environment. In making this determination, the Department should consider the following factors as appropriate:

(a) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

(b) The hydrogeologic characteristics of the site and the surrounding area;

(c) The findings of the preliminary and secondary investigations;

(d) The proximity, quality, and current and future uses of nearby surface water and groundwater;

(e) The potential effects of residual contamination on nearby surface water and groundwater;

(f) An exposure assessment conducted in accordance with rule 335-6-15-.30; and

(g) Any information assembled in compliance with this subpart.

(4) Upon approval of the corrective action plan or as directed by the Department, owners and operators must implement the plan, including modification to the plan made by or required to be made by the Department. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the Department.

(5) If at any time, the Department determines that the implementation of corrective actions are not achieving adequate protection of human health and the environment, the Department may require additional measures to be taken.

(6) Owners and operators shall continue implementation of the corrective action plan until released in writing from this responsibility by the Department.

(7) Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and groundwater before the corrective action plan is approved provided that they:

(a) Notify the Department of their intention to begin cleanup;

(b) Comply with any conditions imposed by the Department, including halting cleanup or mitigating adverse consequences from cleanup activities; and

(c) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the Department for approval.

(8) Upon conclusion of investigative monitoring, or corrective actions at a site, the Department may require any or all monitoring wells to be properly closed.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama 1975](#), § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 25, 2008; [XXXXXX](#), [2017](#).

335-6-15-.30 Corrective Action Requirements. The following requirements shall apply when establishing risk based corrective action limits applicable to the cleanup of soil and ~~ground water~~ groundwater contamination resulting from releases from underground storage tanks regulated under this chapter.

(a) A risk based corrective action process will be used to establish site specific corrective action limits protective of human health and the environment. Corrective action limits, institutional controls, or a combination thereof, shall be adequate to support onsite and surrounding property use consistent with existing and reasonable future use and achieve and maintain compliance with all applicable environmental standards for air, soil and waters of the state of Alabama. The only exception to the use of a risk based corrective action process shall be that as described in rule 335-6-15-.30(f).

(b) Free product shall be removed to the maximum extent practicable.

(c) A risk based corrective action process requires the specification of a target risk level for carcinogenic effects. The estimated individual excess lifetime cancer risk (IELCR) will be:

1. For constituents resulting from releases of petroleum or petroleum-based regulated substances, as regulated under this chapter, the estimated IELCR level used to establish site specific corrective action limits shall be 10^{-5} , for all constituents of concern, for each exposure pathway. If corrective action to a 10^{-5} risk level is determined by the Department to be infeasible, and in the determination of the Department, appropriate institutional controls are implemented, the Department may approve a site-specific corrective action limit that represents a risk level equal to but not greater than 10^{-4} ; and

2. For constituents resulting from releases of non-petroleum regulated substances, as regulated under this chapter, the estimated IELCR used to establish site specific corrective action limits shall be no less than 10^{-6} and no greater than 10^{-5} . If corrective action to a 10^{-6} to 10^{-5} risk level is determined by the Department to be infeasible, and in the determination of the ~~d~~Department, appropriate institutional controls are implemented, the Department may approve a site specific corrective action limit that represents a risk level equal to but not greater than 10^{-4} .

(d) For non-carcinogenic substances, a hazard quotient of one will be used.

(e) For the ~~ground water~~ groundwater ingestion pathway, for constituents for which a Maximum Contaminant Level, MCL, has been established, the corrective action limit shall be set equal to the MCL. For carcinogenic constituents for which a Maximum Contaminant Level has not been established, the estimated IELCR shall be 10^{-6} .

(f) For hydrogeologic settings, where the models used in the risk based evaluations are considered in the determination of the Department, not to be representative of, and thus not protective of, a given hydrogeologic setting, the

Department may require implementation of a corrective action plan to continue until the concentration of dissolved contaminants has leveled off. Leveling off shall mean that the graph of the contaminant concentration versus time fits a curve generally defined by the equation $C = C_f + C_o e^{-kt}$, and the slope of the final portion of the curve approaches zero. Alternatively, the Department may approve the use of a statistical method for use in demonstrating that contaminant concentrations are no longer decreasing with continued corrective action. An indicator parameter satisfactory to the Department shall be selected for application to the curve. In the equation above, the symbols are defined as follows:

1. C - contaminant concentration at time t ;
2. C_f - the final concentration which the curve approaches asymptotically;
3. C_o - the concentration difference between the final concentration and the concentration at time zero;
4. e - 2.718, the base of natural logarithms;
5. k - an exponential factor which indicates how fast the concentration approaches C_f ; and
6. t - time in days from some fixed starting point.

(g) Corrective action limits, institutional controls, or a combination thereof, shall be developed and submitted for approval by the Department, using a format, procedures, and within a schedule acceptable to the Department.

(h) Corrective action, institutional controls, or a combination thereof, shall be implemented, where necessary, to meet the objectives of this rule, within a schedule acceptable to the Department.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989. Repealed: August 28, 2003, Readopted: October 2, 2003; XXXXXX, 2017.

335-6-15-.31 Public Participation.

(1) For each confirmed release that requires a corrective action plan, the Department must provide a 15 day notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.

(2) The Department must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

(3) Before approving a corrective action plan, the Department may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.

(4) The Department must give public notice that complies with paragraph (1) ~~above of this rule~~ if implementation of an approved corrective action plan does not achieve the corrective action limits established in accordance with rule 335-6-15-.30 and termination of that plan is under consideration by the Department.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 25, 2008; April 1, 2014; [XXXXXX, 2017](#).

335-6-15-.32 Analytical Requirements. Soil and groundwater samples collected under the requirements of this chapter shall be analyzed according to the methods presented in this rule, as directed by the Department.

(a) Analysis of soils. Analysis of soils for petroleum contaminants shall be performed for the following parameters according to the type of petroleum product causing the contamination:

1. Total petroleum hydrocarbons	Standard Method 503 EPA Method 9071
2. Benzene, ethyl benzene, toluene and total xylenes	EPA Method 5030 or 3810, followed by EPA Method 8020 or 8240
3. Lead	EPA Method 239.2

(b) Gasoline analytical group. Analysis of groundwater or surface waters required by this chapter for petroleum contaminants of this group shall be performed for the following parameters according to the type of petroleum product causing the contamination:

1. Volatile organic halocarbons (including priority pollutant compounds)	EPA Method 601
2. Benzene, ethyl benzene, toluene and total xylenes	EPA Method 602 or 624
3. 1, 2-Dibromoethane	EPA Method 504.1
4. Lead	EPA Method 239.2

(c) Kerosene Analytical Group. Analysis of groundwater or surface waters required by this chapter for petroleum contaminants of this group shall be performed for the following parameters according to the type of petroleum product causing the contamination:

Note: Kerosene, diesel and jet fuels are included in this group.

1. Polynuclear aromatic hydrocarbons (PAH) (Including 15 priority pollutant PAH's plus 2-Methylnaphthalene and 1-Methylnaphthalene)	EPA Method 601 or 625
2. Benzene, ethyl benzene, toluene and total xylenes	EPA Method 602 or 624
3. Volatile organic halocarbons (including priority pollutant compounds)	EPA Method 601
4. 1, 2-Dibromoethane	EPA Method 504.1
5. Lead	EPA Method 239.2

(d) Monitoring of soil or groundwater for other than petroleum related regulated substances shall be according to established EPA analytical methods, where applicable.

(e) Where the results of initial analyses of soil or groundwater do not indicate the presence of a contaminant listed in subparagraphs (a) through (c) ~~above of this rule~~, or indicate that the presence of the contaminant is due to an ambient concentration, the Department may waive requirements for further testing for that contaminant.

(f) The Department may approve additional methods for the monitoring or investigation of regulated substances which have been released to soils, groundwaters or surface waters of the state of Alabama.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; XXXXXX, 2017.

335-6-15-.33 Temporary Closure.

(1) When an UST system is temporarily closed, owners and operators must:

(a) Continue operation and maintenance of corrosion protection in accordance with rule 335-6-15-.10, and any release detection in accordance with rules 335-6-15-.14 through 335-6-15-.19 and 335-6-15-.48. However, release detection and release detection operation and maintenance testing and inspections in rules 335-6-15-.09, and 335-6-15-.12 through 335-6-15-.19 ~~is~~ are not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system. In addition, spill and overfill operation and maintenance testing and inspections in rules 335-6-15-.09, 335-6-15-.12 and 335-6-15-.13 are not required;

(b) Comply with rules 335-6-15-.20 through 335-6-15-.25 if a release is suspected or confirmed; and

(c) Immediately empty and within 90 days either repair in accordance with rule 335-6-15-.12 or permanently close the UST system in accordance with rules 335-6-15-.34, 335-6-15-.35 and 335-6-15-.37 if the UST owner, operator, or Department is aware of the UST system being compromised in any way such that it may release regulated substance.

(2) When an UST system is temporarily closed for ~~3~~three months or more, owners and operators must also comply with the following requirements:

(a) Leave vent lines open and functioning; and

(b) Cap and secure all other lines, pumps, man-ways, and ancillary equipment.

(3) When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in rule 335-6-15-.06 for new UST systems or the upgrading requirements in rule 335-6-15-.07, except that the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems within 90 days from the end of this 12-month period in accordance with rules 335-6-15-.34 through 335-6-15-.37, unless the Department provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with rule 335-6-15-.26 before such an extension can be applied for.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 1, 2014; [XXXXXX](#), 2017.

335-6-15-.35 Site Closure or Change-In-Service Assessment.

(1) Before permanent closure or ~~a~~ change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site according to procedures which are acceptable to the Department. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a release. A report of the assessment findings shall be submitted to the Department within 45 days of initiating the closure or the change-in-service. The assessment requirements of this paragraph are satisfied if the requirements of rule 335-6-15-.26(1)(f) and (g) or (2) are satisfied or one of the external release detection methods allowed in rules 335-6-15-.17(e) and (f) and ~~rule~~ 335-6-15-.18 have been routinely used and operated in accordance with the requirements in rules 335-6-15-.17 and 335-6-15-.18 at the time of closure, and indicates no release has occurred.

(2) If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered under paragraph (1) ~~above of this rule~~, or by any other manner, owners and operators must begin corrective action in accordance with rules 335-6-15-.24 through 335-6-15-.31.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; [XXXXXX](#), [2017](#).

335-6-15-.37 Closure Records. Owners and operators must maintain records in accordance with rule 335-6-15-.13(b)6. that are capable of demonstrating compliance with closure requirements under rules 335-6-15-.33 through 335-6-15-.36. The results of the excavation zone assessment required in rule 335-6-15-.35 must be submitted to the Department and be maintained for at least ~~3~~three years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the UST system out of service; and

(b) By the current owners and operators of the UST system site.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; XXXXXX, 2017.

335-6-15-.39 Availability to Public of Records, Reports or Information. Any records, reports, or information obtained under this chapter shall be available to the public; except that upon a showing satisfactory to the Department by any person that records, reports or information, or a particular part thereof to which the Department has access under this chapter if made public, would divulge production or sales figures or methods, processes or production unique to such person or would otherwise tend to affect adversely the competitive position of such person by revealing trade secrets, the Department shall consider such record, report, or information or particular portion thereof, confidential. Nothing in this paragraph shall be construed to prevent disclosures of such report, record, or information to federal or state representatives as necessary for purposes of administration of any federal or state laws or when relevant to proceedings under this chapter. Information concerning the presence or concentration of substances in waters shall not be considered confidential by the Department (Acts 1988, No. 88-537, § 8.)

Author: Sonja Massey.

Statutory Authority: Code of Alabama 1975, § 22-36-8.

History: April 5, 1989.

Amended: October 2, 2003.

335-6-15-.42 Underground Storage Tank Regulation Fee. Any owner of an underground storage tank shall pay a yearly Underground Storage Tank Regulation Fee of not less than \$15.00 and not more than \$30.00 per regulated underground storage tank per year. The amount of the fee shall be determined annually by the Director. Payment of the fee shall be due within 30 days of notification to the owner by the Department of the amount of such fee.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-5.

History: April 5, 1989.

Amended: October 2, 2003; [XXXXXX](#), 2017.

335-6-15-.43 Financial Responsibility for Petroleum UST Owners and Operators. 40 CFR Part 280 §§ 280.90 through 280.1125 is hereby adopted by reference. This rule sets forth the amounts of financial responsibility required of petroleum UST owners and operators and the mechanisms allowed for satisfying these requirements. Copies of this rule are available from ADEM. Charges for reproduction apply.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama](#) 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; [XXXXXX](#), 2017.

335-6-15-.45 Delivery Prohibition. The Department will implement Delivery Prohibition in accordance with the following procedures:

(a) Prior to placing an underground storage tank facility under delivery prohibition, the Department will:

1. Make a reasonable effort to notify the owner and/or operator in writing that an underground storage tank facility is in "significant noncompliance requiring delivery prohibition" as defined in rule 335-6-15-.02(~~hh~~uuu), or "significant noncompliance subject to delivery prohibition" as defined in rule 335-6-15-.02(~~hh~~vuv); and

2. Give the owner or operator the opportunity to discuss, within a designated time period specified by the Department, the significant noncompliance.

(b) If the above time period expires without resolution of the significant noncompliance, the underground storage tank facility will be placed on the Department web site "Delivery Prohibition List" by 12:00 a.m. central time on Wednesday of the week that a delivery prohibition determination is made by the Department. The Department will physically affix a red tag on the fill pipes to underground storage tanks at the underground storage tank facility. The delivery prohibition becomes effective immediately to all UST systems at the facility upon placement of the red tag(s). Once the red tag is affixed on the fill pipe, it shall be unlawful to tamper with or remove it until authorized by the Department.

(c) Upon implementation of delivery prohibition as described in subparagraph (b) above, it shall be unlawful for any regulated substance deliverer to deliver a regulated substance, and it shall be unlawful for owners and operators of UST systems to accept delivery of a regulated substance to an underground storage tank facility that is under delivery prohibition.

(d) When the Department has received all documentation required by the Department to demonstrate that the underground storage tank facility has returned to compliance:

1. The underground storage tank facility will become eligible to receive delivery of regulated substances following written notification by the Department. Written notification may be provided electronically or by facsimile; and

2. The Department shall remove the underground storage tank facility from the Department web site "Delivery Prohibition List" as soon as practicable after receipt of the necessary documentation.

(e) Based on the best interest of the public, the Department may defer the implementation of delivery prohibition for up to 180 days for underground storage tank facilities identified as being in significant noncompliance requiring delivery prohibition. Also, the Department retains the right to remove any delivery prohibition at any time during an emergency situation.

Author: Sonja Massey, [Curt Johnson](#), [Lee Davis](#).

Statutory Authority: [Code of Alabama 1975](#), § 22-36-3.

History: April 25, 2008.

Amended: November 24, 2009; January 16, 2012; April 1, 2014; [XXXXXX](#), 2017.

335-6-15-.46 Operator Training.

(1) Owners and operators of underground storage tank systems shall designate a Class A, Class B, and Class C operator as defined in rule 335-6-15-.02(~~ppyy~~) through (~~ffaaa~~). All persons designated as a Class A, B, or C operator shall be trained in accordance with paragraphs (3), (4) and (5) of this rule. Different persons may be designated for each classification or a person may be designated to more than one classification. A person who is designated to more than one operator classification shall be trained in each classification for which the person is designated. Training programs that qualify a participant in more than one operator classification are allowed.

(2) Owners and operators shall identify, for each underground storage tank system or group of underground storage tank systems at a facility, at least one person for each class of operator. Class A and Class B operator training records shall be maintained either at the underground storage tank facility or at an alternative site for all current operators. Documentation of training shall be provided to the Department upon request. Class C operator training records shall be maintained at the underground storage tank facility for all current operators, so that they are immediately available upon inspection by the Department.

(3) Operator training shall satisfy the following minimum requirements for each operator classification.

(a) Class A operator training shall provide a general knowledge of underground storage tank system requirements so the operator can make informed decisions regarding compliance and ensure responsible persons are fulfilling operation, maintenance, and recordkeeping requirements and standards in accordance with this chapter regarding underground storage tank:

1. Spill prevention;
2. Overfill prevention;
3. Release detection;
4. Corrosion protection;
5. Emergency response;
6. Product compatibility;
7. Documentation of financial responsibility;
8. Notification and registration;
9. Release and suspected release reporting;
10. Temporary and permanent closure; and

11. Operator training.

(b) Class B operator training shall provide a more in-depth understanding of operation and maintenance aspects than Class A training, but may cover a more narrow breadth of regulatory requirements. Class B operators may obtain either site-specific operator training, which is focused only on equipment used at the underground storage tank facility, or training in broader regulatory requirements. At a minimum, Class B operator training shall encompass the following:

1. Components of underground storage tank systems;
2. Materials of underground storage tank system components;
3. Methods of release detection and release prevention applied to underground storage tank components; and
4. Underground storage tank operation and maintenance requirements including:
 - (i) Spill prevention,
 - (ii) Overfill prevention,
 - (iii) Release detection,
 - (iv) Corrosion protection,
 - (v) Emergency response,
 - (vi) Product compatibility,
 - (vii) Reporting and recordkeeping, and
 - (viii) Class C operator training.

(c) Class C operator training shall provide, at a minimum, instruction on:

1. Immediate actions required to be taken in response to emergencies, such as situations posing an immediate danger or threat to the public or to the environment; and
2. Actions required to be taken in response to alarms caused by spills or releases from an underground storage tank system.

(4) The training requirements of this rule may be satisfied by any one or combination of the following:

(a) An operator training program conducted by the Department; or the owner, the operator or a third party, that has received prior Department

approval. The program may include in-class, on-line, or hands-on training, and shall include an evaluation of operator knowledge. Examples of evaluation include testing, practical demonstration, or other tools acceptable to the Department.

(b) An examination designed to measure operator knowledge and administered by the Department; or the owner, the operator, or a third party, acceptable to the Department. The examination shall reasonably determine that the person tested has the necessary knowledge and skills to be considered competent to operate underground storage tanks.

(c) Class C operators may be trained by Class A and Class B operators that are employed by the same underground storage tank owner as the C operator.

(d) Operator training received outside the Sstate of Alabama that is verified by and acceptable to the Department.

(5) All persons designated as Class A, Class B, or Class C operators shall satisfy the training requirements of this rule no later than August 8, 2012. After August 8, 2012, operators shall be trained as follows:

(a) Class A and Class B operators shall be trained within 30 days after assuming operation and maintenance responsibilities for an underground storage tank system; and

(b) Class C operators shall be trained before assuming responsibility for responding to emergencies.

(6) In the event the Department determines that an underground storage tank system is not in compliance with the requirements of this chapter, the responsible operator(s) shall be retrained. The Department may determine that any one Class A, B, or C operator be retrained, or any combination of Class A, B, or C operators be retrained. Operators shall be retrained within a reasonable time established by the Department. At a minimum, retraining shall include training in the areas determined not in compliance with the requirements of this chapter.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: November 24, 2009; ~~January 16, 2012; April 1, 2014.~~

Amended: January 16, 2012; April 1, 2014; XXXXXX, 2017.

335-6-15-.47 Certification Requirements for Individuals Who Supervise Installation, Closure, and Repair of UST Systems.

(1) No later than July 16, 2012, individuals who exercise supervisory control with regard to performing installation, closure, and repair of UST systems must be certified by a Department approved certifying organization as described in paragraph (2) of this rule. Exceptions to this certification requirement are: adding or inspecting internal linings in accordance with rule 335-6-15-.12(a) and (b); repair of fiberglass-reinforced plastic underground storage tanks by the manufacturer's authorized representative in accordance with rule 335-6-15-.12(b); installation of cathodic protection systems in accordance with rule 335-6-15-.06(a) and (b) or repair of cathodic protection systems in accordance with rule 335-6-15-.12(a); repair or installation of underground storage tank and/or underground piping leak detection equipment by technicians trained by the manufacturer of the equipment; and routine maintenance.

(a) Minimum Requirements. To be recognized by the Department as certified to exercise supervisory control with regard to performing installation, closure, and repair of UST systems in Alabama, an individual must:

1. Be at least 18 years of age and have a photo ID issued by the United States government, or a state or territory of the United States with date of birth, to allow the Department or a Department approved certifying organization to verify age and identity;

2. Immediately prior to pursuing certification, have documentation of ~~3~~three jobs in the last ~~3~~three year period that can be verified by the Department or a Department ~~A~~approved ~~C~~certifying ~~O~~organization in which the individual was involved in installation, closure, or repair of UST systems; and for jobs after July 16, 2012, if applicable in the state or territory where the job experience was acquired, documentation of the name of the certified individual who supervised the installation, closure, or repair of UST systems;

3. Have proof of individual financial responsibility or employer's financial responsibility as follows:

(i) Individual financial responsibility or employer's financial responsibility in the amount of \$1,000,000 of general liability insurance coverage and \$1,000,000 of pollution financial responsibility that can be verified by the Department or a Department ~~A~~approved ~~C~~certifying ~~O~~organization;

(ii) For Owners installing, closing, or repairing their own UST systems containing motor fuels, using the definition of motor fuel in chapter 335-6-16, the required financial responsibility shall be \$1,000,000 of general liability insurance coverage and \$1,000,000 of pollution financial responsibility coverage. The requirement for pollution financial responsibility may be satisfied by the Alabama Underground and Aboveground Storage Tank Trust Fund if the following conditions are met:

(I) Prior to installation, closure or repair of a UST system, the Department has been notified of the proposed installation or existence of the UST system,

(II) Prior to installation, closure or repair of a UST system, the UST Regulation Fee and any applicable Alabama Underground and Aboveground Storage Tank Trust Fund Fee has been paid,

(III) The Owner has established substantial compliance as defined in chapter 335-6-16,

(IV) The Owner or an Owner's employee has received certification in accordance with rule 335-6-15-.47 prior to installation, closure and repair of a UST system and exercises supervisory control during installation, closure and repair critical junctures.

4. Attend and complete a course with classroom instruction on installation, closure, and repair of UST systems from a Department approved certifying organization;

5. Pass an exam or exams on installation, closure, and repair of UST systems administered by a Department approved certifying organization;

6. Be issued an identification card by a Department approved certifying organization with the name and photo of the individual, and date of certification;

7. Be identified by a Department approved certifying organization as an individual who is certified to exercise supervisory control with regard to performing installation, closure and repair of UST systems in the state of Alabama; ~~and~~.

(b) Grandfathering. Beginning January 16, 2012 through July 16, 2012 all those individuals who are currently certified as having successfully completed an UST system installation, closure, and repair certification program in the ~~S~~state of Alabama will be considered to have met the requirements for installation, closure and repair of UST systems under this rule upon demonstration of the following:

1. Provide proof of successful completion of a UST system installation, closure, and repair certification program approved by the Department prior to January 16, 2012;

2. Meet the requirements of subparagraphs (1)(a)1. through 3., 6. through 7. of this rule; and

3. Apply to a Department approved certifying organization for certification to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule no later than July 16, 2012.

Those individuals that are not certified by this date, must meet all the requirements of subparagraph (1)(a) of this rule to become certified under this rule.

(c) Reciprocity. Beginning January 16, 2012 all those individuals who have successfully been certified to exercise supervisory control with regard to performing installation, closure and repair of UST systems in ~~another state or territory other than Alabama~~ with a ~~state approved~~ certification program approved by the other state or territory, may apply to become certified under this rule by a Department approved certifying organization as follows:

1. Meet the requirements of subparagraphs (1)(a)1. through 3., and 5. through 7. of this rule.

(d) Recertification. Certification to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule expires ~~3~~three years after issuance by the Department approved certifying organization. Therefore, an individual must be recertified every ~~3~~three years by a Department approved certifying organization to maintain certification as follows:

1. Certified individuals must provide the following information to the Department approved certifying organization a minimum of ~~1~~one month prior to expiration;

(i) Proof of certification from a Department approved certifying organization for the previous ~~3~~three year period,

(ii) Verification of 16 hours of online or classroom continuing education related to installation, closure, or repair of UST systems that occurred within the ~~3~~three year recertification period prior to the certification expiration date, and

(iii) Provide the information described in subparagraph (1)(a)3. of this rule to the Department approved certifying organization.

2. If a certified individual is not recertified within 90 days or another time period approved by the Department after expiration of their certification, the individual can only become certified in accordance with the requirements in subparagraph (1)(a) of this rule. An individual whose certification has expired may not exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule.

(e) Responsibilities. A certified individual shall:

1. Exercise supervisory control during installation, closure and repair of UST systems in accordance with the requirements of this chapter;

2. Be present at the job site during the following installation critical junctures;

(i) Excavation immediately prior to underground storage tank and underground piping installation and during backfill and compaction,

(ii) After excavation and prior to setting underground storage tank and underground piping,

(iii) Setting of the UST and underground piping,

(iv) Connection of underground piping and UST system components,

(v) Installation of UST system restraining devices, and

(vi) Tightness testing of the UST system during installation.

3. Be present at the job site during the following closure critical junctures;

(i) De-vaporization, inerting, and cleaning of the underground storage tank,

(ii) Testing atmosphere in and around the underground storage tanks,

(iii) Excavation of material around the underground storage tank and underground piping,

(iv) Removal of the underground storage tank and underground piping from the excavation and job site,

(v) Cutting or destroying the underground storage tank if done on site, and

(vi) When closing in place, filling the underground storage tanks with an inert material.

4. Be present at the job site during the following repair critical junctures;

(i) Excavation of any material from around the area of the underground storage tanks, underground piping, sumps, under dispenser containment, or spill catchment basins necessary to make a repair,

(ii) Repair or alteration of the UST system,

(iii) Repair, alteration or replacement of underground piping or sumps, and

(iv) Cutting the top of an underground storage tank and welding manhole to an underground storage tank.

5. Upon request by a Department representative, provide proof of installation, closure, and repair certification from a Department ~~C~~certifying ~~O~~rganization.

6. Report any suspected releases or unusual operating conditions observed by the certified individual or by someone under his supervisory control at a UST facility where work is being performed or in the immediate surrounding area in accordance with rule 335-6-15-.20.

7. Prior to beginning an installation or upgrade, ensure that a notice of proposed installation modification, or upgrade has been submitted to the Department in accordance with rules ~~s~~ 335-6-15-.08(1)(b) and 335-6-15-.05(5).

8. Prior to beginning a closure, ensure that a notice of intent to permanently close has been submitted to the Department in accordance with rule 335-6-15-.34.

(f) Revocation of Certification. An individual's certification to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule may not be recognized by the Department or may be revoked by a Department approved certifying organization.

1. Revocation can occur for the following reasons, and for any other reasons deemed appropriate by the Department;

(i) Gross negligence,

(ii) Fraud or deception,

(iii) Failure to correct deficiencies in workmanship,

(iv) Failure to comply with the certified individual's responsibilities in subparagraph (1)(e) of this rule, and

(v) Performing installation, closure, or repair activities without employer financial responsibility required by subparagraph (1)(a)3. of this rule.

(vi) Failure to comply with the financial responsibility requirements in subparagraph (1)(a)3. of this rule.

2. After revocation of certification by the certifying organization for the reasons indicated in subparagraph (1)(f)1.(i) through (v) above of this rule, the Department may allow the individual to pursue certification to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule in accordance with paragraph (1)(a) of this rule. Recertification of an individual after revocation by the certifying organization under for item-subparagraph (1)(f)1.(vi) above of this rule requires the individual to meet the requirements of subparagraphs (1)(a)3. and 7. of this rule.

(2) Department Approved Certifying Organization. The Department may approve a person, as defined in rule 335-6-15-.02(vvddd) who is not regulated under this chapter, as a certifying organization with the authority to certify and recertify individuals to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule in accordance with paragraph (1) of this rule. The Department approved certifying organization has the authority to revoke certifications issued by them in accordance with subparagraph (1)(f) of this rule.

(a) Approval Process. To be approved by the Department as a certifying organization, the person must, as a minimum, be able to perform the following:

1. Verify the identity, age, experience, and insurance of all individuals taking the certification course using the information required by subparagraphs (1)(a)-1. through 3.of this rule.

2. Provide a course with classroom instruction by a qualified instructor on the installation, closure, and repair of UST systems that cover, as a minimum, the following topics;

- (i) Installation, closure and repair requirements of this chapter.
- (ii) Installation preparation and underground storage tank handling,
- (iii) Pre-installation and post installation testing,
- (iv) Installation and closure excavation,
- (v) Anchoring,
- (vi) Backfilling,
- (vii) Spill and overfill prevention,
- (viii) Leak detection methods for underground storage tanks and underground piping,
- (ix) Corrosion protection,
- (x) Underground pPiping,
- (xi) Electrical,
- (xii) Underground storage tTank and/or underground piping removal,
- (xiii) Filling underground storage tanks with inert material,
- (xiv) Cleaning, purging and inerting underground storage tanks,

- (xv) Sampling,
- (xvi) Repairing of underground storage tanks, underground piping, and sumps,
- (xvii) Post repair tightness testing,
- (xviii) Applicable United States Department of Labor Occupational Safety and Health Administration (OSHA) requirements,
- (xix) Applicable National Fire Protection Association (NFPA) requirements,
- (xx) Information contained in the most current versions of Petroleum Equipment Institute (PEI) Recommended Practice RP100, and American Petroleum Institute (API) Recommended Practice 1604, 1615 and 2015₇.

3. Provide a written or oral exam on installation, closure, and repair of UST systems, which is approved by the Department, that requires at least a grade of 75% to pass and keep documentation of the test results for all individuals taking the test for a period of 6six years.

4. After the individual has successfully completed all of the requirements in either subparagraphs (1)(a), ~~(1)(b)~~, ~~(1)(c)~~, or ~~(1)(d)~~ of this rule and, when applicable, passed the ~~tests~~exams described in subparagraph (1)(a)5. Above of this rule, issue an identification card to the individual with the individual's name and photo, date of certification, and certifying organization.

5. Certify individuals to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule in accordance with subparagraphs (1)(a), ~~(1)(b)~~, and ~~(1)(c)~~, of this rule, and recertify individuals in accordance with subparagraph (1)(d) of this rule.

6. Revoke certification of an individual to exercise supervisory control with regard to performing installation, closure, and repair of UST systems, in accordance with subparagraph (1)(f) of this rule.

7. Identify individuals who are certified and recertified to exercise supervisory control with regard to performing installation, closure, and repair of UST systems under this rule and their date of certification or recertification on an active website, and keep the list up-to-date within a 7seven day time period.

(3) Audits of Department Approved Certifying Organizations. Department approved certifying organizations will be subject to audits by the Department. The results of the audits will be to sustain, suspend, or revoke, approval.

(a) Sustained Approval. The Department may sustain the authorization of a certifying organization to certify individuals under this rule if the audit does not uncover any of the problems indicated in subparagraphs

(3)(c)1.(i) through (iv) ~~below of this rule~~, or any other problems deemed appropriate by the Department.

(b) Suspended Approval. The Department may suspend the authorization of a certifying organization to certify individuals under this rule if the audit uncovers any of the problems indicated in subparagraphs (3)(c)1.(i) through (iv) ~~below of this rule~~, or any other problems deemed appropriate by the Department.

1. When approval is suspended by the Department, the certifying organization will be notified of the problem(s) that need to be addressed. Once the certifying organization has resolved all the problems, the Department will reinstate approval of the certifying organization.

(c) Revoked Approval. ~~—~~ The Department may suspend or revoke the authorization of a certifying organization to certify individuals under this rule.

1. Revocation may occur for the following reasons and for any other reasons deemed appropriate by the Department;

(i) Fraud or deception,

(ii) Incompetence or inability to perform responsibilities,

(iii) Failure to update course information and exam questions in response to additions and revisions made to this chapter, and

(iv) Failure to comply with any of the requirements under paragraph (2) of this rule.

2. When approval is revoked by the Department, the principals of the certifying organization will no longer be eligible to obtain Department approval as a certifying organization for ~~2~~two years.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: January 16, 2012; ~~April 1, 2014.~~

Amended: April 1, 2014; XXXXXX, 2017.

335-6-15-.48 UST Systems with Field-Constructed Tanks and UST Systems with Airport Hydrant Fuel Distribution Systems

(1) Except as provided in paragraph (2) of this rule, owners and operators of UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems must comply with the requirements of this chapter.

(a) For UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems installed before *[the effective date of rule]*, the requirements are effective according to the following schedule:

Requirement	Effective Date
<u>Notification</u> (rule 335-6-15-.05)	<i>[one year after the effective date of rule]</i>
<u>Upgrading</u> (rule 335-6-15-.07 and this rule)	October 13, 2018
<u>General Operating Requirements</u> (rules 335-6-15-.09 through 335-6-15-.13 and this rule)	October 13, 2018
<u>Release Detection</u> (rules 335-6-15-.14 through 335-6-15-.19 and this rule)	October 13, 2018
<u>Release Reporting, Response, and Investigation</u> (rules 335-6-15-.20 through 335-6-15-.32)	<i>[the effective date of rule]</i>
<u>Closure</u> (rules 335-6-15-.34 through 335-6-15-.37)	<i>[the effective date of rule]</i>
<u>Financial Responsibility</u> (rules 335-6-15-.43 through 335-6-15-.44 and this rule)	October 13, 2018
<u>Operator Training</u> (rule 335-6-15-.46)	October 13, 2018

(b) For UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems installed on or after *[the effective date of rule]*, all the requirements of this chapter apply *[the effective date of rule]*.

(c) In addition to codes of practice developed by nationally recognized associations or independent testing laboratories allowed in rule 335-6-15-.06, owners and operators of UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems may also use military construction criteria when designing, constructing, and installing UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems.

(2) Owners and operators of UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems must comply with the following additions, exceptions, and alternatives.

(a) Exception to piping secondary containment requirements. Owners and operators may use single walled underground piping when installing underground piping associated with UST systems with field-constructed tanks with a nominal capacity greater than 50,000 gallons, and underground piping associated with UST systems with airport hydrant fuel distribution systems. Underground piping associated with UST systems with field-constructed tanks less than or equal to a nominal capacity of 50,000 gallons and not part of an UST system with airport hydrant fuel distribution system must meet the secondary containment requirements in rule 335-6-15-.06(b) at installation.

(b) Upgrade requirements for UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems where installation commenced before [the effective date of rule]. These UST systems must meet the following upgrade requirements no later than October 13, 2018, or be permanently closed in accordance with rules 335-6-15-.34 through 335-6-15-.37 of this chapter:

1. Corrosion protection. UST system components in contact with the ground that routinely contain regulated substances must meet one of the following:

(i) Except as provided in subparagraph (2)(a) of this rule, the UST system performance standards for new underground storage tanks in rule 335-6-15-.06(a) and for new underground piping in rule 335-6-15-.06(b); or

(ii) Be constructed of metal and cathodically protected according to a code of practice developed by a nationally recognized association or independent testing laboratory and meet the following:

(I) The cathodic protection requirements in rule 335-6-15-.06(a)2.(ii), (iii), and (iv) for underground storage tanks, and rule 335-6-15-.06(b)2.(ii), (iii), and (iv) for underground piping,

(II) Underground storage tanks greater than 10 years old without cathodic protection must be assessed to ensure the underground storage tank is structurally sound and free of corrosion holes prior to adding cathodic protection in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory. The assessment must be by internal inspection or another method determined by the Department to adequately assess the underground storage tank for structural soundness and corrosion holes.

2. Spill and overflow prevention. To prevent spilling and overflowing associated with product transfer to the UST system, all UST systems with field-constructed tanks and all UST systems with airport hydrant fuel

distribution systems must comply with the spill and overflow prevention equipment requirements specified in rule 335-6-15-.06(c).

(c) Walkthrough inspections. In addition to the walkthrough inspection requirements in rule 335-6-15-.09(2), owners and operators must inspect the following additional areas for UST systems with airport hydrant fuel distribution systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (see 29 CFR part 1910) is not required or at least annually if confined space entry is required, and keep documentation of the walkthrough inspection in accordance with rule 335-6-15-.13(b)11:

1. Hydrant pits – visually check for any damage; remove any liquid or debris; and check for any leaks, and

2. Hydrant piping vaults – check for any hydrant piping leaks.

(d) Methods of release detection for UST systems with field-constructed tanks. Owners and operators of UST systems with field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the release detection requirements in rules 335-6-15-.14 through 335-6-15-.19. Owners and operators of UST systems with field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in rules 335-6-15-.14 through 335-6-15-.19 (except rule 335-6-15-.17(e) and (f) must be combined with inventory control as stated in subparagraph (2)(d)5. of this rule) or use one or a combination of the following alternative methods of release detection:

1. Conduct an annual tank tightness test in accordance with rule 335-6-15-.17(c) except that the test equipment must be able to detect a 0.5 gallon per hour leak rate;

2. Use an automatic tank gauging system to perform release detection performed at least every 30 days in accordance with rule 335-6-15-.17(d) except that the test equipment must be able to detect a leak rate less than or equal to one gallon per hour. This method must be combined with a tank tightness test performed at least every three years in accordance with rule 335-6-15-.17(c) except that the test equipment must be able to detect a 0.2 gallon per hour leak rate;

3. Use an automatic tank gauging system to perform release detection performed at least every 30 days in accordance with rule 335-6-15-.17(d) except that the test equipment must be able to detect a leak rate less than or equal to two gallons per hour. This method must be combined with a tank tightness test performed at least every two years in accordance with rule 335-6-15-.17(c) except that the test equipment must be able to detect a 0.2 gallon per hour leak rate;

4. Perform vapor monitoring at least every two years in accordance with rule 335-6-15-.17(e) for a tracer compound placed in the underground storage tank system capable of detecting a 0.1 gallon per hour leak rate;

5. Perform inventory control at least every 30 days conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures that can detect a leak equal to or less than 0.5 percent of flow-through; and

(i) Perform a tank tightness test at least every two years in accordance with rule 335-6-15-.17(c) except that the test equipment must be able to detect a 0.5 gallon per hour leak rate; or

(ii) Perform vapor monitoring or groundwater monitoring at least every 30 days conducted in accordance with rule 335-6-15-.17(e) or (f), respectively, for the stored regulated substance.

6. Use another method approved by the Department if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subparagraphs (2)(d)1. through 5. of this rule. In comparing methods, the Department shall consider the size of release that the method can detect and the frequency and reliability of detection.

(e) Methods of release detection for underground piping. Owners and operators of underground piping associated with UST systems with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in rules 335-6-15-.14 through 335-6-15-.19. Owners and operators of underground piping associated with UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems greater than 50,000 gallons must follow either the requirements in rules 335-6-15-.14 through 335-6-15-.19 (except rule 335-6-15-.17(e) and (f) must be combined with inventory control as stated in subparagraph (2)(e)3. of this rule) or use one or a combination of the following alternative methods of release detection:

1. Perform a semiannual or annual line tightness test in accordance with rule 335-6-15-.18(b) except that the test equipment must be able to perform a test at or above the underground piping operating pressure in accordance with the table below:

Maximum Leak Detection Rate Per Test Section Volume		
<u>Test Section Volume (Gallons)</u>	<u>Semiannual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)</u>	<u>Annual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)</u>
<u>< 50,000</u>	<u>1.0</u>	<u>0.5</u>
<u>≥ 50,000 to < 75,000</u>	<u>1.5</u>	<u>0.75</u>
<u>≥ 75,000 to < 100,000</u>	<u>2.0</u>	<u>1.0</u>
<u>≥ 100,000</u>	<u>3.0</u>	<u>1.5</u>

And underground piping segment volumes greater than or equal to 100,000 gallons not capable of meeting the maximum 3.0 gallon per hour leak rate for the semiannual test may be tested at a leak rate up to 6.0 gallons per hour according to the following schedule:

Phase In For Underground Piping Segments \geq 100,000 Gallons In Volume	
<u>First test</u>	<u>Not later than October 12, 2018</u> <u>(may use up to 6.0 gph leak rate)</u>
<u>Second test</u>	<u>Between October 12, 2018 and October 12, 2021</u> <u>(may use up to 6.0 gph leak rate)</u>
<u>Third test</u>	<u>Between October 12, 2021 and October 12, 2022</u> <u>(must use 3.0 gph for leak rate)</u>
<u>Subsequent tests</u>	<u>After October 12, 2022</u> <u>(begin using semiannual or annual line testing according to</u> <u>the <i>Maximum Leak Detection Rate Per Test Section Volume</i></u> <u>table above)</u>

2. Perform vapor monitoring at least every two years in accordance with rule 335-6-15-.17(e) for a tracer compound placed in the underground storage tank system capable of detecting a 0.1 gallon per hour leak rate;

3. Perform inventory control at least every 30 days conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures that can detect a leak equal to or less than 0.5 percent of flow-through; and

(i) Perform a line tightness test at least every two years conducted in accordance with rule 335-6-15-.18(b) and subparagraph (2)(e)1. of this rule using the leak rates for the semiannual test; or

(ii) Perform vapor monitoring or groundwater monitoring at least every 30 days conducted in accordance with rule 335-6-15-.17(e) and (f), respectively, for the stored regulated substance;

4. Use another method approved by the Department if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subparagraphs (2)(e)1. through 3. of this rule. In comparing methods, the Department shall consider the size of release that the method can detect and the frequency and reliability of detection.

(f) Recordkeeping for release detection. Owners and operators of UST systems with field-constructed tanks and UST systems with airport hydrant fuel distribution systems must maintain release detection records according to the recordkeeping requirements in rule 335-6-15-.19(b)3.

(g) Applicability of closure requirements to previously closed UST systems. When directed by the Department, the owner and operator of an UST system with field-constructed tanks or UST systems with airport hydrant fuel distribution system permanently closed before [effective date of rule] must assess the excavation zone and permanently close the UST system in accordance with rules 335-6-15-.34 through 335-6-15-.37 if releases from the UST system may, in the judgment of the Department, pose a current or potential threat to human health and the environment.

Author: [Curt Johnson, Lee Davis](#).

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: [XXXXXX, 2017](#).

~~335-6-15-.49~~**335-6-15-.48** **Severability.** If any paragraph, subparagraph, provision, clause or portion of this chapter is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall not be affected thereby.

Author: Sonja Massey, Curt Johnson, Lee Davis.

Statutory Authority: Code of Alabama 1975, § 22-36-3.

History: April 5, 1989.

Amended: October 2, 2003; April 25, 2008; November 24, 2009; January 16, 2012; XXXXXX, 2017.