

PUBLIC NOTICE

Tennessee Valley Authority (TVA) has applied to the Tennessee Department of Environment and Conservation, Division of Air Pollution Control for a significant modification to an existing major source operating permit subject to the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations. A major source operating permit is required by both the Federal Clean Air Act and the Tennessee Air Pollution Control Regulations. TVA seeks to obtain a significant modification to a major source operating permit for the addition of a permitted emissions source to the Title V permit. The existing Title V operating permit subject to the modification is identified as follows: Division identification number 73-0013/560775. The emission source affected by the modification is identified as follows: 73-0013-20/ Emergency Communications Diesel Generator Engine, 90hp. This significant modification is conducted pursuant to subpart 1200-03-09-.02(11)(f)5(iv) of the Tennessee Air Pollution Control Regulations. Only the portion of the Title V permit affected by the significant modification is open to comment during the notice period.

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. Whether EPA's 45-day review period is performed concurrently with the public comment period or after the public comment period has ended, the deadline for citizen's petitions to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended (*i.e.*, sequentially). The status regarding EPA's 45-day review of these permits and the deadline for submitting a citizen's petition can be found at the following website address:

<http://www.epa.gov/region4/air/permits/Tennessee.htm>

Copies of the draft permits and the application materials used by the TAPCD are available for public inspection during normal business hours at the following locations:

Kingston Public Library
1004 Bradford Way
Kingston, TN 37763-3100

and

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

Electronic copies of the draft permits are available by accessing the TDEC internet site located at:

<http://tn.gov/environment/ppo/#air>

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be made within thirty (30) days of the date of this notice and should be addressed to **Ms. Michelle W. Owenby, Director, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 15th Floor, Nashville, Tennessee 37243**. Questions concerning the source(s) may be addressed to Mr. Joshua Bartlett at the same address or by calling (615) 532-6813. A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 2nd Floor, Nashville, TN 37243, 1-(866)-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

For the "Roane County News" – publish once during the time period of June 6, 2016, through June 10, 2016.

Air Pollution Control DATE: MAY 18, 2016
Assigned to – Joshua Bartlett

No alterations to the above are allowed:

Tennessee Valley Authority must pay to place this advertisement in the newspaper

Air Pollution Control must be furnished with an affidavit from the newspaper stating that the ad was run and the date of the ad or one complete sheet from the newspaper showing this advertisement, the name of the newspaper and the date of publication. Mail to Joshua Bartlett, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 15th Floor, Nashville, Tennessee 37243.

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531



**SIGNIFICANT MODIFICATION #3 TO
OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act**

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations. The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Issue Date: **April 3, 2012**

Permit Number: **560775**

Modification Date: **DRAFT**

Expiration Date: **April 2, 2017**

Issued To:

**Tennessee Valley Authority
Kingston Fossil Plant**

Installation Address:

**714 Swan Pond Road
Harriman**

Installation Description:

Coal Fired Steam Electric Generating Plant:

01-09: (9) Coal Fired Boilers

11: Coal Handling Facility

17: Limestone Handling Process

18: Dry Fly Ash Handling

19: Gypsum Dewatering and Handling

**20: Emergency Communications Diesel Generator
Engine, 90hp**

Emission Source Reference No.: **73-0013**

Renewal Application Due Date: **July 6, 2016, and October 4, 2016**

Primary SIC: 49

Information Relied Upon:

Title V renewal applications dated March 14, 2007, and December 7, 2011.

Significant Modification #1 application dated May 14, 2014.

Acid Rain Permit application dated December 15, 2009.

May 20, 2014 Consent Decree and Federal Facilities Compliance Agreement.

Significant Modification #2 request dated December 7, 2015

Significant Modification #3 request dated March 21, 2016

(continued on the next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

CONTENTS

SECTION A

GENERAL PERMIT CONDITIONS

A1.	Definitions	1
A2.	Compliance requirement	1
A3.	Need to halt or reduce activity	1
A4.	The permit	1
A5.	Property rights	1
A6.	Submittal of requested information	1
A7.	Severability clause	2
A8.	Fee payment	2
A9.	Permit revision not required	3
A10.	Inspection and entry	3
A11.	Permit shield	4
A12.	Permit renewal and expiration	4
A13.	Reopening for cause	5
A14.	Permit transference	6
A15.	Air pollution alert	6
A16.	Construction permit required	6
A17.	Notification of changes	6
A18.	Schedule of compliance	6
A19.	Acid Rain program	6
A20.	Title VI	7
A21.	112(r)	7

SECTION B

GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

B1.	Recordkeeping	8
B2.	Retention of monitoring data	8
B3.	Reporting	8
B4.	Certification	8
B5.	Annual compliance certification	8
B6.	Submission of compliance certification	9
B7.	Emergency provisions	9
B8.	Excess emissions reporting	10
B9.	Malfunctions, startups and shutdowns - reasonable measures required	10
B10.	Reserved.	10
B11.	Report required upon the issuance of notice of violation	11

CONTENTS

SECTION C

PERMIT CHANGES

C1.	Operational flexibility changes	12
C2.	Section 502(b)(10) changes	12
C3.	Administrative amendment	12
C4.	Minor permit modifications	13
C5.	Significant permit modifications	13
C6.	New construction or modifications	13

SECTION D

GENERAL APPLICABLE REQUIREMENTS

D1.	Visible emissions	14
D2.	General provisions and applicability for non-process gaseous emissions	14
D3.	Non-process emission	14
D4.	General provisions and applicability for process gaseous emissions	14
D5.	Particulate emissions from process emission sources	14
D6.	Sulfur dioxide emission standards	14
D7.	Fugitive dust	14
D8.	Open burning	15
D9.	Asbestos	15
D10.	Annual certification of compliance	15

CONTENTS

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

E1.	Fee payment	16
E2-1.	Reporting requirements	18
	(a) Quarterly reports	
	(b) Semiannual reports	
	(c) Annual compliance certification	
E2-2.	Recordkeeping: Data Entry Requirements	20
E2-3.	Visible Emissions Evaluation: General Requirements	20
E2-4.	Ambient Monitoring for SO₂	20
E2-5.	Consent Decree/Federal Facilities Compliance Agreement	21
E2-6.	Utility MACT Requirements	21
E2-7.	Identification of Responsible Official, Technical Contact, and Billing Contact	21
E3-1.	Coal Fired Boilers (73-0013-01-09). Conditions E3-1 through E3-16 apply.	23
E4-1.	Coal Handling Facility (73-0013-11). Conditions E4-1 through E4-3 apply.	29
E5-1.	Limestone Handling Process (73-0013-17). Conditions E5-1 through E5-5 apply.	30
E6-1.	Dry Fly Ash Handling (73-0013-18). Conditions E6-1 through E6-7 apply.	32
E7-1.	Gypsum Dewatering and Handling (73-0013-19). Conditions E7-1 and E7-2 apply.	35
E8-1	Emergency Communications Diesel Generator Engine, 90hp. Conditions E8-1 through E8-16 apply	36

END OF PERMIT NUMBER 560775

ATTACHMENT 1	Opacity Matrix Decision Tree for Visible Emission Evaluation by TVEE Methods 1 and 2 and EPA Method 9, amended September 11, 2013
ATTACHMENT 2	Compliance Assurance Monitoring (CAM) Plan
ATTACHMENT 3	Emission Factors and Calculation of Particulate Emissions from Coal Handling Facility (73-0013-11)
ATTACHMENT 4	Emission Factors and Calculation of Particulate Emissions from Dry Fly Ash Handling Process (73-0013-18)
ATTACHMENT 5	Emission Factors and Calculation of Particulate Emissions from Limestone Handling Process (73-0013-17)
ATTACHMENT 6	Emission Factors and Calculation of Particulate Emissions from Gypsum Handling Process (73-0013-19)
ATTACHMENT 7	Nonapplicable Requirements
ATTACHMENT 8	Acid Rain Permit for TVA - Kingston Fossil Plant

SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

A1. Definitions. Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

A2. Compliance requirement. All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act.

The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

A3. Need to halt or reduce activity. The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

A4. The permit. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

A5. Property rights. The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

A6. Submittal of requested information. The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

A7. Severability clause. The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

(a) The permittee shall pay an annual major source emission fee based upon the responsible official's choice of actual emissions or allowable emissions. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A major source annual emission fee will not be charged for emissions in excess of the cap (s) or for carbon monoxide.

(b) Major sources who have filed a timely, complete operating permit application in accordance with 1200-03-09-.02(11), shall pay allowable emission based fees until the beginning of the next annual accounting period following receipt of their major source operating permit. At that time, the permittee shall begin paying their annual emission fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees as stated under SECTION E of this permit. Once permitted, altering the existing choice shall be accomplished by a written request of the major source, filed in the office of the Technical Secretary at least one hundred eighty days prior to the expiration or reissuance of the major source operating permit.

(c) Major sources must conform to the following requirements with respect to fee payments:

1. If a major source choosing an allowable based annual emission fee wishes to restructure its allowable emissions for the purposes of lowering its annual emission fees, a mutually agreed upon, more restrictive regulatory requirement may be established to minimize the allowable emissions and thus the annual emission fee. The more restrictive requirement must be specified on the permit, and must include the method used to determine compliance with the limitation. The documentation procedure to be followed by the major source must also be included to insure that the limit is not exceeded. Restructuring the allowable emissions is permissible only in the annual accounting periods of eligibility and only, if the written request for restructuring is filed with the Technical Secretary at least 120 days prior to the beginning of the annual accounting period of eligibility. These periods of eligibility occur upon expiration of the initial major source operating permit, renewal of an expired major source operating permit or reissuance of a major source operating permit.

2. Major sources paying on allowable based emission fees will be billed by the Division no later than April 1 prior to the end of the accounting period. The major source annual emission fee is due July 1 following the end of the accounting period.

3. Major sources choosing an actual based annual emission fee shall file an actual emissions analysis with the Technical Secretary which summarizes the actual emissions of all regulated pollutants at the air contaminant sources of their facility. Based upon the actual emissions analysis, the source shall calculate the fee due and submit the payment and the analysis each July 1st following the end of the annual accounting period.

4. Major sources choosing a mixture of allowable and actual based emission fees shall file an actual emissions and allowable emissions analysis with the Technical Secretary which summarizes the actual and allowable emissions of all regulated pollutants at the air contaminant sources of their facility. Based upon the analysis, the source shall calculate the fee due and submit the payment and the analysis each July 1st following the end of the annual accounting period.

The mixed based fee shall be calculated utilizing the 4,000 ton cap specified in subparagraph 1200-03-26-.02(2)(i). In determining the tonnages to be applied toward the regulated pollutant 4,000 ton cap in a mixed based fee, the source shall first calculate the actual emission based fees for a regulated pollutant and apply that tonnage toward the regulated pollutant's cap. The remaining tonnage available in the 4,000 ton category of a regulated pollutant shall be subject to allowable emission based fee calculations for the sources that were not included in the actual emission based fee calculations. Once the 4,000 ton cap has been reached for a regulated pollutant, no additional fee shall be required.

5. Major sources choosing to pay their major source annual emission fee based on actual based emissions or a mixture of allowable and actual based emissions may request an extension of time to file their emissions analysis with the Technical Secretary. The extension may be granted by the Technical Secretary up to ninety (90) days. The request for extension must be postmarked no later than July 1 or the request for extension shall be denied. The request for extension to file must state the reason and give an adequate explanation.

An estimated annual emission fee payment of no less than eighty percent (80%) of the fee due July 1 must accompany the request for extension to avoid penalties and interest on the underpayment of the annual emission fee. A remaining balance due must accompany the emission analysis. If there has been an overpayment, a refund may be requested in writing to the Division or be applied as a credit toward next year's major source annual emission fee. The request for extension of time is not available to major sources choosing to pay their major source annual emission fee based on allowable emissions.

6. Newly constructed major sources or minor existing sources modifying their operations such that they become a major source in the midst of the standard July 1st to June 30th annual accounting period, shall pay allowable based annual emission fees for the fractional remainder of the annual accounting period commencing upon their start-up. At the beginning of the next annual accounting period, the "responsible official" of the source may choose to pay annual emission fees based on actual or allowable emissions or a mixture of the two as provided for in this rule 1200-03-26-.02.

- (d) Where more than one (1) allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31 will place such regulated emissions in the specific hazardous air pollutant under regulation. If the pollutant is also in the family of volatile organic compounds or the family of particulates, the pollutant shall not be placed in that respective family category.
2. A miscellaneous category of hazardous air pollutants shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that do not have an allowable emission standard. A pollutant placed in this category shall not be subject to being placed in any other category such as volatile organic compounds or particulates.
3. Each individual hazardous air pollutant and the miscellaneous category of hazardous air pollutants is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).
4. Major sources that wish to pay annual emission fees for PM₁₀ on an allowable emission basis may do so if they have a specific PM₁₀ allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM₁₀ emission basis, it may do so if the PM₁₀ actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM₁₀ emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM₁₀ emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM₁₀ emissions.

TAPCR 1200-03-26-.02 (3) and (9) and 1200-03-09-.02(11)(e)1(vii)

- A9. **Permit revision not required.** A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

- A10. **Inspection and entry.** Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or his authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

- (a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

A11. Permit shield.

- (a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:
 - 1. Such applicable requirements are included and are specifically identified in the permit; or
 - 2. The Technical Secretary has, in acting on the renewal applications dated March 14, 2007, and December 7, 2011, determined that certain requirements specifically identified and listed in Attachment 7, are not applicable to the source.
- (b) Nothing in this permit shall alter or affect the following:
 - 1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;
 - 2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - 3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
 - 4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.
- (c) Permit shield is granted to the permittee.

TAPCR 1200-03-09-.02(11)(e)6

A12. Permit renewal and expiration.

- (a) Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted at least 180 days, but no more than 270 days prior to the expiration of this permit.
- (b) Provided that the permittee submits a timely and complete application for permit renewal the source will not be considered in violation of paragraph 1200-03-09-.02(11) until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).
- (c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)3 and 2, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

- (a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:
1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.
 2. Additional requirements become applicable to an affected source under the acid rain program.
 3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.
- (c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.
- (d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:
1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90 day time period.
 2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.
 3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).
 4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR 1200-03-09-.02(11)(f)6 and 7.

- A14. Permit transference.** An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:

- (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
- (b) written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

A15. Air pollution alert. When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03.

A16. Construction permit required. Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(aa) or subparagraph TAPCR 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

A17. Notification of changes. The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.

- (a) change in air pollution control equipment
- (b) change in stack height or diameter
- (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

A18. Schedule of compliance. The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. Acid rain program

- (a) The permittee shall not produce emissions in excess of allowances held under Title IV of the Federal Clean Air Act and the regulations promulgated thereunder and TAPCR 1200-3-30.
- (b) The permittee shall not be subject to the permit revision requirements of TAPCR 1200-3-9-.02(11)(f) for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement.
- (c) Where an applicable requirement of the Federal Act is more stringent than the Federal regulations promulgated under Title IV of the Federal Act, both provisions shall be incorporated into the permit and shall be enforceable by the administrator.
- (d) No limit shall be placed on the number of allowances held by this source under the acid rain program. The permittee may not use allowances as a defense for noncompliance with any other applicable requirement.
- (e) Any allowance shall be accounted for according to the regulations promulgated under Title IV of the Federal Clean Air Act and the provisions of TAPCR 1200-3-30.

TAPCR 1200-03-09-.02(11)(e)1(iv)

A20. Title VI.

- (a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - 1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
 - 2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
 - 3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.
- (b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- (c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program(SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

TAPCR 1200-03-09-.03(8) and 40 CFR 82

- A21. 112 (r).** The permittee shall comply with the requirement to submit to the Administrator or designated State Agency a risk management plan, including a registration that reflects all covered processes, by June 21, 1999, if the permittee's facility is required pursuant to 40 CFR, 68, to submit such a plan.

TAPCR 1200-03-09-.03(8) and 40 CFR 68

SECTION B

**GENERAL CONDITIONS for MONITORING,
REPORTING, and ENFORCEMENT**

B1. Recordkeeping. Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.

(a) Where applicable, records of required monitoring information include the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The company or entity that performed the analysis;
4. The analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions as existing at the time of sampling or measurement.

(b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B2. Retention of monitoring data. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

B3. Reporting. Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B4. Certification. Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

B5 (SM2). Annual compliance certification. The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

(a) The identification of each term or condition of the permit that is the basis of the certification;

(b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information.

(c) Reserved.

(d) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and

(e) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* “Excursion” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** “Exceedance” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol.62, No.204, October 22, 1997, pages 54946 and 54947

B6. Submission of compliance certification. The compliance certification shall be submitted to:

Tennessee Department of Environment and Conservation Division of Air Pollution Control Knoxville Environmental Field Office 3711 Middlebrook Pike Knoxville, Tennessee 37921 e-mail: APC.KnoxEFO@tn.gov	and	Air and EPCRA Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
--	-----	---

TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

B7. Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.
2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.
3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The

notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

- (b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

- (a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.
- (b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.
- (c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:
 1. Stack or emission point involved
 2. Time malfunction, startup, or shutdown began and/or when first noticed
 3. Type of malfunction and/or reason for shutdown
 4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
 5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

- B9. Malfunctions, startups and shutdowns - reasonable measures required.** The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).
- TAPCR 1200-03-20-.02

- B10 (SM1).** Reserved – SM1 deletes this condition.

B11. Report required upon the issuance of a notice of violation for excess emissions. The permittee must submit within twenty (20) days after receipt of the notice of violation, the data shown below to assist the Technical Secretary in deciding whether to excuse or validate the violation. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty (20) day time period. The minimum data requirements are:

- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
- (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
- (c) The time and duration of the emissions;
- (d) The nature and cause of such emissions;
- (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
- (f) The steps taken to limit the excess emissions during the occurrence reported, and
- (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty (20) day period specified shall preclude the admissibility of the data for consideration of excusal for malfunctions.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

C1. Operational flexibility changes. The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:

- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
- (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
- (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
- (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
- (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
- (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
- (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

C2. Section 502(b)(10) changes.

- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7 day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
- (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - 3. a declaration and quantification of any change in emissions;
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.
- (c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4 (i)

C3. Administrative amendment.

- (a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

- (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.
- (c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

C4. Minor permit modifications.

- (a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).
- (b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
- (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.
- (d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

- (a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).
- (b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications. Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

- (a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.
- (b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).
- (c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d) 1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

- D1. Visible emissions.** With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six minute period per one (1) hour of not more than forty (40) percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.

Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or his representative upon his request.

The permittee will be issued a certificate of validation upon satisfactory completion of the requirements of TAPCR 1200-03-05-.05. The certificate will be effective upon issuance.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.

- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.

- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

- D7. Fugitive Dust.**

(a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;

2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stock piles, and other surfaces which can create airborne dusts;
 3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
- (b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

TAPCR 1200-03-08

D8. Open burning. The permittee shall comply with the TAPCR 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. Asbestos. Where applicable, the permittee shall comply with the requirements of 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

D10. Annual certification of compliance. The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

Revised 10/2011

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

73-0013	Facility Description:	TVA Kingston is a steam electric generating facility with nine steam producing boilers and coal and ash handling operations.
----------------	------------------------------	--

Conditions E1 and E2 apply to all sources in Section E of this permit unless otherwise noted.

E1. Fee payment: mixed (actual and allowable) emissions basis.

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 73-0013

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	N/A	AEAR	Includes all fee emissions. See Notes for calculation methods for AEAR
PM ₁₀	N/A	N/A	
SO ₂	206,575	N/A	
VOC	224.3	N/A	Includes all fee emissions. Maximum actual emissions.
NO _x	46,901.6	N/A	Maximum actual emissions.
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAP WITHOUT A STANDARD)*			
VOC FAMILY GROUP	38.1	N/A	Fee emissions are included in VOC above. Maximum actual HAP emissions
NON-VOC GASEOUS GROUP	N/A	AEAR	Fee emissions are not included above. See Notes for calculation methods for AEAR.
PM FAMILY GROUP	N/A	AEAR	Fee emissions are included in PM above.
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAP WITH A STANDARD)**			
VOC FAMILY GROUP	To be determined	N/A	See notes.
NON-VOC GASEOUS GROUP	N/A	AEAR	See notes.
PM FAMILY GROUP	N/A	AEAR	See notes.
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT NOT LISTED ABOVE	N/A	N/A	

NOTES

AAP The Annual Accounting Period (AAP) is a twelve (12) consecutive month period that begins each July 1st and ends June 30th of the following year. The present Annual Accounting Period began July 1, 2015 and ends June 30, 2016. The next Annual Accounting Period begins July 1, 2016 and ends June 30, 2017.

N/A N/A indicates that no emissions are specified for fee computation.

AEAR AEAR indicates that an Actual Emissions Analysis is Required to determine the actual emissions of:

- (1) each regulated pollutant (Particulate matter, SO₂, VOC, NO_x and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) each pollutant group (VOC Family, Non-VOC Gaseous, and Particulate Family), and
- (3) the Miscellaneous HAP Category

under consideration during the Annual Accounting Period.

* **Category Of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, the **Miscellaneous HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

** **Category Of Specific HAP (HAP With A Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(I). A Utility MACT rule is expected in the term of this permit. After the effective date of any standards promulgated as a part of such rule, fees for PM and non-VOC gaseous HAPs will be determined on an AEAR calculation. VOC HAPs will be calculated on an allowable basis.

*** **Category Of NSPS Pollutants Not Listed Above:** This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the **PM, SO₂, VOC or NO_x** emissions from each source in this permit. **For fee computation**, each **NSPS pollutant not listed above** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

Actual Emissions Analyses Required for source 73-0013 are the following:

- (1) for particulate - all sources
- (2) for HAP, particulate - fuel burning installation 73-0013-01-09
- (3) for Non-VOC gaseous group (HAP without a standard) - all sources

Actual particulate emissions for fuel burning installation 73-0013-01-09 shall be calculated as follows:

$$\text{TPY per boiler} = (\text{btu/yr}) (\text{lb particulate} / 10^{12} \text{ btu}) (\text{ton} / 2,000 \text{ lb})$$

where: $\text{btu/yr} =$ actual annual heat input to the boiler for the annual accounting period.

$\text{lb particulate} / 10^{12} \text{ btu} =$ average concentration of particulate in the stack gas from the most recent stack test.

Actual particulate emissions for source 73-0013-11 (coal handling) shall be calculated as described in Attachment 3 of this permit.

Actual particulate emissions for source 73-0013-17 (limestone handling) shall be calculated as described in Attachment 5 of this permit.

Actual particulate emissions for source 73-0013-18 (dry fly ash handling) shall be calculated as described in Attachment 4 of this permit.

Actual particulate emissions for source 73-0013-19 (gypsum dewatering and handling) shall be calculated as described in Attachment 6 of this permit.

Actual Non-VOC gaseous group (HAP without a standard) shall be calculated for the annual accounting period and as reported in the National Emissions Inventory.

END NOTES

- The permittee shall:**
- (1) Pay major source annual **mixture (allowable and actual) based emission fees**, as requested by the responsible official, for each annual accounting period (AAP) by July 1 of each year.
 - (2) Prepare an **actual emissions and allowable emissions analysis** in accordance with the above **Fee Emissions Summary Table for each AAP (July 1 of each year through June 30 of the following year)**. The **actual emissions and allowable emissions analysis** shall include:

- (a) the completed **Fee Emissions Summary Table**,
 - (b) each **AEAR** required by the above **Fee Emissions Summary Table**,
and
 - (c) the records used to complete the **AEARs** required by the above **Fee Emissions Summary Table**.
- (3) Submit the **actual emissions and allowable emissions analysis** at the time the fees are paid in full.
 - (4) Calculate the fee due based upon the **actual emissions and allowable emissions analysis**, and submit the payment on July 1st following the end of the **annual accounting period**. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Major sources may request an extension of time to file their emissions analysis with the Technical Secretary as specified in Condition A8(c)5 of this permit. Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions and allowable emissions analysis shall be submitted to The Technical Secretary at the following address:

**Tennessee Department of Environment and Conservation
Division of Fiscal Services
Consolidated Fee Section– APC
William R. Snodgrass Tennessee Tower
312 Rosa L Parks Avenue, 10th Floor
Nashville, TN 37243**

TAPCR 1200-03-26-.02 (3) and (9), and 1200-03-09-.02(11)(e)1 (iii) and (vii)

E2-1. (SM3) Reporting requirements.

- (a) **Quarterly Reports.** Reporting periods shall be **January 1 to March 31, April 1 to June 30, July 1 to September 30, and October 1 to December 31** of each calendar year. The quarterly reports shall be submitted within 30 days after the end of each reporting period. These reports are not required to be certified by a responsible official. Quarterly reports of this facility (**73-0013**) shall include any monitoring and recordkeeping required by Condition **E3-13** of this permit. A summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance. These reports shall be submitted to the Technical Secretary at the following address:

**Division of Air Pollution Control
ATTN: Compliance Validation Section
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243**

or,

Email (signed PDF copy): Air.Pollution.Control@tn.gov.

- (b) **Semiannual reports.** Reporting periods shall be **January 1 to June 30** and **July 1 to December 31** of each calendar year. The Semiannual reports shall be submitted within 60 days after the end of each reporting period. Semiannual reports of this facility (**73-0013**) shall include:
 - (1) A summary of any recordkeeping and monitoring required by Conditions **E3-4(b), E3-4(e), E3-5, E3-6, E3-10, E3-16, E4-1, E5-1, E5-2, E6-2, E6-3, E7-1, and E8-14** of this permit. A summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.

- (d) **Accidental Release Plan.** In accordance with Section 112(r) of the Clean Air Act and Rule 1200-03-32-.03(1) of Tennessee Air Pollution Control Regulations, the permittee has filed a copy of the accidental release plan for this facility. This plan has been filed with both EPA Region IV and the Division of Air Pollution Control. The permittee shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. Such certification is due no later than January 31 for the preceding calendar year in accordance with 1200-03-32-.03(3) of TAPCR. The certification shall be submitted to the Technical Secretary at the following address:

**Tennessee Department of Environment and Conservation
Division of Air Pollution Control
ATTN: East Tennessee Permit Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243**

or,

Email (signed PDF copy): Air.Pollution.Control@tn.gov

E2-2. Recordkeeping: Data Entry Requirements

- (a) For monthly recordkeeping, all data, including the results of all calculations, must be entered into the log no later than thirty (30) days from the end of the month for which the data is required.
- (b) For weekly recordkeeping, all data, including the results of all calculations, must be entered into the log no later than seven (7) days from the end of the week for which the data is required.
- (c) For daily recordkeeping, all data, including the results of all calculations, must be entered into the log no later than seven (7) days from the end of the day for which the data is required.

TAPCR 1200-03-10-.02(2)(a)

E2-3. Visible Emissions Evaluation: General Requirements

- (a) For all emission sources that use the opacity matrix decision trees (Attachment 1) to comply with any visible emissions requirement, including emission sources for which visible emissions are not required by the opacity matrix, if the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.
- (b) Compliance with the fugitive emission requirements of **Condition D7(b)** shall be determined by Tennessee Visible Emissions Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986. These evaluations shall be made semiannually.

TAPCR 1200-03-08, TAPCR 1200-03-09-.02(11)(e)1.(iii), TAPCR 1200-03-10-.02(1)(a)

E2-4. Ambient Monitoring for SO₂

Consistent with the provisions of TAPCR 1200-03-14-.01(6), each owner or operator of a fuel burning installation having a total rated capacity greater than 1,000 MMBtu/hr of sulfur dioxide during calendar year 1972 or any other calendar year thereafter must comply with the following requirements:

- (a) Demonstrate to the satisfaction of the Technical Secretary, that the sulfur dioxide emitted either alone or in contribution to other sources will not interfere with attainment and maintenance of any primary or secondary air quality standard.
- (b) Install and maintain air quality sensors to monitor attainment and maintenance of ambient air quality standards in the areas influenced by the emissions from such installation. Such shall be done in the manner prescribed by the Technical Secretary. Results of such monitoring shall be provided to the Technical Secretary in the manner and form as he shall

direct. Owners or operators may petition and be granted permission by the Technical Secretary to terminate ambient air quality monitoring provided two calendar years air quality data has been generated in the area under the influence of the source's emissions to verify compliance with the Tennessee Ambient Air Quality Standards. Petitions may be granted if the following conditions are met:

- (1) The source must be located in an attainment area and must not significantly impact a sulfur dioxide nonattainment area.
- (2) Measurements of air quality in the vicinity of the source demonstrate that ambient sulfur dioxide levels do not exceed 75 percent of the Tennessee Ambient Air Quality Standards.
- (c) All calculations performed pursuant to demonstration required by rule .01(6) shall assume that the process emission source and fuel burning installation is operating at a maximum rated capacity.

Pursuant to the approval letter from the Technical Secretary dated February 1, 2008, this facility has met the requirements of paragraphs (b)(1) and (b)(2) of this condition, and ambient SO₂ monitoring is not required.

TAPCR 1200-03-14-.01(6)

E2-5. Consent Decree/Federal Facilities Compliance Agreement

This facility is subject to a Consent Decree (State of Alabama et. al. v. TVA, Civil Action No. 3:11-cv-00170, filed April 14, 2011, approved June 13, 2011), which imposes certain requirements at this facility that are enforceable in accordance with the terms of that decree. This permit incorporates all new applicable requirements as permit conditions, as required by paragraph 154 of the referenced Consent Decree.

TAPCR 1200-03-06-.01(7), TAPCR 1200-03-14-.01(3), Consent Decree

E2-6. (SM2) Utility MACT Requirements

The permittee is placed on notice that coal-fired and oil-fired EGUs (as defined in 40 CFR §63.10042) are subject to the requirements of 40 CFR 63 Subpart UUUUU (National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units).

In a letter dated December 5, 2014, the permittee requested a one-year extension to the compliance date for the 40 CFR 63 Subpart UUUUU Mercury and Air Toxics Standard (MATS) for the affected electric generating units at this facility. Pursuant to 40 CFR §63.6 paragraphs (i)(9) through (i)(14), the Division granted a one-year compliance date extension. The extended compliance date for the applicable requirements of the MATS is **April 16, 2016**.

TAPCR 1200-03-09-.03(8), 40 CFR 63 Subpart UUUUU, 40 CFR §63.6(i)(4)(i)(A), Division letter to permittee dated December 15, 2014

E2-7. (SM1). Identification of Responsible Official, Technical Contact, and Billing Contact

- (a) The applications that were utilized in the preparation of this renewal permit are dated March 14, 2007, December 7, 2011, and May 14, 2014, and are signed by Brian Doug Keeling, Plant Manager. If this person terminates his employment or is assigned different duties such that he is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.
- (b) The applications that were utilized in the preparation of this renewal permit are dated March 14, 2007, December 7, 2011, and May 14, 2014. Cynthia McCowan, Program Administrator, Environmental, is identified as the

Principal Technical Contact for the permitted facility. If this person terminates her employment or is assigned different duties such that he is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.

- (c) The applications that were utilized in the preparation of this renewal permit are dated March 14, 2007, December 7, 2011, and May 14, 2014. The current Billing Contact for this facility is J. Thomas Waddell, Senior Manager, Air Permits, Compliance, and Monitoring. If this person terminates his employment or is assigned different duties such that he is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

73-0013-01-09

Source Description: Nine (9) Coal Fired Boilers for Steam & Electricity Generation. 16,844 Million Btu/hour nominal heat input. 1,700 Megawatts (nameplate capacity). Electrostatic Precipitator (ESP) control of particulate matter (one ESP unit per each boiler). Selective Catalytic Reduction (SCR) control of nitrogen oxides (NO_x) (one SCR unit per each boiler). TVA designated emission units #1 (bypass stack for boilers 1-5) and #2 (bypass stack for boilers 6-9). Wet-limestone flue-gas desulfurization (FGD) absorber (TVA designated emission units #20 and 21) for control of sulfur dioxide (SO₂).

Conditions E3-1 through E3-14 apply to fuel burning installation 73-0013-01-09

E3-1. The fuel burning equipment at this installation consists of nine Combustion Engineering coal fired boilers installed in 1954. The units are a pulverized-coal, tangentially-fired, dry bottom boilers without flyash reinjection. The Boilers exhaust through two flues of 400 feet in height and 30 feet in diameter each (exhaust flues 20 and 21 for boilers 1-9). The Boilers may also exhaust through two stacks of 1,000 feet in height and 26 feet in diameter each (exhaust stack 1 for boiler units 1-5 and stack 2 for units 6-9).

The facility is permitted to burn the following fuels:

- (1) Coal with No. 2 fuel oil or reprocessed oil used for startup;
- (2) Wood;
- (3) Fuel oil or reprocessed oil may also be burned as follows:
 - (i) under non-steady-state and low-load conditions to ensure flame stability, and
 - (ii) to supplement boiler heat input when the heat input from coal is insufficient.
- (4) Illegal drugs confiscated by law enforcement agencies may be disposed of in these units. No more than two tons of such material may be disposed of in any 12-month period. The facility will maintain records showing the amount(s) destroyed by weight and the date(s) of destruction.

TAPCR 1200-03-09-.02(11)(e)1.(i)

E3-2. The amount of on and off spec oil, as defined at 40 CFR 279, and nonhazardous solvents that can be burned in this fuel burning installation shall not exceed 100,000 gallons per year. In addition, boiler cleaning waste, oil contaminated media, and oil-contaminated soil and absorbent material used to clean up oil spills may be burned.

Compliance Method: The permittee shall maintain daily records of the amounts of used oil and nonhazardous solvents burned. If there is no daily usage of a fuel, then a record of the respective fuel usage on that day is not required. These records shall be maintained at the facility and shall be available for inspection by the Technical Secretary or his representative. These records shall be retained for a period of not less than five (5) years.

TAPCR 1200-03-09-.02(11)(e)1.(i) and (iii), 1200-03-10-.02(2)(a), 40 CFR §51.110(a)

E3-3. The permittee may conduct test burns of fuels not listed in **Conditions E3-1 and E3-2** for up to thirty (30) operating days without a construction permit or a reopening of this permit, provided that:

- (a) Notification is provided to the Technical Secretary at least 30 days prior to initiation of the burning of such fuels. Notification at a minimum shall include a copy of the test plan; the fuels to be burned; an estimated start date and completion date; an estimate of the impact on control devices; and an estimate of the impact on emissions;
- (b) The permittee complies with all applicable emission limitations; and
- (c) The permittee agrees to perform additional testing as may be required by the Technical Secretary.

The permanent use of such fuels shall be allowed upon completion of testing unless the Technical Secretary determines that a permit revision is required. Such determination will examine triggering control requirements under the PSD, NESHAP, NSPS or other programs. In any event, the Technical Secretary shall issue an approval or disapproval for the continuing use of the alternate fuel.

TAPCR 1200-03-09-.02(11)(e)1.(i) and (iii)

E3-4. (SM1) Particulate matter emitted from this fuel burning installation shall not exceed 0.030 pounds per million British Thermal Units (lb/MMBtu) of heat input as determined by stack testing in accordance with TAPCR 1200-03-12 and 40 CFR 60, Appendix A, Method 5 and ensuring that the front half filter temperature shall be $160^{\circ} \pm 14^{\circ} \text{C}$ ($320^{\circ} \pm 25^{\circ} \text{F}$).

Compliance Method: Compliance with this condition shall be assured as follows:

- (a) The permittee shall perform stack testing of this fuel burning source to demonstrate compliance with the applicable particulate emissions limits. Testing shall be performed every calendar year, and a particulate source test report shall be filed with the Technical Secretary within 45 days after completion of the testing. Ten (10) days prior to conducting the source test, the permittee shall provide notice of such test to the Technical Secretary to afford him the opportunity to have an observer present. Testing of wet stacks shall be conducted in accordance with TAPCR 1200-03-12 and 40 CFR 60, Appendix A, Method 5 **and** ensuring that the front half filter temperature shall be $160^{\circ} \pm 14^{\circ} \text{C}$ ($320^{\circ} \pm 25^{\circ} \text{F}$). TVA shall calculate the PM emission rate from the stack test results in accordance with 40 CFR 60.8(f). The continuous in-duct opacity monitor(s) shall be fully operational prior to and during the performance test. The opacity data generated during this compliance testing shall be incorporated into the test report. Stack testing performed as part of an annual relative response audit (RRA) under 40 CFR 63 UUUUU (**Condition E2-6**) shall be considered to satisfy this requirement.
- (b) The permittee shall operate the continuous opacity monitoring system (COMS) to provide an indication of good operational and maintenance practices. The COMS shall comply with **Conditions E3-9, E3-10, E3-11, E3-12, and E3-13** of this permit and with the applicable provisions of 40 CFR 64, as indicated in the attached CAM plan (Attachment 2).
- (c) The Technical Secretary may require additional performance testing for exceedances of the *de minimis* criteria specified in TAPCR 1200-03-20-.06. The permittee shall conduct performance tests upon written notification of the Technical Secretary, within the time period specified in the written notification.
- (d) Beginning June 13, 2011 and continuing thereafter, the permittee shall continuously operate (as defined by Paragraph 15 of the Consent Decree) each PM Control Device on each Unit. TVA shall, at a minimum, to the extent reasonably practicable and consistent with manufacturers' specifications, the operational design of the Unit, and good engineering practices,
 1. Fully energize each section of the ESP for each Unit;
 2. Operate automatic control systems on each ESP to maximize PM collection efficiency; and
 3. Maintain power levels delivered to the ESPs as needed to maximize collection efficiency.

TVA must complete and submit all PM emission control optimization studies according to the schedule dictated by Paragraph 99 the Consent Decree.

- (e) No later than twelve (12) months after the date that EPA approves the plan for installation and correlation of the PM CEMS and the QA/QC protocol, as specified in the Consent Decree, the permittee shall install, correlate, maintain, and operate PM continuous emission monitoring systems (CEMS) as specified below. Each PM CEMS shall comprise a continuous particle mass monitor measuring PM concentration, directly or indirectly, on an hourly average basis and a diluent monitor used to convert the concentration to units of lb/MMBtu. The PM CEMS installed at each flue must be appropriate for the anticipated stack conditions. The permittee shall maintain, in an electronic database, the hourly average emission values produced by each PM CEMS in lb/MMBtu. Except for periods of monitor malfunction, maintenance, or repair, the permittee shall continuously operate the PM CEMS at all times when at least one Unit it serves is operating.

No later than ninety (90) days after the permittee begins operation of the PM CEMS, the permittee shall conduct tests of each PM CEMS to demonstrate compliance with the PM CEMS installation and correlation plan(s) and QA/QC protocol(s). Within forty-five (45) days of each such test, the permittee shall submit the results to EPA, the States, and the Citizen Plaintiffs pursuant to Section VIII (Notices) of the Consent Decree. Following the installation of each PM CEMS, the Permittee shall begin and continue to report the data recorded by the PM CEMS, expressed in lb/MMBtu

on a 3-hour rolling average basis and a 24-hour rolling average basis in electronic format to EPA, the States, and the Citizen Plaintiffs, including identification of each 3-hour average and 24-hour average above the applicable PM Emission Rate for Kingston Units 1-9. Upon termination of the Consent Decree, or the applicable provisions therein, test results shall be submitted to the Technical Secretary; submittal to EPA and the Citizen Plaintiffs will no longer be required by this permit upon termination of the Consent Decree.

TAPCR 1200-03-06-.02(1), 1200-03-09-.02(11)(e)1.(iii), 40 CFR 64, Consent Decree

- E3-5.** Sulfur dioxide (SO₂) emissions from this fuel burning installation shall not exceed 2.8 lb/MMBtu of heat input (TAPCR 1200-03-14-.02(1)(a)). A twenty-four (24) hour midnight to midnight averaging basis shall be utilized, as specified in TAPCR 1200-03-14-.02(1)(d).

Compliance Method: Compliance with this emission standard shall be determined through the use of continuous in-stack monitoring for sulfur dioxide. Continuous monitoring for SO₂ shall meet the requirements of TAPCR 1200-03-10-.02 and Conditions **E3-6, E3-7, E3-12, and E3-13** of this permit.

TAPCR 1200-03-09-.02(11)(e)1.(iii); 1200-03-10-.02; 1200-03-14-.02(1)(a); and 1200-03-14-.02(1)(d)

State-Only Provision: Consistent with the provisions of TAPCR 1200-03-20-.06, no notice of violation shall be automatically issued unless the specified *de minimis* level of one (1) 24-hour period per year of sulfur dioxide emissions in excess of the applicable sulfur dioxide emissions standard, as measured by the continuous in-stack sulfur dioxide emissions monitoring system, is exceeded. This exemption from automatic issuance of a notice of violation is applicable provided that good operational and maintenance practices are utilized for the fuel burning equipment and the operational availability of the sulfur dioxide monitoring system (see **Condition E3-6**) is maintained.

E3-6. Operational Availability Condition for the Sulfur Dioxide Monitoring System

The use of continuous in-stack monitoring for sulfur dioxide is the method by which this fuel burning installation proves continual compliance with the applicable sulfur dioxide emission limitation. Therefore, for this fuel burning installation to demonstrate continual compliance with the applicable sulfur dioxide emission limitation, each sulfur dioxide monitoring system shall be fully operational for at least ninety five percent (95%) of the operational time of the monitored units during each calendar quarter. An operational availability level of less than this amount may be considered the basis for declaring the fuel burning installation in noncompliance with the applicable monitoring requirements, unless the reasons for the failure to maintain these levels of operational availability are accepted by the Division as being legitimate malfunctions of the instruments or due to limited operation of the monitored units.

TAPCR 1200-03-10-.02(1)(a)

E3-7. Quality Assurance Condition for the Sulfur Dioxide Monitoring System

Quality assurance checks shall be performed on the sulfur dioxide monitoring system on an annual basis. The quality assurance checks shall consist of a repetition of the relative accuracy portion of the Performance Specification Test. Written reports of the quality assurance checks shall be submitted to the Technical Secretary.

Within ninety (90) days of each major modification or major repair of any sulfur dioxide emissions monitor, diluent monitor, or electronic signal combining system, a repeat of the performance specification test shall be conducted. A written report of the performance specification test shall be submitted to the Technical Secretary as proof of the continuous operation of the sulfur dioxide emissions monitoring system within acceptable limits.

TAPCR 1200-03-10-.02(1)(a)

- E3-8.** Visible emissions from each stack of this fuel burning installation shall not exceed twenty (20) percent opacity except for one six (6) minute period per one (1) hour of not more than forty (40) percent opacity, as specified in TAPCR 1200-03-05-.01(1). Opacity data reduction shall be accomplished by EPA Method 9 utilizing the procedures outlined in the current 40 CFR 60, Appendix A (6 minute average opacity).

Compliance Method: Consistent with the provisions of Paragraph 1200-03-05-.03(1) of the Regulations, compliance with the applicable visible emissions standards shall be determined by a certified reader using Method 9. Each stack shall be evaluated

biannually unless a valid reading cannot be made due to merging plumes or other reasons. In the event that a valid reading cannot be taken within 6 months and provided that at least one reading was attempted during the six month period, an additional 30 days shall be allowed in which to attempt another reading. If a valid reading cannot again be made, the permittee shall within 60 days of the end of the six-month period submit a report describing its efforts to obtain valid readings, and the reasons it could not.

TAPCR 1200-03-05-.01(1)

- E3-9.** Consistent with the requirements of TAPCR 1200-03-05-.02 and 1200-03-20, due allowance shall be made for visible emissions in excess of that allowed in this permit which are necessary or unavoidable due to routine startup and shutdown conditions.

Routine startups as used above shall only cover startups, which have less than 7.0 hours of visible emission levels in excess of the standard in paragraph 1200-03-05-.01(1), and shall not include any periods of time in which visible emissions exceed eighty (80) percent opacity for more than 72 minutes based on six (6) minute average intervals. Routine shutdowns as used above shall only cover shutdowns, which have less than 7.5 hours of visible emission levels in excess of the standard in paragraph 1200-03-05-.01(1), and shall not include any periods of time in which visible emissions exceed eighty (80) percent opacity for more than 30 minutes based upon six (6) minute averaging intervals. For overlapping multiple unit startups and shutdowns, the full exempt period shall apply from the beginning of each individual boiler startup or shutdown. A log of all malfunctions and nonroutine startups and shutdowns shall be maintained in accordance with Rule 1200-03-20-.04. Irrespective of the start-up and shutdown exemptions set forth on this operating permit for any source, no emission shall be allowed which can be proved by the Technical Secretary to cause or contribute to any violations of the Ambient Air Quality Standards contained in Chapter 1200-03-03.

TAPCR 1200-03-05-.02 and 1200-03-20-.06(6)

E3-10. Operational Availability Condition for the Opacity Monitoring System

Each in-duct opacity monitoring system for this fuel burning installation shall be fully operational for at least ninety-five (95) percent of the operational time of the monitored units during each calendar quarter.

An operational availability level of less than this amount may be considered the basis for declaring the fuel burning installation in noncompliance with the applicable monitoring requirement, unless the reasons for the failure to maintain this level of operational availability are accepted by the Division as being legitimate malfunctions of the instruments or due to limited operation of the monitored units.

TAPCR 1200-03-10-.02(1)(a)

E3-11. Quality Assurance Condition for the Opacity Monitoring System

On-stack quality assurance audits shall be conducted on a semiannual basis. This on-stack quality assurance audit shall consist of a repetition of the calibration error portion of Performance Specification 1 (40 CFR 60, Appendix B) utilizing the on-stack audit device, and written reports of the audits shall be submitted to the Technical Secretary.

As an alternative to this, an off-stack quality assurance audit may be conducted on a biennial calendar basis. If elected, this quality assurance audit shall include, at a minimum, a repetition of the calibration portion of 40 CFR 60, Appendix B (Performance Specification 1). Both the monitor transceiver and retroreflector must be removed from the stack and set up to the stack path length prior to conducting the quality assurance. Written reports of the quality assurance checks shall be submitted to the Technical Secretary. Prior to the commencing of the use of this option, the Technical Secretary shall be informed in writing of the election of this option. Utilization of this option shall not be cause for the reopening of this permit.

Within ninety (90) days of each major modification or major repair of any opacity monitor or the electronic signal combining system, a repeat of the performance specification test shall be conducted. A written report of the performance specification test shall be submitted to the Technical Secretary as proof of the continuous operation of the opacity monitoring system within acceptable limits.

TAPCR 1200-03-10-.02(1)(a)

E3-12. Data Averaging for SO₂ and Opacity

For sulfur dioxide, eighteen (18) valid one-hour data averages are required in order to calculate a valid daily average (midnight to midnight). One-hour averages shall be calculated from four or more equally spaced data averages over each one-hour period, except during periods when calibration, quality assurance, or maintenance are being performed. A valid one-hour average during these periods shall consist of at least two data points with each representing a fifteen minute time period. Hourly sulfur dioxide emission rates are not calculated if the affected facility is operated less than 30 minutes in a one-hour period.

“One day” is defined as the twenty-four hour time period from midnight to midnight and “one hour” is defined as any of the twenty-four successive sixty minute time blocks beginning at midnight.

Average values for opacity may be obtained by integration over the 6-minute averaging period or by arithmetically averaging a minimum of 24 equally spaced, instantaneous opacity measurements per 6-minute period. Opacity data recorded during periods of monitoring system breakdown, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages.

TAPCR 1200-03-09-.02(11)(e)(1)(iii); 1200-03-10-.02(1)(a); and 1200-03-10-.02(2)

E3-13. Quarterly Reports for SO₂ and Opacity

From the emissions data generated by the continuous in-stack opacity and sulfur dioxide monitoring systems, quarterly reports of opacity emissions over 20 % and excess sulfur dioxide emissions shall be generated. The format of these quarterly reports shall meet the requirements of Paragraph 1200-03-10-.02(2) of the Tennessee Air Pollution Control Regulations. These reports shall be submitted to the Division no later than thirty (30) days after the end of each calendar quarter.

(a) For opacity monitoring, the reports shall consist of:

- (1) The magnitude in actual percent opacity of all 6-minute averages of opacity greater than 20% for each hour of operation of the source minus one 6-minute exempt period of no more than 40 percent opacity;
- (2) The date and time identifying each period during which the system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. The Technical Secretary may require proof of system performance whenever system repairs or adjustments have been made;
- (3) When no emissions over 20 % opacity have occurred and the system has not been inoperative, repaired, or adjusted, such information shall be included in the report; and
- (4) The nature and cause of emissions over 20 % opacity, if known.

(b) For sulfur dioxide monitoring, the reports shall consist of:

- (1) Emission averages, in the units of the applicable standard, for each averaging period during operation of the source.
- (2) Identification of each averaging period in which the applicable standard was exceeded and the nature and cause of excess emissions, if known;
- (3) The date and time identifying each period during which the system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. The Technical Secretary may require proof of system performance whenever system repairs or adjustments have been made; and
- (4) When no excess emissions have occurred and the system has not been inoperative, repaired, or adjusted, such information shall be included in the report.

TAPCR 1200-03-10-.02(2) and TAPCR 1200-03-09-.02(11)(e)1(iii)

E3-14. Transport Rule (TR) Requirements

The permittee shall comply with the applicable provisions of 40 CFR 97 Subparts AAAAA (TR NO_x Annual Trading Program), BBBBB (TR NO_x Ozone Season Trading Program), and CCCCC (TR SO₂ Group 1 Trading Program). The permittee shall comply with paragraphs 74 through 78 of the Consent Decree regarding the use and surrender of NO_x allowances, and with paragraphs 90 through 93 of the Consent Decree regarding the use and surrender of SO₂ allowances. The permittee may sell, bank, use, trade, or transfer any allowances in accordance with paragraphs 82 and 94 of the Consent Decree (Super-Compliance Allowances). For surrender of allowances, the permittee shall comply with paragraphs 79, 80, 95, and 96 of the Consent Decree.

TAPCR 1200-03-09-.03(8) and 40 CFR §52.2240 and §52.2241, 40 CFR §§97.401 – 97.435, §§97.501 – 97.535, §§97.601 – 97.635, Consent Decree

E3-15. (SM1) Continuous Operation of NO_x and SO₂ Control Equipment

Beginning June 13, 2011 and continuing thereafter, the permittee shall continuously operate any pollution control technology or combustion control (including, but not limited to, SCR, FGD, PM Control Device, SNCR, Low NO_x Burner (LNB), Overfire Air (OFA) or Separated Overfire Air (SOFA)) at all times such Unit is in operation, except during a Malfunction that is determined to be a Force Majeure Event as defined by the Consent Decree. This continuous operation serves to minimize emissions to the greatest extent technically practicable consistent with the technological limitations, manufacturers' specifications, fire prevention codes, and good engineering and maintenance practices for such pollution control technology or combustion control and the Unit. This condition specifically applies to such equipment as the installed SCR and Wet FGD for NO_x and SO₂ emissions control.

TAPCR 1200-03-09-.03(8), Consent Decree

E3-16. (SM1) Compliance with System-Wide Annual NO_x and SO₂ Tonnage Limits

During each calendar year all Units in the TVA System and any New CC/CT Units constructed pursuant to Paragraph 117 of the Consent Decree, collectively, shall not emit NO_x or SO₂ in excess of the System-Wide Annual Tonnage Limitations found in paragraphs 67-69 and 82-84 of the Consent Decree.

Compliance Method: In accordance with 40 CFR 75, TVA shall use CEMS to monitor emissions of NO_x and SO₂ to demonstrate compliance with the System-Wide Annual Tonnage Limitations.

TAPCR 1200-03-09-.03(8), Consent Decree

73-0013-11	Source Description:	<p>Coal Handling Facility: Truck unloading station with coal crusher building and associated conveyors and coal storage yard with associated coal stockout and reclaiming activities. Wet suppression control (water sprays and water truck).</p> <p>TVA designated emission units #3 (old crusher building), #4 (coal storage yard), #5 (truck unloading station), #8 (railcar unloading), #9 (railcar unloading receiving hopper to conveyor BC-13), #10 (stacking tube #2), #11 (stacking tube #1), #12 (transfer station E), #13 (new crusher building), #14 (transfer station C), #15 (coal sampling at railcar unloader - as received), and #16 (coal sampling at crushers – as blended).</p> <p>Crushers and associated conveyors are subject to 40 CFR 60 Subpart Y (Standards of Performance for Coal Preparation Plants) as indicated below.</p>
------------	----------------------------	---

Conditions E4-1 through E4-3 apply to source 73-0013-11

E4-1. The material input rate for this source shall not exceed the following design capacities, on a daily average basis:

Operation/Equipment	Status	Capacity (tons/hour)
Unloading	non-NSPS	5,280
New Truck Unloading System	non-NSPS	600
Crushing	NSPS	2,640 each
Loading	NSPS	2,640
Conveyor drops	NSPS	5,280
Coal Samplings	non-NSPS	2.5

Compliance Method: A daily log of coal processed and hours of operation to show compliance for each of the above operations shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

TAPCR 1200-03-09-.02(11)(e)1.(i) and (iii)

E4-2. Particulate matter emitted from this source shall not exceed 24.9 tons per year and 14.9 tons per year of PM₁₀.

Compliance Method: Compliance with this condition shall be assured as follows:

- (a) During truck delivery of coal and stockout and reclaim coal hauling operations at the coal storage yard, wet suppression (water truck and/or water sprays) shall be used as needed to control fugitive emissions. The suppression system shall be inspected semiannually, and the results of these inspections and any repairs to the system shall be recorded in a log.
- (b) Compliance assurance for this source is also based upon the calculated emissions in Attachment 3 of this permit.

TAPCR 1200-03-07-.01(5), 1200-03-09-.02(11)(e)1.(iii)

E4-3. Visible emissions from this source shall not exhibit 20% opacity or greater, as specified in TAPCR 1200-03-05-.03(6) and 1200-03-16-.22(3)(c). Visible emissions shall be determined by EPA Method 9 in the current 40 CFR 60, Appendix A (six-minute average).

Compliance Method: Compliance with this condition shall be assured by the procedures of the Opacity Matrix Decision Tree for Visible Emission Evaluation, amended September 11, 2013 (Attachment 1).

TAPCR 1200-03-09-.03(8) and §60.254(a)

73-0013-17	Source Description:	Limestone Handling Process: Pre-ground limestone delivered by trucks on paved and unpaved roads to one of four truck unloading stations and by rail to one of three railcar unloading stations. The pre-ground limestone is unloaded pneumatically into one of two 3,000 ton limestone storage silos. Each storage silo has a bin vent filter for fugitive dust control. Wet suppression control for the haul road to ash disposal area and dredge cell ash disposal operations to reduce fugitive dust emissions on paved and unpaved roads. TVA designated emission units # 17 (truck haul road), #18 (limestone silo A with bin vent filter), and # 19 (limestone silo B with bin vent filter).
------------	----------------------------	---

Condition E5-1 through E5-5 apply to source 73-0013-17

E5-1. The amount of pre-ground limestone handled by this source shall not exceed 569,000 tons during any period of 12 consecutive months.

Compliance Method: Monthly records indicating the amount of material handled shall be maintained at the facility and kept available for inspection by the Technical Secretary or his representative for a period of not less than five (5) years.

TAPCR 1200-03-07-.01(5), agreement for PSD avoidance stated in the application dated November 27, 2006, and condition 1 of construction permit 960526P.

E5-2. Particulate matter emitted from the two pre-ground limestone storage silos shall not exceed 1.084 pounds per hour combined.

Compliance Method: Each bin vent filter will be maintained, kept in good operating condition, and inspected semiannually to ensure compliance with the applicable particulate matter limits. Documentation of the semiannual inspections and any maintenance performed will be kept on site for a period of not less than five (5) years

TAPCR 1200-03-07-.01(5), agreement for PSD avoidance stated in the application dated November 27, 2006, and condition 2 of construction permit 960526P.

E5-3. Visible emissions from the silos shall not exhibit greater than ten percent (10%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average). This emission limitation is established pursuant to TAPCR 1200-03-05-.03(6), TAPCR 1200-03-05-.01(1) and 1200-03-05-.01(3) agreement to ten percent (10%) opacity stated in application dated 11/27/2006.

Compliance Method: Compliance with this condition shall be assured by the procedures of the Opacity Matrix Decision Tree for Visible Emission Evaluation, amended September 11, 2013 (Attachment 1).

TAPCR 1200-03-05-.01(1) 1200-03-05-.01(3) and 1200-03-05-.03(6), agreement for PSD avoidance stated in the application dated November 27, 2006, and condition 3 of construction permit 960526P.

E5-4. Fugitive emissions from this source shall be controlled as specified in Rule 1200-03-08-.01. Specifically, no person shall cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

Compliance Method: Compliance with this condition shall be assured as follows:

- (a) Fugitive emissions from this source shall be controlled by the operation, as needed, of the wet suppression system (water truck and sprays) at the haul road.
- (b) Compliance with this standard shall be determined by Tennessee Visible Emissions Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986. These evaluations shall be made semiannually.

TAPCR 1200-03-08-.01(1)(a) and (2), condition 4 of construction permit 960526P

E5-5. Visible emissions from roads and parking areas shall not exhibit greater than ten percent (10%) opacity as determined by Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, as amended on September 15, 1982 and August 24, 1984.

Compliance Method: Compliance with this condition shall be assured by the procedures of the Opacity Matrix Decision Tree for Visible Emission Evaluation, dated September 12, 2005 (Attachment 1).

TAPCR 1200-03-05-.01(1) and 1200-03-05-.03(6), condition 5 of construction permit 960526P.

73-0013-18	Source Description:	<p>Dry Fly Ash Handling: In Phase 1, fly ash will be sluiced to a rim ditch and will be excavated to an on-site temporary storage area or transported off-site. In Phase 2, fly ash will be removed from the precipitators handling system. The material will be transported either off-site or to an on-site temporary storage area. In Phase 3, the fly ash will be removed from the precipitators by a dry handling system and transported either off-site or to a permanent on-site storage area. Additionally, during this phase, material from the temporary storage area will be transported either off-site or to a permanent on-site storage area. In Phase 4, handling of fly ash from the temporary on-site storage area will be complete. Handling of production ash will be as in Phase 3A.</p> <p>The dry fly ash handling system will consist of a fly ash vacuum system with nine (9) operating pumps and two (2) standby vacuum pumps and corresponding filter separators, (TVA designated emission points 33-43). The collected ash will then drop into a vacuum pressure transfer system and be blown into one of two (2) three-day collection fly ash storage silos using a vacuum pressure system that consists of five (5) operating and two (2) standby compressors & bin vent, (TVA designated emission points 44-45). Fly ash loadout to hopper trucks or rail cars through dry spout with pen mixer ash unloader or load out to pneumatic trucks or rail cars, (TVA designated emission points 46-47). Fugitive dust is generated during the transport of the dry fly ash on haul roads (TVA designated emission points 30, 48, 50, and 53).</p>
------------	----------------------------	---

Conditions E6-1 through E6-7 apply to source 73-0013-18

- E6-1.** The stated design throughput capacity of fly ash is 136,986 pounds per hour. The Technical Secretary may require the permittee to assure compliance with this rate. TAPCR 1200-03-09-.01(1)(d) and condition 2 of construction permit 964203P.
- E6-2.** The permittee shall comply with the following emission limits, material handling limits, and work practice standards for the specified emission points:

Emission Point(s)	Emission Limit by Pollutant			Dry Fly Ash Handling
	Total Suspended Particulate (TSP)	PM ₁₀	PM _{2.5}	
Nine (9) operating and two (2) standby vacuum pumps with filter separators to remove fly ash from precipitators, SCRs, and economizers to one of two (2) three-day storage silos. TVA designated emission points 33-43.	0.4 lb/hr and 1.74 tons per year	0.4 lb/hr and 1.74 tons per year	0.4 lb/hr, 1.74 tons per year, and 0.005 grains per dry standard cubic foot (gr/dscf)	The handling of dry fly ash shall not exceed 440,000 tons in any period of twelve consecutive months.
Vacuum pressure transfer system with five (5) operating compressors blowing into two (2) storage silos. Each silo will operate alternately and will be equipped with a pin mixer ash unloader and a bin vent. TVA designated emission points 44-45.	0.52 lb/hr and 2.26 tons per year	0.52 lb/hr and 2.26 tons per year	0.52 lb/hr, 2.26 tons per year, and 0.005 gr/dscf	
Conditioned fly ash unloaded into hopper trucks or rail cars through a pin mixer ash unloader. TVA designated emission points 46-47.	0.03 lb/hr and 0.032 tons per year	0.0143 lb/hr and 0.015 tons per year	0.00022 lb/hr and 0.00023 tons per year	
Trucks and rail cars shall be covered after conditioned fly ash is unloaded.				

These limits represent Best Available Control Technology (BACT) for PM_{2.5}. The permittee has requested this limit in order to avoid major New Source Review for PM_{2.5}.

Compliance Method: The dry fly ash handling system shall be maintained, kept in good operating condition, and inspected semiannually to ensure compliance with the applicable particulate matter limits. Documentation of the semiannual inspections and any maintenance performed shall be kept on site for a period of not less than five (5) years. Monthly records shall be maintained of the amount of fly ash handled by the facility. All data, including all required calculations, must be entered in the log no later than 30 days from the end of the month for which the data is required. The log must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

TAPCR 1200-03-07-.01(5), agreement letter dated February 23, 2011. TAPCR 1200-03-09-.01(5)(b)2.(ii).

E6-3. The permittee shall comply with the following requirements during Phase 1, Phase 2, Phase 3, and Phase 4, as applicable:

Phase	Work Practice Standards	Material Handling Limit	Recordkeeping
Phase 1	Wet suppression shall be used as needed during transport of dewatered fly ash and during operations at the temporary storage area.	No more than 550,000 tons of dewatered fly ash shall be handled during any period of 12 consecutive months.	Monthly records shall be maintained of the amount of dewatered fly ash handled by the facility.
Phase 2	Wet suppression shall be used as needed during transport of conditioned fly ash and during operations at the temporary storage area.	No more than 440,000 tons of dewatered fly ash shall be handled during any period of 12 consecutive months.	Monthly records shall be maintained of the amount of conditioned fly ash handled by the facility.
Phase 3	Wet suppression and vacuum sweeping shall be used as needed during transport of dewatered fly ash from the temporary storage area to the permanent storage area, during transport of conditioned fly ash from the fly ash collection system to the permanent storage area and during operations at the temporary and the permanent storage areas. The haul road between the fly ash collection system and the permanent storage area shall be paved.	No more than 1,100,000 tons of dewatered fly ash shall be handled in any 12 consecutive month period. No more than 440,000 tons of conditioned fly ash shall be handled in any 12 consecutive month period.	Monthly records shall be maintained of the amount of conditioned fly ash and the amount of dewatered fly ash handled by the facility.
Phase 4	Wet suppression shall be used as needed during transport of conditioned fly ash from the fly ash collection system to the permanent storage area. The haul road between the fly ash collection system and the permanent storage area shall be paved.	No more than 440,000 tons of conditioned fly ash shall be handled in any 12 consecutive month period.	Monthly records shall be maintained of the amount of conditioned fly ash handled by the facility.
All Phases	For all recordkeeping requirements, all data, including all required calculations, must be entered in the log no later than 30 days from the end of the month for which the data is required. The log must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.		

TAPCR 1200-03-07-.01(5), agreement letter dated February 23, 2011.

E6-4. The permittee shall comply with the following emission limits during Phase 1, Phase 2, Phase 3, and Phase 4, as applicable:

Phase	Emission Limit by Pollutant		
	Total Suspended Particulate (TSP)	PM ₁₀	PM _{2.5}
Phase 1	23 tons	11 tons	2 tons
Phase 2	21 tons	12 tons	6 tons
Phase 3	23 tons	13 tons	7 tons
Phase 4	22 tons	12 tons	6 tons
Emissions of each pollutant shall not exceed the specified limits during any period of twelve consecutive months.			

Compliance with this condition shall be assured by compliance with **Conditions E6-2, E6-3, E6-5, and E6-6**. These limits represent Best Available Control Technology (BACT) for PM_{2.5}. The permittee has requested this limit in order to avoid

major New Source Review for PM_{2.5}. TAPCR 1200-03-07-.01(5), agreement letter dated February 23, 2011. TAPCR 1200-03-09-.01(5)(b)2.(ii).

E6-5. Fly ash may be loaded into hopper trucks, pneumatic trucks, hopper rail cars or pneumatic rail cars for off-site transportation. Roads used for this truck traffic shall be paved and wet suppression used as needed. TAPCR 1200-03-07-.01(5), agreement letter dated February 23, 2011.

E6-6. Visible emissions from vents and stacks at this source shall not exhibit greater than ten percent (10%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Permit Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average). This emission limitation is established pursuant to TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1).

Compliance Method: Compliance with this condition shall be assured by the procedures of the Opacity Matrix Decision Tree for Visible Emission Evaluation, amended September 11, 2013 (Attachment 1).

E6-7. Visible emissions from roads and parking areas shall not exhibit greater than ten percent (10%) opacity as determined by Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, as amended on September 15, 1982 and August 24, 1984. TAPCR 1200-03-08-.03.

Compliance Method: Compliance with this condition shall be assured by the procedures of the Opacity Matrix Decision Tree for Visible Emission Evaluation, amended September 11, 2013 (Attachment 1).

73-0013-19	Source Description:	Gypsum Dewatering and Handling: The gypsum dewatering, handling and storage system will consist of vacuum belt filters, hydroclone trains, a transfer conveyor and temporary stacking area (TVA designated emission point 45), loading and transport (TVA designated emission point 46), truck unloading and gypsum disposal area (TVA designated emission point 47) and offsite transport by truck (TVA designated emission point 48).
------------	----------------------------	--

Conditions E7-1 and E7-2 apply to source 73-0013-19

E7-1. Emissions from this source shall be limited as follows:

- (a) Particulate emissions shall not exceed 22.0 tons during any period of 12 consecutive months.
- (b) PM₁₀ emissions shall not exceed 7.8 tons during any period of 12 consecutive months.
- (c) PM_{2.5} emissions shall not exceed 2.4 tons during any period of 12 consecutive months
- (d) The total amount of dewatered gypsum handled by this source shall not exceed 785,000 tons during any period of 12 consecutive months, and the amount of dewatered gypsum transported off-site by truck shall not exceed 85,000 tons during any period of 12 consecutive months.

Compliance Method: Wet suppression shall be used as needed on haul roads. Monthly records shall be maintained of the amount of dewatered gypsum handled by the facility and the amount of dewatered gypsum transported off-site. All data, including all required calculations, must be entered in the log no later than 30 days from the end of the month for which the data is required. The log must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

The above limits are based on the agreement letter dated June 21, 2010, and represent Best Available Control Technology (BACT) for emissions of PM_{2.5}. TAPCR 1200-03-07-.01(5) and 1200-03-09-.01(5)(b)2.(ii)

E7-2. Visible emissions from roads and parking areas shall not exhibit greater than ten percent (10%) opacity as determined by Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, as amended on September 15, 1982 and August 24, 1984.

Compliance Method: Compliance with this condition shall be assured by the procedures of the Opacity Matrix Decision Tree for Visible Emission Evaluation, amended September 11, 2013 (Attachment 1).

TAPCR 1200-03-08-.03

73-0013-20	Source Description:	Emergency Communications Diesel Generator Engine, 90hp: Emergency diesel engine for Communications Generator, 90 horsepower, 2012 model year Cummins engine.
------------	----------------------------	---

Conditions E8-1 through E8-16 apply to source 73-0013-20.

- E8-1 (SM3).** The design rated power for this compression ignition engine generator is 90 hp. This source is subject to the requirements of 40 CFR part 60 Subpart III and 40 CFR §89.113. Also, the unit is subject to TAPCR 1200-03-09-.03(8). TAPCR 1200-03-09-.01(1)(d) and the application dated January 23, 2015. Condition 2 of construction permit 969935P.
- E8-2 (SM3).** Only No. 2 fuel oil and diesel fuel shall be used as fuels for this source. TAPCR 1200-03-09-.01(1)(d) and the application dated January 23, 2015. Condition 3 of construction permit 969935P.
- Compliance Method:** Compliance with this condition is ensured by compliance with **Condition E8-10** of this permit
- E8-3 (SM3).** Particulate Matter (TSP) emitted from this source shall not exceed 0.30 grams per brake horsepower-hour (0.06 lb/hr). 40 CFR §60.4205(b). Condition 4 of construction permit 969935P.
- Compliance Method:** Compliance with this condition is ensured by compliance with **Condition E8-1** of this permit and the manufacturer's certification of compliance with 40 CFR §89.112.
- E8-4 (SM3).** Sulfur Dioxide (SO₂) emitted from this source shall not exceed 0.1 pounds per hour. TAPCR 1200-03-14-.03(5). Condition 5 of construction permit 969935P.
- Compliance Method:** Compliance with this condition is ensured by compliance with **Conditions E8-1 and E8-2** of this permit and AP-42, Chapter 3, Section 3, emission factors.
- E8-5 (SM3).** Carbon Monoxide (CO) emitted from this source shall not exceed 3.7 grams per brake horsepower-hour (0.73 lb/hr). 40 CFR §60.4205(b). Condition 6 of construction permit 969935P.
- Compliance Method:** Compliance with this condition is ensured by compliance with compliance with **Condition E8-1** of this permit and the manufacturer's certification of compliance with 40 CFR §89.112.
- E8-6 (SM3).** Non-Methane Hydrocarbons and Nitrogen Oxides (NMHC + NO_x) emitted from this source shall not exceed 3.5 grams per brake horsepower-hour (0.69 lb/hr). 40 CFR §60.4205(b). Condition 7 of construction permit 969935P.
- Compliance Method:** Compliance with this condition is ensured by compliance with **Condition E8-1** of this permit and the manufacturer's certification of compliance with 40 CFR §89.112.
- E8-7 (SM3).** The emergency diesel generator allowable emissions were calculated using EPA's policy of 500 hours per calendar year. Condition 10 of construction permit 969935P.
- E8-8 (SM3).** Pursuant to 40 CFR §60.4211(f), the permittee must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, subpart III, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
 - (2) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (2)(i) through (iii) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (2).

- (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (2) of this condition. Except as provided in paragraph (3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

- (i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
- (ii) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (iii) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (iv) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (v) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

40 CFR §60.4211(f), Condition 11 of construction permit 969935P.

Compliance Method: Compliance with this condition is ensured by compliance with **Condition E8-14** of this permit.

E8-9 (SM3).

Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period.

Compliance Method: Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1). Condition 12 of construction permit 969935P.

E8-10 (SM3).

Pursuant to 40 CFR §60.4207(b), the permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b), as follows:

(1) Sulfur content shall not exceed 15 parts per million (ppm) maximum for nonroad diesel fuel.

(2) Cetane index or aromatic content, as follows:

- (i) A minimum cetane index of 40; or
- (ii) A maximum aromatic content of 35 volume percent.

Compliance Method: The permittee shall maintain purchase receipts, vendor certifications, material safety data sheets, or other records to demonstrate that all fuel purchased for this source meets the requirements of this condition (any fuel labeled as ultra-low sulfur non-highway diesel fuel or ultra-low sulfur highway diesel fuel meets these requirements). These records shall be made available to the Technical Secretary for inspection upon request. These records must be maintained for a period of at least (2) years from the purchase date. As an alternative to maintaining records, the permittee may instead ensure that the engine’s fuel inlet/fill cap indicates that ultra-low sulfur diesel (ULSD) fuel is required for this engine.

Condition 13 of construction permit 969935P.

E8-11 (SM3). The permittee shall operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer. 40 CFR §60.4211(a), Condition 14 of construction permit 969935P.

E8-12 (SM3). The permittee shall comply with the PM, CO, and (NMHC + NOx) emission limitations by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b) for the same model year and maximum engine power. The permittee shall maintain a record of this certification at the source location. The engine shall be installed and configured according to the manufacturer’s specifications. 40 CFR §60.4211(c), Condition 15 of construction permit 969935P.

E8-13 (SM3). The source is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ). Pursuant to 40 CFR §63.6590(c), this affected source (which is a new stationary RICE located at an area source of HAP emissions) shall meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for these engines under 40 CFR Part 63. Condition 16 of construction permit 969935P.

E8-14 (SM3). The permittee must keep monthly records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for the following categories: (a) emergency operation, as specified in **Condition E8-8**, Paragraph (1), including what classified the operation as emergency; (b) maintenance checks and readiness testing, demand response, as specified in **Condition E8-8**, Paragraph (2); and (c) non-emergency operation, as specified in **Condition E8-8**, Paragraph (3). The permittee shall calculate the operating hours per calendar year. The permittee shall maintain the following log format or an alternative format which readily provides the same required information. All data, including all required calculations, must be entered in the log no later than thirty (30) days from the end of the month for which the data is required. This log shall be retained for a period of not less than two (2) years and shall be made available for inspection by the Technical Secretary or his representative upon request. Condition 17 of construction permit 969935P.

Logs for emergency stationary ICE

Month, Year	Emergency Operation (hr/mon)	Maintenance Checks and Readiness Testing (hr/mon)	Non-Emergency Operation (hr/mon)
	Column A	Column B	Column C
January			
February			
Etc.			
December			

Month, Year	Add Columns B+C	Add Column C
Limit	100 hours	50 Hours
January		
February		
Etc.		
December		

E8-15 (SM3). This source shall comply with all applicable state and federal air pollution regulations. This includes, but is not limited to, federal regulations published under 40 CFR 63 for sources of hazardous air pollutants and 40 CFR 60, New Source Performance Standards. TAPCR 1200-03-09-.01(1)(d), and Condition 18 of construction permit 969935P..

E8-18 (SM3). This source shall operate in accordance with the terms of this permit and the information submitted in the approved permit application. TAPCR 1200-03-09-.03(8), Condition 19 of construction permit 969935P.

END OF PERMIT NUMBER: 560775

ATTACHMENT 1

**OPACITY MATRIX DECISION TREE FOR VISIBLE EMISSION
EVALUATION BY TVEE METHODS 1 AND 2 AND EPA METHOD 9
AMENDED SEPTEMBER 11, 2013**

**Decision Tree PM for Opacity from
 Nontraditional Sources (Roads and Parking Areas)
 Utilizing TVEE Method 1**

Notes:

The use of Tennessee Visible Emission Evaluation (TVEE) Method 1 is only applicable where the use of the method is specified as a permit condition.

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(1)(iii).

This Decision Tree outlines the criteria by which major sources can meet the PM requirements of Title V for demonstrating compliance with the visible emissions standard for nontraditional sources (roads and parking areas). It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

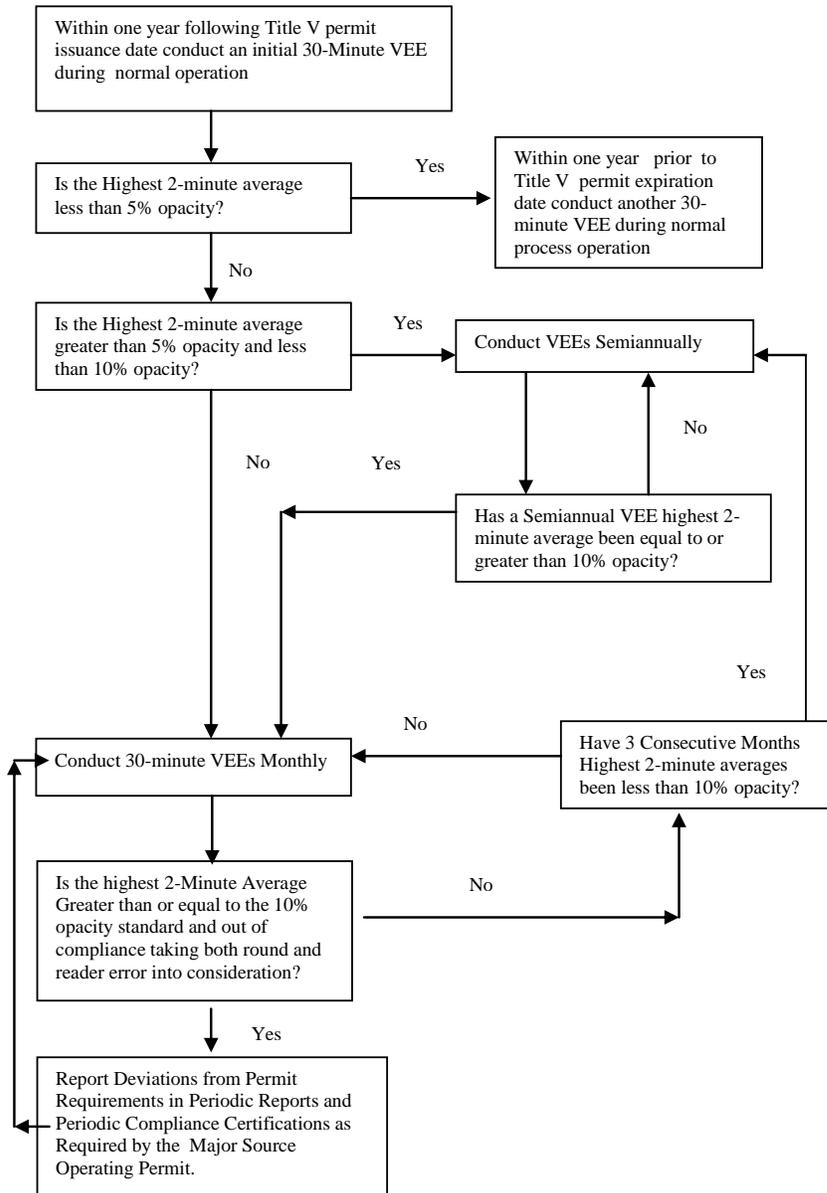
Visible Emissions Evaluations (VEEs) are to be conducted utilizing TVEE Method 1. The observer must be properly certified according to criteria specified in TVEE Method 1 to conduct Method 1 evaluations.

Initial observations are to be repeated within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

A VEE conducted by TDAPC personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error
 For TVEE Method 1, the TDAPC declares non-compliance when the highest two-minute average exceeds the standard plus 10% opacity for sources having this standard applied prior to August 24, 1984 or 8.8% for sources having this standard applied on or after August 24, 1984.

Dated June 18, 1996
 Amended September 11, 2013



**Decision Tree PM for Opacity for
 Sources Subject to Rule 1200-03-05-.01
 Utilizing TVEE Method 2**

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standard in Rule 1200-03-05-.01. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PMT required.

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing Tennessee Visible Emission Evaluation Method 2. The observer must be properly certified according to the criteria specified in EPA Method 9 to conduct TVEE Method 2 evaluations.

Typical Pollutants
 Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

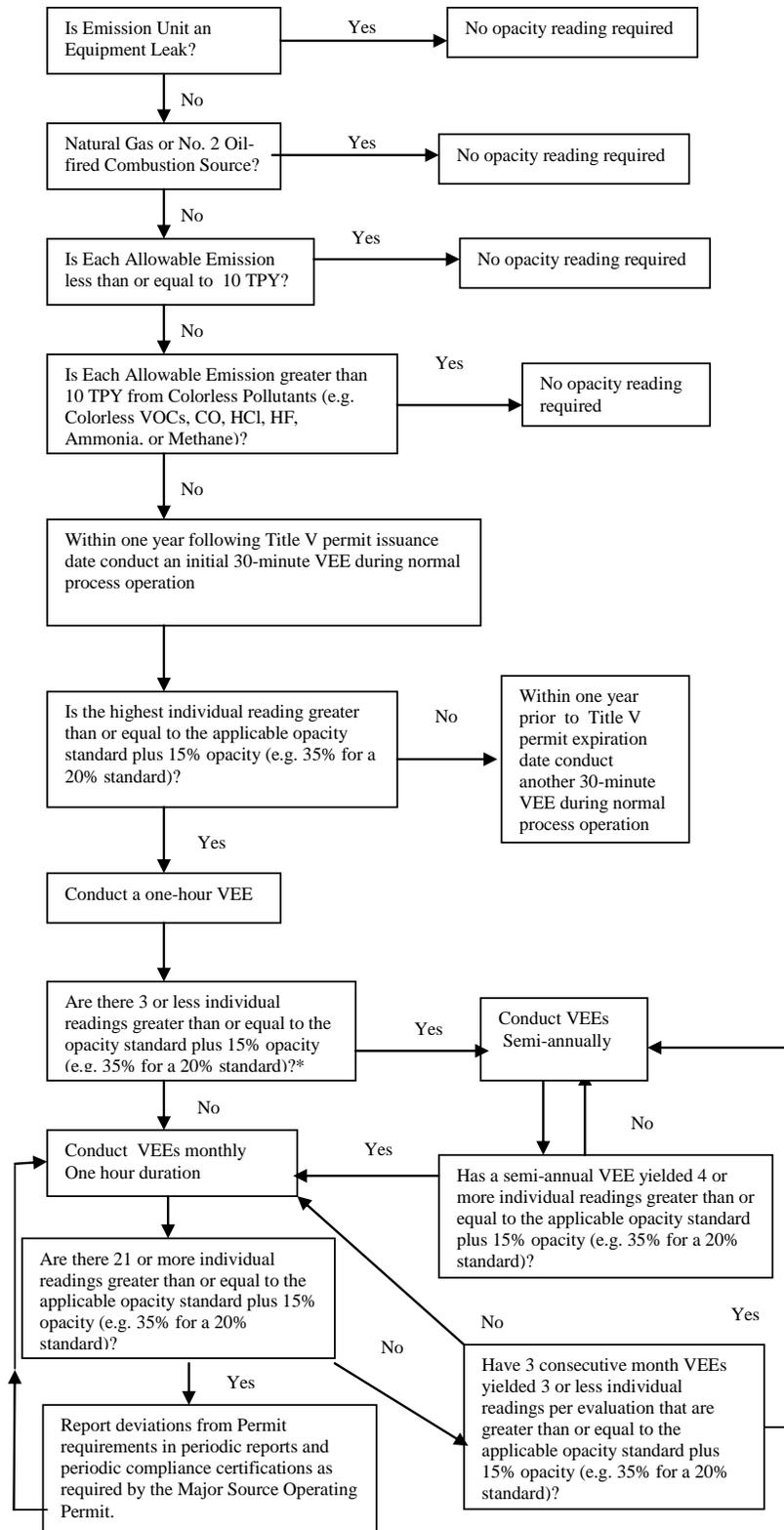
A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error
 TVEE Method 2: The TAPCD declares non-compliance when 21 observations are read at the standard plus 15% opacity (e.g. 35% for a 20% standard).

*The rationale for this is the fact that Rule 1200-03-05-.01 allows for an exemption of 5 minutes (20 readings) per hour and up to 20 minutes (80 readings) per day. With 4 or more excessive individual readings per hour the possibility of a daily exceedance exists.

Note: A company could mutually agree to have all of its sources regulated by EPA Method 9. Caution: Agreement to use Method 9 could potentially place some sources in non-compliance with visible emission standards. Please be sure before you agree.

Dated June 18, 1996
 Amended September 11, 2013



Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants
 Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

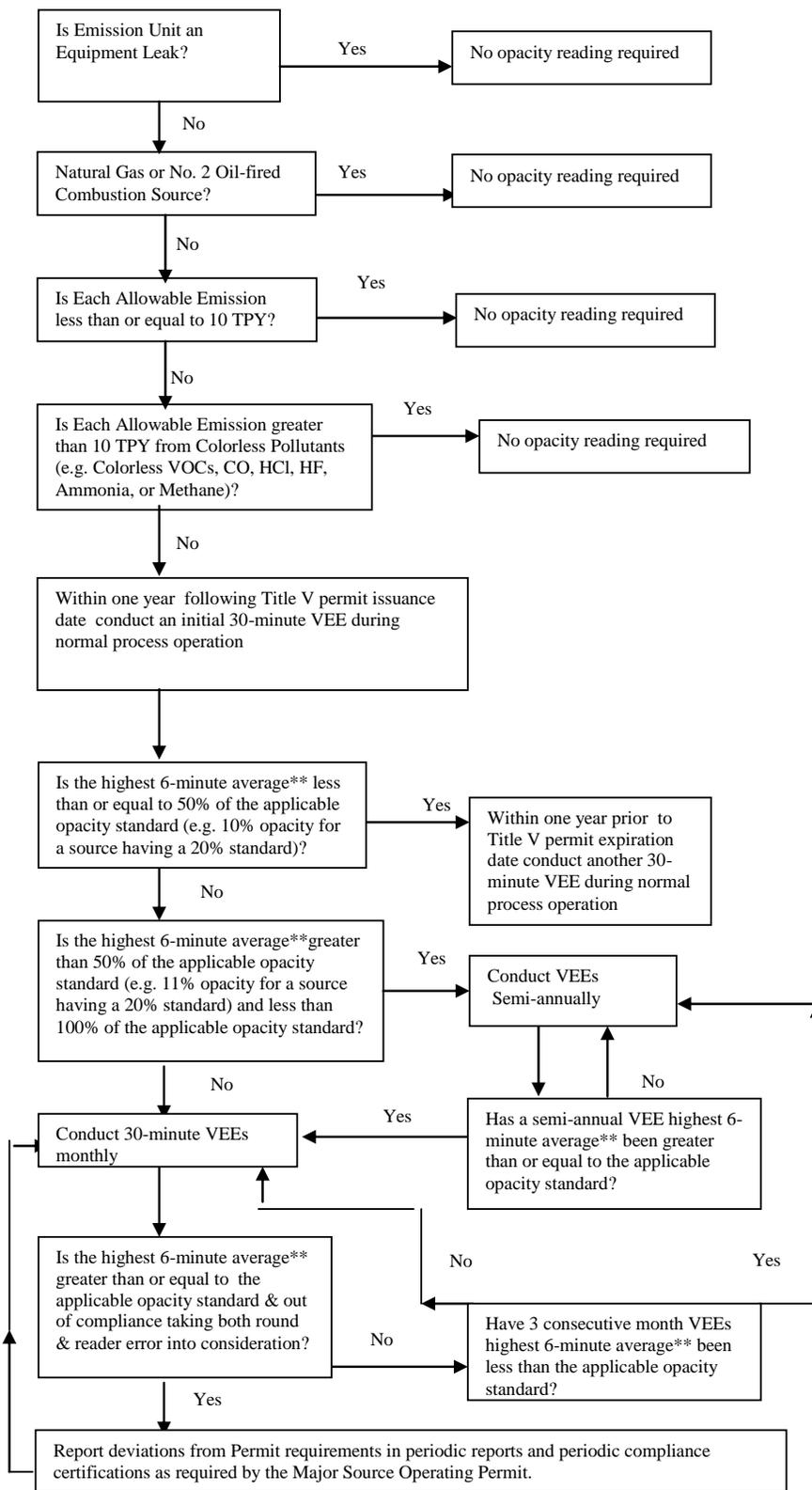
Reader Error
 EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:
 The TAPCD guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards:
 EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996
 Amended September 11, 2013



ATTACHMENT 2

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN

Compliance Assurance Monitoring General Requirements

Operation of approved monitoring (§64.7):

Commencement of operation: The permittee shall conduct all monitoring required pursuant to 40 CFR 64 and this attachment upon issuance of this permit.

Proper maintenance: At all times, permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

Continued operation: Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Response to excursions or exceedances: Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

Documentation of need for improved monitoring: If the permittee identifies a failure to comply with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or if the results of compliance or performance testing document a need to modify the existing indicator ranges, the permittee shall promptly notify the Technical Secretary and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes.

Reporting and recordkeeping requirements (§64.9)

General reporting requirements: On and after the issue date of this permit, the permittee shall submit monitoring reports to the Technical Secretary in accordance with Condition E2-1(a) of this permit. The report shall include, at a minimum, the information required by Condition E2-1(a) and the following information, as applicable:

- (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; and
- (2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

General recordkeeping requirements: The permittee shall comply with the applicable recordkeeping requirements of §70.6(a)(3)(ii) and shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained under 40 CFR 64. The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

Quality Improvement Plan (§64.8)

Based on the results of a determination made under §64.7(d)(2), the Technical Secretary may require the owner or operator to develop and implement a Quality Improvement Plan (QIP) if the procedures used by the permittee in response to an excursion or exceedance are determined to be unacceptable.

**Compliance Assurance Monitoring (CAM) Plan – 40 CFR 64
73-0013-01 through 73-0013-09**

Stack or Flow Diagram Points	Coal-fired boilers 1 through 9
Pollutants	Particulate Matter
Indicator	Opacity
Description of Monitoring Protocol	The opacity is measured by a Continuous Opacity Monitoring System (COMS) on each stack.
Indicator Range	An excursion is defined as a measured opacity greater than 20% for a period of three consecutive hours. An excursion triggers a reporting requirement. Corrective action must be initiated when the measured opacity is greater than 20% for a one-hour block average, excluding those events defined as startups, shutdowns, or malfunctions. Corrective action does not trigger a reporting requirement.
Data Representativeness	Under normal boiler operation, as the mass emissions increase, it can be reasonably expected that the opacity will also increase. The opacity monitors are located in the ductwork, with no bypass capabilities. The opacity monitors meet the installation and minimum acceptable accuracy requirements of 40 CFR 60, Performance Specification 1.
Verification of Operational Status	Not applicable. The monitoring approach uses existing equipment.
Measurement Frequency	Continuously monitored and recorded. The COMS collects a data point every 10 seconds and reduces the data to a rolling 6-minute average. Data is also reduced to one-hour block averages.
QA/QC Practices	Daily zero and calibration drift check, periodic cleaning of optical surfaces, and other periodic QA/QC checks as specified in the applicable version of Performance Specification 1.
Reference	Title V application dated March 14, 2007, pages 41-46.

ATTACHMENT 3

**EMISSION FACTORS AND CALCULATION OF PARTICULATE
EMISIONS FROM COAL HANDLING FACILITY (73-0013-11)**

**TABLE 4-1
INPUT DATA FOR SOLID-FUEL HANDLING EMISSION ESTIMATES**

Maximum capacity of coal handling process, tph	5,280
Maximum capacity of truck unloading station, tph	600
July 1994 - June 1995 coal usage, tpy*	3.88 x 10 ⁶
Stockout or reclaim as % of total coal usage**	20
Maximum coal storage pile area, acres	8
Stacking tube coal storage pile area, acres	2 each 4 total
Coal silt content, %	4
Coal moisture content, %***	6.9
Coal minimum heating value, Btu/lb****	11,000
Average wind speed, mph	3.0
Wet days per year	127
Wind frequency > 12 mph, %	0.12
Coal-pile pan scraper average speed, mph	15
Coal-pile pan scraper capacity, tons	52
Coal-pile pan scraper empty weight, tons	76
Coal-pile pan scraper average trip haul length, ft/trip	600
Coal-pile pan scraper, number of wheels	4
Enclosure control efficiency, %	70
Chemical foam suppression - initial application control efficiency,%	90
Chemical foam suppression – subsequent transfer – residual carryover control efficiency, %	10% drop/transfer
Water spray control efficiency, %	80
Wet suppression control efficiency, %	75
Gravity feed reclaim hopper control efficiency, %	80
Coal-pile bulldozer average speed, mph	5
Coal-pile bulldozer weight, tons	19
Coal-pile bulldozer, number of wheels	4
Watering truck average operating speed, mph	10
Watering truck average haul weight, tons	28
Watering truck, number of wheels	4
Coal truck capacity, tons	25
Coal truck unpaved haul length one-way, ft.	750
Coal truck haul length one-way, miles	0.8

* The coal usage was greater than the coal receipts of 3.80 x 10⁶ tpy for the operating period, so coal usage rather than coal receipts was used in calculations.

** The sum of stockout plus reclaim tonnages averaged 26% of total coal receipts for 1988-1994, so a conservative figure of 20% was used for stockout and for reclaim (total sum of 40%).

*** Average for previous five years (1990-1994)

**** TVA FOSSIL PLANTS - COAL SPECIFICATIONS AND INFORMATION, Revised 2/8/95.

SAMPLE CALCULATIONS FOR THE SOLID-FUEL HANDLING PROCESS KINGSTON FOSSIL PLANT

Calculations are based on the following capacities:

- Railcar unloading to stacking tubes - 5,280 tph
- Truck unloading station - 600 tph
- Reclaim from stacking tubes to transfer station C - 2,640 tph
- Transfer station C to powerhouse - 2,200 tph
- Reclaim from BC-8 - 1,100 tph
- Rotary car dumper #1 to old crusher building and stockout on BC-7 - 1,100 tph

ACTUAL EMISSIONS

Currently coal is the only solid fuel burned at Kingston Fossil Plant. The following discussion reviews the assumptions and equations used to generate particulate emissions estimates for a representative sample of fugitive dust sources in the solid-fuel handling process.

For a worst case scenario for calculation purposes, it is assumed that 70% of the coal is unloaded by railcar and that 30% of the coal is unloaded by truck. Of the 70% of the coal that is unloaded by railcar, one-half is unloaded by the railcar unloader and one-half is unloaded by the rotary car dumper #1.

A railcar thawer has been installed as part of this process. It is electrically heated, so there are no combustion emissions from this unit and it is not included in the sample calculations and emissions summary for the solid-fuel handling process.

(1) Batch/Continuous Drop Operations

Source: EPA, AP-42, 4th Edition, Supplement B, Section 11.2.3.3, September 1988

$$E = k (0.0032) \frac{\left(\frac{u}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}$$

Where: E = Uncontrolled particulate emission factor, lb/ton
 K = Particle size multiplier, 0.74 for TPS (<30µm)
 u = Mean wind speed, mph
 M = Material moisture content, weight %

Sample Calculation - Old Crusher Building (Emission Unit 3A): Coal Discharge from Conveyor BC-2 to Screens/Crusher

$$E = 0.74 (0.0032) \frac{\left(\frac{3.0}{5}\right)^{1.3}}{\left(\frac{6.9}{2}\right)^{1.4}} = 2.15 \times 10^{-4} \text{ lb/ton}$$

It is assumed that of the 70% of the total coal that is unloaded by railcar, that one-half of the coal is handled through the Old Crusher Building. The conveyor has a maximum capacity of 1,100 tons/hr.

Uncontrolled Emissions:

$$\text{ANNUAL} = \frac{2.15 \times 10^{-4} \text{ lb}}{\text{ton}} \times 0.5 \times \frac{3.88 \times 10^6 \text{ tons}}{\text{yr}} \times 0.70 \times \frac{\text{ton}}{2,000 \text{ lb}} = 1.46 \times 10^{-1} \text{ tpy}$$

$$\text{HOURLY} = \frac{2.15 \times 10^{-4} \text{ lb}}{\text{ton}} \times \frac{1,100 \text{ tons}}{\text{hr}} = 2.37 \times 10^{-1} \text{ lb/hr}$$

Controlled Emissions:

Controlled emissions = (Uncontrolled emissions) (1-e/100)

Where: e = Control Efficiency (%)

The discharge from conveyor BC-2 occurs inside the screening and crushing station, and the coal falls within an enclosed chute to screens and crushers, which are enclosed. Enclosure control efficiencies for conveyor transfer emissions are listed in the 70 - 90% range in the AWMA - Air Pollution Manual, Page 794, Table 3, 1992. Emissions are conservatively estimated using the lower value.

$$\text{ANNUAL} = 1.46 \times 10^{-1} \text{ tpy} \times \left(1 - \frac{70}{100}\right) = 4.38 \times 10^{-2} \text{ tpy}$$

$$\text{HOURLY} = 2.37 \times 10^{-1} \text{ lb/hr} \times \left(1 - \frac{70}{100}\right) = 7.10 \times 10^{-2} \text{ lb/hr}$$

(2) **Screening and Crushing**

Source: EPA, AP-42, Section 8.23.2, August 1982

Coal from the rotary car dumper #1 either goes to the powerhouse or is stocked out in the coal storage yard and reclaimed to feed to the powerhouse. All this coal is fed through the Old Crusher Building where it is screened and approximately 25% of the coal feed is screened oversize material that is fed to the crusher; the remaining 75% bypasses the crushers. The crushers are assumed to be primary crushers therefore an emission factor of 0.02 pounds per ton is used. This factor for high-moisture ore is assumed for the process since the definition of high-moisture ore is moisture content of 4% by weight or greater. Coal moisture at Kingston Fossil Plant averaged 6.9% moisture for the five previous fiscal years (1990-1994), so the coal would be a high-moisture ore.

Sample Calculation - Old Crusher Building (Emission Unit 3B): Crushing of Coal.

Uncontrolled Emissions:

$$ANNUAL = \frac{0.02 \text{ lb}}{\text{ton}} \times 0.25 \times \frac{3.88 \times 10^6 \text{ tons}}{\text{yr}} \times 0.5 \times 0.70 \times \frac{\text{ton}}{2,000 \text{ lb}} = 3.39 \text{ tpy}$$

$$HOURLY = \frac{0.02 \text{ lb}}{\text{ton}} \times 0.25 \times \frac{1,100 \text{ tons}}{\text{hr}} = 5.50 \text{ lb/hr}$$

Controlled Emissions:

Controlled emissions = (Uncontrolled emissions) (1-e/100)

Where: e = Control Efficiency (%) = 70%

Using 70% as control efficiency for an enclosure, estimated controlled emissions are:

$$ANNUAL = 3.39 \text{ tpy} \times \left(1 - \frac{70}{100}\right) = 1.02 \text{ tpy}$$

$$HOURLY = 5.50 \text{ lb/hr} \times \left(1 - \frac{70}{100}\right) = 1.65 \text{ lb/hr}$$

(3) Wind Erosion from Active (Frequently Disturbed) Storage Piles

Source: EPA-450/2-92-004, Fugitive Dust Background Document and Technical Information Document For Best Available Control Measures, Section 2.3.1.3, page 2-25, September 1992.

$$E \text{ (TSP)} = 1.7 \left(\frac{s}{1.5}\right) \left(\frac{d}{235}\right) \left(\frac{f}{15}\right)$$

Where: E = TSP (<30 μ) emission factor, lb/(acre·day) of pile area
s = Silt content of material, weight %
d = Number of dry days per year (<0.01 inches of precipitation per day)
f = Frequency of wind speeds greater than 12 mph at the mean pile height, %

Sample Calculation - Coal Storage Yard (Emission Unit 4A): Open Storage Pile Wind Erosion

$$E = 1.7 \left(\frac{4.0}{1.5}\right) \left(\frac{365 - 127}{235}\right) \left(\frac{0.12}{15}\right) = 3.67 \times 10^{-2} \text{ lb/(acre} \cdot \text{day)}$$

The footprint for the coal storage pile (30-day supply assumed at full coal burn) is approximately 8.0 acres.

Uncontrolled Emissions:

$$\text{ANNUAL} = \frac{3.67 \times 10^{-2} \text{ lb}}{\text{acre} \cdot \text{day}} \times 8.0 \text{ acres} \times \frac{365 \text{ day}}{\text{yr}} \times \frac{\text{ton}}{2,000 \text{ lb}} = 5.36 \times 10^{-2} \text{ tpy}$$

$$\text{HOURLY} = \frac{3.67 \times 10^{-2} \text{ lb}}{\text{acre} \cdot \text{day}} \times 8.0 \text{ acres} \times \frac{\text{day}}{24 \text{ hr}} = 1.22 \times 10^{-2} \text{ lb/hr}$$

Controlled Emissions:

Controlled Emissions = (Uncontrolled emissions) (1-e/100)

Where: e = Control Efficiency (%) = 0%

$$\text{ANNUAL} = 5.36 \times 10^{-2} \text{ tpy} \times \left(1 - \frac{0}{100}\right) = 5.36 \times 10^{-2} \text{ tpy}$$

$$\text{HOURLY} = 1.22 \times 10^{-2} \text{ lb/hr} \times \left(1 - \frac{0}{100}\right) = 1.22 \times 10^{-2} \text{ lb/hr}$$

(4) Unpaved Road

Source: EPA, AP-42, 4th Edition, Supplement B, Section 11.2.1.2, September 1988

$$E = k (5.9) \left(\frac{s}{12}\right) \left(\frac{S}{30}\right) \left(\frac{W}{3}\right)^{0.7} \left(\frac{w}{4}\right)^{0.5} \frac{(365 - p)}{365}$$

Where: E = Emission factor lb/VMT (VMT=Vehicle Miles Traveled)
k = Particle size multiplier (0.80 for TSP)
s = Silt content of road surface material weight %
S = Mean vehicle speed, mph
W = Mean vehicle weight, tons
w = Mean number of wheels
p = Number of days per year with at least 0.01" of precipitation

$$E = 0.8 (5.9) \times \frac{4.0}{12} \times \frac{15}{30} \times \left(\frac{128}{3}\right)^{0.7} \left(\frac{4}{4}\right)^{0.5} \frac{(365 - 127)}{365} = 7.10 \text{ lb/VMT}$$

Sample Calculation - Coal Storage Yard (Emission Unit 4B): Pan Scrapers Stockout Hauling, One-way Full

Where: VMT = (Total weight hauled/weight hauled per trip) x (length of each trip)

For calculation of estimated emissions, 20% of total coal unloaded at the plant is stocked out to the coal storage yard. The remaining 80% of the coal unloaded goes to the stacking tubes or is fed directly to the powerhouse. The coal stocked out and reclaimed (sum of both operations) averaged 26% of coal receipts for 1988-1994, so the values used in the calculations (20% stockout and 20% reclaim) should be conservative ones.

Uncontrolled Emissions:

$$ANNUAL = \frac{7.10 \text{ lb}}{VMT} \times 0.20 \times \frac{3.88 \times 10^6 \text{ tons}}{\text{yr}} \times \frac{1 \text{ trip}}{52 \text{ tons}} \times \frac{600 \text{ feet}}{\text{trip}} \times \frac{\text{mile}}{5,280 \text{ feet}}$$

$$\times \frac{\text{ton}}{2,000 \text{ lb}} = 6.02 \text{ tpy}$$

$$HOURLY = \frac{7.10 \text{ lb}}{VMT} \times \frac{1,100 \text{ tons}}{\text{hr}} \times \frac{1 \text{ trip}}{52 \text{ tons}} \times \frac{600 \text{ feet}}{\text{trip}} \times \frac{\text{mile}}{5,280 \text{ feet}} = 17.1 \text{ lb/hr}$$

Controlled Emissions:

Controlled emission = (Uncontrolled emission) (1-e/100)

Where: e = Control Efficiency (%)

The AWMA Air Pollution Engineering Manual, citing field-test data at a coal-fired power plant, indicates that wet suppression methods can effectively control unpaved-road fugitive emissions. It is estimated that the watering program will achieve 75 percent control efficiency for coal storage yard stockout/reclaim fugitive emissions, taking into account realistic limitations in the area that the water truck can cover as compared to the pan scrapers.

$$ANNUAL = 6.02 \text{ tpy} \times \left(1 - \frac{75}{100}\right) = 1.50 \text{ tpy}$$

$$HOURLY = 17.1 \text{ lb/hr} \times \left(1 - \frac{75}{100}\right) = 4.27 \text{ lb/hr}$$

(5) Grading and Compacting with Bulldozer

Source: EPA, AP-42, 4th Edition, Supplement B, Section 11.2.1.2, September, 1992

$$E = k (5.9) \left(\frac{s}{12}\right) \left(\frac{S}{30}\right) \left(\frac{W}{3}\right)^{0.7} \left(\frac{w}{4}\right)^{0.5} \frac{(365 - p)}{365}$$

Where: E = Emission factor lb/VMT (VMT = Vehicle Miles Traveled)
k = Particle size multiplier (0.80 for TSP)
s = Silt content of road surface material, weight %
S = Mean vehicle speed, mph
W = Mean vehicle weight, tons
w = Mean of wheels
p = Number of days per year with at least 0.01" of precipitation

Sample Calculation - Coal Storage Yard (Emission Unit 4G): Bulldozer Grading and Compacting Coal Pile

$$E = 0.8(5.9) \times \frac{4.0}{12} \times \frac{5}{30} \times \left(\frac{19}{3}\right)^{0.7} \left(\frac{4}{4}\right)^{0.5} \frac{(365 - 127)}{365} = 0.622 \text{ lb/VMT}$$

It is assumed that one bulldozer operated 6 hours per day, 365 days per year at a speed of 5 mph for coal pile maintenance activities. The bulldozer currently used has a vehicle weight of 19 tons and is assumed to have an equivalent of 4 wheels.

Uncontrolled Emissions:

$$\text{ANNUAL} = \frac{0.622 \text{ lb}}{\text{VMT}} \times \frac{365 \text{ days}}{\text{yr}} \times \frac{6 \text{ hr}}{\text{day}} \times \frac{5 \text{ miles}}{\text{hr}} \times \frac{\text{ton}}{2,000 \text{ lb}} = 3.41 \text{ tpy}$$

$$\text{HOURLY} = \frac{0.622 \text{ lb}}{\text{VMT}} \times \frac{5 \text{ miles}}{\text{hr}} = 3.11 \text{ lb/hr}$$

Controlled Emissions:

Controlled emissions = (Uncontrolled emissions) (1-e/100)

Where: e = Control Efficiency (%) = 0%

$$\text{ANNUAL} = 3.41 \text{ tpy} \times \left(1 - \frac{0}{100}\right) = 3.41 \text{ tpy}$$

$$\text{HOURLY} = 3.11 \text{ lb/hr} \times \left(1 - \frac{0}{100}\right) = 3.11 \text{ lb/hr}$$

(6) Paved Road

Source: EPA AP-42, Section 11.2.6, 1988

$$E = k \times 3.5 \left(\frac{sL}{0.35}\right)^{0.3}$$

Where: E = Emission factor, lb/VMT = Vehicle Miles Traveled
k = Particle size multiplier (0.54 estimated for TSP)
sL = Road surface material silt loading, oz/yd² (assumed to be same as that for a concrete batching facility and for iron and steel production as given in AP-42, Section 11.2.6: 0.354 oz/yd²)

The k value was estimated for TSP (effective cut point = 30-micrometer (µm) aerodynamic diameter) from data presented in AP-42 Section 11.2.6 for particulate matter with 2.5-, 10-, and 15-µm aerodynamic diameters.

Sample Calculation - Truck Unloading Station (Emission Unit 5Q): Haul Coal in Trucks to Station, One-way Full

$$E = 0.54 \times 3.5 \times \left(\frac{0.354}{0.35} \right)^{0.3} = 1.90 \text{ lb/VMT}$$

Where: VMT = (Total weight hauled/weight hauled per trip) x (length of each trip)

Uncontrolled Emissions:

$$\text{ANNUAL} = \frac{1.90 \text{ lb}}{\text{VMT}} \times \frac{3.88 \times 10^6 \text{ tons}}{\text{yr}} \times 0.30 \times \frac{\text{trip}}{25 \text{ tons}} \times \frac{0.8 \text{ mile}}{\text{trip}} \times \frac{\text{ton}}{2,000 \text{ lb}} = 35.3 \text{ tpy}$$

$$\text{HOURLY} = \frac{1.90 \text{ lb}}{\text{VMT}} \times \frac{600 \text{ tons}}{\text{hr}} \times \frac{\text{trip}}{25 \text{ tons}} \times \frac{0.8 \text{ mile}}{\text{trip}} = 36.4 \frac{\text{lb}}{\text{hr}}$$

Controlled Emissions:

Controlled emissions = (Uncontrolled emissions)(1-e/100)

Where: e = Control Efficiency (%) = 75%

$$\text{ANNUAL} = 35.3 \text{ tpy} \times \left(1 - \frac{75}{100} \right) = 8.83 \text{ tpy}$$

$$\text{HOURLY} = 36.4 \frac{\text{lb}}{\text{hr}} \times \left(1 - \frac{75}{100} \right) = 9.10 \frac{\text{lb}}{\text{hr}}$$

ATTACHMENT 4

**EMISSION FACTORS AND CALCULATION OF PARTICULATE
EMISSIONS FROM DRY FLY ASH HANDLING PROCESS (73-0013-18)**

KINGSTON FOSSIL PLANT: ASH HANDLING PROCESS PARTICULATE EMISSIONS FROM SIGNIFICANT SOURCES

EMISSION UNIT NO.	DESCRIPTION	EMISSION UNIT COMPONENT	EMISSION [1] EQUATION	INPUT PARAMETERS [2] PARAMETER			EMISSION FACTORS				SCALING FACTORS (PROCESS MEASURE)	CONTROLS	CONTROL [3] EFFICIENCY	CONTROLLED			
				TSP	PM10	PM2.5	TSP	PM10	PM2.5	UNITS				PM	LB/HR	TON/YR	
22-32	FLY ASH VACUUM SYSTEM	9 VACUUM PUMPS W/ FILTERS (+ 2 STANDBY)		OUTPUT CONC, GR/SCF				5.00E-03	5.00E-03	5.00E-03	GR/SCF	9 PUMPS 1,031 SCF/MIN 8,760 HR/YR	FILTER		TSP PM10 PM2.5	3.97E-01 3.97E-01 3.97E-01	1.74E+00 1.74E+00 1.74E+00
33-34	STORAGE SILO W/ PRESSURE SYSTEM	1 BIN VENT FILTER (1 REDUNDANT)		OUTPUT CONC, GR/SCF				5.00E-03	5.00E-03	5.00E-03	GR/SCF	12,019 SCF/MIN 8,760 HR/YR	FILTER		TSP PM10 PM2.5	5.15E-01 5.15E-01 5.15E-01	2.26E+00 2.26E+00 2.26E+00
35-36	FLY ASH LOADOUT TO TRI-AXLE TRUCKS FROM SILOS	1 PIN MIXER ASH UNLOADER (1 REDUNDANT)	BATCH/CONTINUOUS DROP OPERATIONS (AP-42, SEC. 13.2.4)	H2O CONTENT, % AVG WIND SPEED, MPH PARTICLE SIZE MULTIPLIER, k	20 3 0.74	20 3 0.35	20 3 0.053	4.85E-05	2.30E-05	3.48E-06	LB/TON	19.5 TONS/TRUCK 10.8 TRUCKS/HR 440,000 TONS/YR	NONE	0 0 0	TSP PM10 PM2.5	1.03E-02 4.86E-03 7.35E-04	1.07E-02 5.05E-03 7.65E-04
37	FLY ASH HAULING TO PENINSULA PHASE II LANDFILL	TRI-AXLE DUMP TRUCK HAULING TO LANDFILL AREA	PAVED ROAD FUGITIVE DUST (AP-42, SEC. 13.2.1)	PARTICLE SIZE MULTIPLIER, k SILT LOADING, g/m ² AVG WEIGHT OF VEHICLE, TONS WET DAYS PER YEAR, P	0.011 8.2 27.8 126.6	0.0022 8.2 27.8 126.6	0.00054 8.2 27.8 126.6	2.02E+00	4.04E-01	9.92E-02	LB/VMT	3.60 MI/TRUCK 19.5 TONS/TRUCK 10.8 TRUCKS/HR 440,000 TONS/YR	WET SUPPRESSION	95 95 95	TSP PM10 PM2.5	3.95E+00 7.89E-01 1.94E-01	4.10E+00 8.21E-01 2.02E-01
		WATERING TRUCK	PAVED ROAD FUGITIVE DUST (AP-42, SEC. 13.2.1)	PARTICLE SIZE MULTIPLIER, k SILT LOADING, g/m ² AVG WEIGHT OF VEHICLE, TONS WET DAYS PER YEAR, P	0.011 8.2 28 126.6	0.0022 8.2 28 126.6	0.00054 8.2 28 126.6	2.04E+00	4.08E-01	1.00E-01	LB/VMT	10 MPH 416 HRS/YR	WET SUPPRESSION	95 95 95	TSP PM10 PM2.5	1.02E+00 2.04E-01 5.01E-02	2.12E-01 4.24E-02 1.04E-02
38	FLY ASH UNLOADING AT PENINSULA PHASE II LANDFILL	DRY FLY ASH UNLOADING FROM TRI-AXLE DUMP TRUCK	BATCH/CONTINUOUS DROP OPERATIONS (AP-42, SEC. 13.2.4)	H2O CONTENT, % AVG WIND SPEED, MPH PARTICLE SIZE MULTIPLIER, k	20 3 0.74	20 3 0.35	20 3 0.053	4.85E-05	2.30E-05	3.48E-06	LB/TON	19.5 TONS/TRUCK 10.8 TRUCKS/HR 440,000 TONS/YR	NONE	0 0 0	TSP PM10 PM2.5	1.03E-02 4.86E-03 7.35E-04	1.07E-02 5.05E-03 7.65E-04
39	PENINSULA PHASE II LANDFILL OPERATIONS	PILE MAINTENANCE COMPACTING (ROLLER)	UNPAVED ROAD FUGITIVE DUST (AP-42, SEC. 13.2.2)	PARTICLE SIZE MULTIPLIER, k SILT CONTENT, % WEIGHT OF VEHICLE, TONS WET DAYS PER YEAR, P	4.9 100 12.5 126.6	1.5 100 12.5 126.6	0.15 100 12.5 126.6	2.68E+01	1.26E+01	1.26E+00	LB/VMT	1 ROLLER 4 MPH 1,040 HRS/YR	WET SUPPRESSION	95 95 95	TSP PM10 PM2.5	5.37E+00 2.51E+01 2.51E-01	2.79E+00 1.31E+00 1.31E-01
		PILE MAINTENANCE SPREADING (DOZER)	UNPAVED ROAD FUGITIVE DUST (AP-42, SEC. 13.2.2)	PARTICLE SIZE MULTIPLIER, k SILT CONTENT, % WEIGHT OF VEHICLE, TONS WET DAYS PER YEAR, P	4.9 100 20 126.6	1.5 100 20 126.6	0.15 100 20 126.6	3.32E+01	1.55E+01	1.55E+00	LB/VMT	1 DOZER 4 MPH 2,080 HRS/YR	WET SUPPRESSION	95 95 95	TSP PM10 PM2.5	6.63E+00 3.10E+00 3.10E-01	6.90E+00 3.23E+00 3.23E-01
		PILE WATERING WATERING TRUCK	UNPAVED ROAD FUGITIVE DUST (AP-42, SEC. 13.2.2)	PARTICLE SIZE MULTIPLIER, k SILT CONTENT, % WEIGHT OF VEHICLE, TONS WET DAYS PER YEAR, P	4.9 28 28 126.6	1.5 28 28 126.6	0.15 100 28 126.6	3.86E+01	1.80E+01	1.80E+00	LB/VMT	5 MPH 416 HRS/YR	WET SUPPRESSION	95 95 95	TSP PM10 PM2.5	9.64E+00 4.51E+00 4.51E-01	2.01E+00 9.38E-01 9.38E-02
		LANDFILL AREA (DISTURBED)	WIND EROSION OF FREQ-DISTURBD PILE (EPA, 1992, SEC. 2.3.1.3.3)	SILT CONTENT, % WET DAYS PER YEAR, P WIND FREQ > 12 MI/HR, %	100 126.6 0.12	100 126.6 0.12	100 100 0.12	9.20E-01	4.60E-01	4.60E-01	LB/ACRE-DY	10 ACRES	NONE	0 0 0	TSP PM10 PM2.5	3.83E-01 1.92E-01 1.92E-01	1.68E+00 8.39E-01 8.39E-01
												TOTAL	TSP	2.79E+01	2.17E+01		
												TOTAL	PM10	1.22E+01	1.12E+01		
												TOTAL	PM2.5	2.36E+00	5.60E+00		

NOTES:

[1] EMISSION EQUATION

- A. BATCH DROP OPERATIONS: EPA, AP-42, 5TH EDITION, SECTION 13.2.4, NOVEMBER 2006
- B. PAVED ROAD FUGITIVE DUST: EPA, AP-42, 5TH EDITION, SECTION 13.2.1, JANUARY 2011
- C. UNPAVED ROAD FUGITIVE DUST: EPA, AP-42, 5TH EDITION, SECTION 13.2.2, NOVEMBER 2006
- D. WIND EROSION OF ACTIVE STORAGE PILES: EPA, EPA-450/2-92-004, SECTION 2.3.1.3.3, SEPTEMBER 1992

[2] METEOROLOGICAL PARAMETERS

- A. AVERAGE WIND SPEED: KINGSTON FOSSIL PLANT METEOROLOGICAL TOWER, 1986-87 DATABASE
- B. NUMBER OF WET DAYS: NATIONAL WEATHER SERVICE, KNOXVILLE, TENNESSEE DATA, 1942-1994 AVERAGE
- C. FREQUENCY OF WINDS GREATER THAN 12 MPH: KINGSTON FOSSIL PLANT METEOROLOGICAL TOWER, 1986-87 DATABASE

[3] CONTROL EFFICIENCY

- A. WET SUPPRESSION: AWMA, AIR POLLUTION ENGINEERING MANUAL, PG. 143-144, 1992

SAMPLE CALCULATIONS FOR THE ASH HANDLING PROCESS KINGSTON FOSSIL PLANT

1.0 PROPOSED PARTICULATE MATTER EMISSIONS

The proposed particulate matter (TSP, PM₁₀, and PM_{2.5}) hourly and annual emissions are determined from good engineering judgments, manufacture's guarantees, and AP-42 emission factors. Maximum ash throughput is estimated to be 550,000 tons per year with 80 percent (440,000 tons per year) being fly ash and 20 percent (110,000 tons per year) being bottom ash.

1.1 DRY FLY ASH HANDLING SYSTEM

The Kingston Fossil Plant (KIF) dry fly ash handling system replaces the wet fly ash handling system. It will consist of a vacuum system and two (2) three-day storage silos.

1.1.1 FLY ASH VACUUM SYSTEM

A vacuum system removes the fly ash from the precipitators, SCRs, and economizers via an air current into one of two storage silos. The system is equipped with nine (9) liquid-ring vacuum pumps and filter separators. Total concentration exiting the vacuum pumps is 0.005 grains per standard cubic foot.

Air flow through the system is 9,275 cubic feet per minute. The system is expected to operate 8,760 hours per year. The pound per hour and annual TSP, PM₁₀, and PM_{2.5} emissions for the vacuum system operation is as followed:

$$\frac{0.005 \text{ grains}}{\text{scf}} \times \frac{9275 \text{ scf}}{\text{min}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{60 \text{ min}}{1 \text{ hour}} = 3.97 \times 10^{-1} \frac{\text{lb}}{\text{hour}}$$

$$\frac{0.005 \text{ grains}}{\text{scf}} \times \frac{9275 \text{ scf}}{\text{min}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} \times \frac{60 \text{ min}}{1 \text{ hour}} \times \frac{8760 \text{ hrs}}{1 \text{ year}} = 1.74 \frac{\text{ton}}{\text{year}}$$

1.1.2 STORAGE SILO PRESSURE SYSTEM AND BIN VENT

The fly ash collected by the nine (9) filter separators is deposited into a vacuum pressure transfer system. This pressure system blows the fly ash to one of two three-day collection silos. Conveying air is produced with five (5) operating and two (2) standby screw compressors, and it exhausts through the storage silo's filtered bin vent

Air flow entering the silo is 12,019 standard cubic feet per minute. Total exit concentration through the silo bin vent (with fabric filter) is 0.005 grains per standard cubic foot. The system is expected to operate 8,760 hours per year. The pound per hour and annual TSP, PM₁₀, and PM_{2.5} emissions from the silo pressure system operation is as followed:

$$\frac{0.005 \text{ grains}}{\text{scf}} \times \frac{12019 \text{ scf}}{\text{min}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{60 \text{ min}}{1 \text{ hour}} = 5.15 \times 10^{-1} \frac{\text{lb}}{\text{hour}}$$

$$\frac{0.005 \text{ grains}}{\text{scf}} \times \frac{12019 \text{ scf}}{\text{min}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} \times \frac{60 \text{ min}}{1 \text{ hour}} \times \frac{8760 \text{ hrs}}{1 \text{ year}} = 2.26 \frac{\text{ton}}{\text{year}}$$

1.1.3 STORAGE SILO UNLOADING VIA PIN MIXER

Fly ash can be unloaded (i.e., batch drop operations) to a dump truck, hopper truck, or rail car via a pin mixer ash unloader. Fly ash conditioners moisten the dust to 20 percent moisture for dust control before discharge. The typical ash handling process involves fly ash being unloaded to trucks for on-site hauling¹. Trucks utilized for ash loading are tri-axle dump trucks (19.5 ton capacity) or articulating trucks (40.8 ton capacity). Loading operations are estimated to occur 10 hours per day and four (4) days per week (i.e., 2,080 hours per year).

AP-42² provides the following equation that estimates particulate emissions from batch or continuous drop operations:

$$E = k \times 0.0032 \times \left[\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \right]$$

The variables are as followed:

- E denotes emission factor of pounds of particulate per ton of material transferred;
- k denotes particle size multiplier (e.g., 0.74 for total suspended particulates [TSP], 0.35 for PM₁₀, and 0.053 for PM_{2.5});
- U denotes the mean wind speed in miles per hour (e.g., 3.0 mph);
- M denotes the material moisture content, in percent (e.g., approximately 20 percent for conditioned fly ash obtained from either storage silo).

For fly ash loading from either of the two (2) storage silos to tri-axle dump trucks, the TSP emission factor as followed:

$$E = 0.74 \times 0.0032 \times \left[\frac{\left(\frac{3.0}{5}\right)^{1.3}}{\left(\frac{20}{2}\right)^{1.4}} \right] = 4.85 \times 10^{-5} \frac{\text{lb TSP}}{\text{ton}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

There will be approximately 10.8 tri-axle dump trucks per hour, and each tri-axle dump truck can accommodate 19.5 tons. Therefore, the hour and annual TSP emissions for loading fly ash from either storage silo is as followed:

¹ Pneumatic trucks, hopper trucks, and rail cars may be used to transfer fly ash offsite for disposal or beneficial use. However, emission estimates are based on the assumption that all ash will be disposed on the KIF property, which yields the largest fugitive emission estimates.

² AP-42, Volume I, Fifth Edition, "13.2.4 Aggregate Handling and Storage Piles," November 2006

$$\frac{4.85 \times 10^{-5} \text{ lb TSP}}{\text{ton}} \times \frac{19.5 \text{ tons}}{1 \text{ truck}} \times \frac{10.8 \text{ trucks}}{1 \text{ hr}} = 1.03 \times 10^{-2} \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{4.85 \times 10^{-5} \text{ lb TSP}}{\text{ton}} \times \frac{4.40 \times 10^5 \text{ tons}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 1.07 \times 10^{-2} \frac{\text{tons TSP}}{\text{yr}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}. Additionally, truck unloading operations at the Peninsula Phase II Landfill follow the same calculation methodology.

1.2 ASH HAULING

Hauling of production fly ash occurs on paved roads³. AP-42⁴ provides the following equation that estimates daily particulate emissions (TSP, PM₁₀, and PM_{2.5}) from vehicles traveling on paved roads:

$$E = [k \times sL^{0.91} \times W^{1.02}] \times \left(1 - \frac{P}{4N}\right)$$

The variables are as followed:

- E denotes emission factor of pounds of particulate per vehicle mile traveled (VMT);
- k denotes particle size multiplier (e.g., 0.011 lb TSP per VMT, 0.0022 for PM₁₀, and 0.00054 for PM_{2.5});
- sL denotes the road surface silt content in grams per meter square (g/m²) (e.g., assumed 8.2 g/m²; see Table 13.2.1-3);
- W denotes the average vehicle weight (e.g., approximately 27.8 tons per tri-axle dump truck);
- P denotes the number of wet days per year (e.g., 126.6 days);
- N denotes the number of days per year (i.e., 365 days).

The TSP emission factor (pound [lb] per VMT) associated with a tri-axle dump truck driving from the dry fly ash storage silos to the Peninsula Phase II Landfill is as followed:

$$E = [0.011 \times 8.2^{0.91} \times 27.8^{1.02}] \times \left(1 - \frac{126.6}{4 \times 365}\right) = 2.02 \text{ lb TSP/VMT}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

³ Pneumatic trucks, hopper trucks, and rail cars may be used to transfer fly ash offsite for disposal or beneficial use. However, emission estimates are based on the assumption that all ash will be disposed on the KIF property, which yields the largest fugitive emission estimates.

⁴ AP-42, Volume I, Fifth Edition, "13.2.1 Paved Roads," January 2011

There are approximately 10.8 tri-axle dump trucks per hour (based on an operating schedule of 10 hours per day and four [4] days per week), and each dump truck can carry 19.5 tons. The round-trip distance each truck travels is approximately 3.6 miles. The uncontrolled pound per hour and the annual TSP emissions for dry fly ash hauling operations is as followed:

$$\frac{2.02 \text{ lb TSP}}{\text{VMT}} \times \frac{3.6 \text{ miles}}{1 \text{ truck}} \times \frac{10.8 \text{ trucks}}{1 \text{ hr}} = 78.9 \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{2.02 \text{ lb TSP}}{\text{VMT}} \times \frac{3.6 \text{ miles}}{1 \text{ truck}} \times \frac{1 \text{ truck}}{19.5 \text{ tons}} \times \frac{4.40 \times 10^5 \text{ tons}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 82.1 \frac{\text{ton TSP}}{\text{year}} \quad \mathbf{12}$$

A watering truck provides roadway dust suppression (95 percent control). Therefore, the controlled pound per hour and the annual TSP emissions for dry fly ash hauling operations is as followed:

$$78.9 \frac{\text{lb TSP}}{\text{hr}} \times \left(1 - \frac{95}{100}\right) = 3.95 \frac{\text{lb TSP}}{\text{hr}}$$

$$82.1 \frac{\text{ton TSP}}{\text{year}} \times \left(1 - \frac{95}{100}\right) = 4.10 \frac{\text{ton TSP}}{\text{year}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

1.3 LANDFILL OPERATIONS

Fly ash is transported and deposited by dump trucks at the Peninsula Phase II Landfill. Several activities occur at the landfill: fly ash-pile compacting, fly-ash spreading, and fly ash-pile watering (for dust suppression). These activities occur on surfaces considered to be unpaved roads. For the area of the landfill disturbed during these activities, fugitive dust generated by wind is taken into account.

1.3.1 UNPAVED ROAD

AP-42⁵ provides the following equation that estimates particulate emissions (TSP, PM₁₀, and PM_{2.5}) from vehicles traveling on unpaved roads:

$$E = \left[k \times \left(\frac{s}{12}\right)^a \times \left(\frac{W}{3}\right)^b \right] \times \frac{365-P}{365}$$

The variables are as followed:

- *E* denotes emission factor of pounds of particulate per vehicle mile traveled (VMT);
- *k* denotes particle size multiplier (e.g., 4.9 lb TSP per VMT, 1.5 for PM₁₀, and 0.15 for PM_{2.5});
- *s* denotes the road surface silt content (e.g., assumed 100 percent for an ash landfill);
- *W* denotes the average vehicle weight (e.g., approximately 12.5 tons per compacting roller);
- *P* denotes the number of wet days per year (e.g., 126.6 days).

The constants *a* and *b* used to complete the unpaved road equation are provided as followed:

Constant	TSP	PM ₁₀	PM _{2.5}
----------	-----	------------------	-------------------

⁵ AP-42, Volume I, Fifth Edition, “13.2.2 Unpaved Roads,” November 2006

a	0.7	0.9	0.9
b	0.45	0.45	0.45

The TSP emission factor (pound [lb] per VMT) associated with a compacting roller traveling on the Peninsula Phase II Landfill is as followed:

$$E = \left[4.9 \times \left(\frac{100}{12} \right)^{0.7} \times \left(\frac{12.5}{3} \right)^{0.45} \right] \times \frac{365-126.6}{365} = 2.68 \times 10^1 \text{ lb TSP/VMT}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

One compacting roller is utilized and travels at four (4) miles per hour. It operates approximately 1,040 hours per year. The uncontrolled pound per hour and the annual TSP emissions for associated with this operation is as followed:

$$\frac{2.68 \times 10^1 \text{ lb TSP}}{\text{VMT}} \times \frac{4 \text{ miles}}{1 \text{ hr}} = 1.07 \times 10^2 \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{2.68 \times 10^1 \text{ lb TSP}}{\text{VMT}} \times \frac{4 \text{ miles}}{1 \text{ hr}} \times \frac{1040 \text{ hr}}{1 \text{ yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 5.58 \times 10^1 \frac{\text{ton TSP}}{\text{year}}$$

A watering truck provides landfill / pile watering to mitigate dust generation (95 percent control). Therefore, the controlled pound per hour and the annual TSP emissions is as followed:

$$1.07 \times 10^2 \frac{\text{lb TSP}}{\text{hr}} \times \left(1 - \frac{95}{100} \right) = 5.37 \frac{\text{lb TSP}}{\text{hr}}$$

$$5.58 \times 10^1 \frac{\text{ton TSP}}{\text{year}} \times \left(1 - \frac{95}{100} \right) = 2.79 \frac{\text{ton TSP}}{\text{year}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

1.4.2 LANDFILL AREA (DISTURBED)

The Peninsula Phase II Landfill is uncovered and is exposed to wind currents. Wind erosion will results in the release of fugitive particulate matter. However, as the landfill (i.e., pile) is maintained through compacting and watering a natural crust develops binding the ash and decreasing the erosion potential. Consequently, the total disturbed landfill area (i.e., the area of the pile that ash unloading and pile maintenance occurs) is approximately 10 acres.

Storage pile wind erosion is discussed in an EPA fugitive dust background document⁶. The ash pile is continuously active within 10 acres. The following equation provides fugitive emissions for frequently disturbed storage piles:

$$E_{TSP} = 1.7 \times \left(\frac{s}{1.5} \right) \times \left(\frac{365-P}{235} \right) \times \left(\frac{f}{15} \right)$$

The variables are as followed:

⁶ Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, EPA-450/2-92-004, pg. 2-25

- E_{TSP} denotes emission factor in pounds of TSP per day per acre;
- s denotes the silt content of material (e.g., 100 percent);
- P denotes the number of wet days per year (e.g., 126.6 days);
- f denotes the percent of time wind speed exceeds 12 miles per hour (i.e., 0.12 percent).

Additionally, the cited EPA fugitive dust document states that the “fraction of TSP which is PM_{10} is estimated at 0.5.” This fraction is applied to both PM_{10} and $PM_{2.5}$.

The TSP emission factor (pound [lb] per day-acre) associated with the Peninsula Phase II Landfill (actively disturbed area):

$$E_{TSP} = 1.7 \times \left(\frac{100}{1.5}\right) \times \left(\frac{365-126.6}{235}\right) \times \left(\frac{0.12}{15}\right)$$

$$E_{TSP} = 9.20 \times 10^{-1} \text{ lb/day} - \text{acre}$$

Similar calculations are performed for PM_{10} and $PM_{2.5}$ taking into account that the fraction of TSP which is PM_{10} (and $PM_{2.5}$) is 0.5.

Because TVA believes the total disturbed landfill area (i.e., the area of the pile that ash unloading and pile maintenance occurs) to be approximately 10 acres, the total TSP for the Peninsula Phase II Landfill is as followed:

$$\frac{9.20 \times 10^{-1} \text{ lb TSP}}{\text{day-acre}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times 10 \text{ acres} = 3.83 \times 10^{-1} \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{9.20 \times 10^{-1} \text{ lb TSP}}{\text{day-acre}} \times \frac{365 \text{ days}}{1 \text{ year}} \times 10 \text{ acres} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 1.68 \frac{\text{tons TSP}}{\text{year}}$$

The same method is used to estimate PM_{10} and $PM_{2.5}$ emissions.

ATTACHMENT 5

**EMISSION FACTORS AND CALCULATION OF PARTICULATE
EMISSIONS FROM LIMESTONE HANDLING PROCESS (73-0013-17)**

SAMPLE CALCULATIONS FOR THE LIMESTONE HANDLING PROCESS KINGSTON FOSSIL PLANT

1.0 PROPOSED PARTICULATE MATTER EMISSIONS

The proposed particulate matter (TSP, PM₁₀, and PM_{2.5}) hourly and annual emissions are determined from good engineering judgments, manufacture's guarantees, and AP-42 emission factors.

Pre-ground limestone will be delivered by trucks via paved and unpaved roads and pneumatically conveyed to one (of two) 3,000 ton storage silos. Each storage silo uses a bin vent filter to control fugitive dust during storage silo loading.

1.1 PRE-GROUND LIMESTONE DELIVERY / HAULING

1.1.1 PAVED ROAD

Pre-ground limestone delivery occurs on paved and unpaved roads. Particulate emissions associated with unpaved roads are discussed in section 1.1.2. For paved road travel, AP-42⁷ provides the following equation that estimates daily particulate emissions (TSP, PM₁₀, and PM_{2.5}) from vehicles:

$$E = [k \times sL^{0.91} \times W^{1.02}] \times \left(1 - \frac{P}{4N}\right)$$

The variables are as followed:

- E denotes emission factor of pounds of particulate per vehicle mile traveled (VMT);
- k denotes particle size multiplier (e.g., 0.011 lb TSP per VMT, 0.0022 for PM₁₀, and 0.00054 for PM_{2.5});
- sL denotes the road surface silt content in grams per meter square (g/m²) (e.g., assumed 8.2 g/m²; see Table 13.2.1-3);
- W denotes the average vehicle weight (e.g., approximately 27 tons per delivery truck);
- P denotes the number of wet days per year (e.g., 126.6 days);
- N denotes the number of days per year (i.e., 365 days).

The TSP emission factor (pound [lb] per VMT) associated with an off-site haul truck is as followed:

$$E = [0.011 \times 8.2^{0.91} \times 27^{1.02}] \times \left(1 - \frac{126.6}{4 \times 365}\right) = 1.97 \text{ lb TSP/VMT}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

There are approximately 10.4 pre-ground limestone delivery / haul trucks per hour, and each truck carries 26 tons. The round-trip distance each truck travels on paved road is approximately 1.36 miles. The uncontrolled pound per hour and the annual TSP emissions is as followed:

$$\frac{1.97 \text{ lb TSP}}{\text{VMT}} \times \frac{1.36 \text{ miles}}{1 \text{ truck}} \times \frac{10.4 \text{ trucks}}{1 \text{ hr}} = 27.7 \frac{\text{lb TSP}}{\text{hr}}$$

⁷ AP-42, Volume I, Fifth Edition, "13.2.1 Paved Roads," January 2011

$$\frac{1.97 \text{ lb TSP}}{\text{VMT}} \times \frac{1.36 \text{ miles}}{1 \text{ truck}} \times \frac{1 \text{ truck}}{26 \text{ tons}} \times \frac{560,640 \text{ tons}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 28.8 \frac{\text{ton TSP}}{\text{year}}$$

A watering truck provides roadway dust suppression (95 percent control). Therefore, the controlled pound per hour and the annual TSP emissions is as followed:

$$27.7 \frac{\text{lb TSP}}{\text{hr}} \times \left(1 - \frac{95}{100}\right) = 1.39 \frac{\text{lb TSP}}{\text{hr}}$$

$$28.8 \frac{\text{ton TSP}}{\text{year}} \times \left(1 - \frac{95}{100}\right) = 1.44 \times 10^{-1} \frac{\text{ton TSP}}{\text{year}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

1.1.2 UNPAVED ROAD

AP-42⁸ provides the following equation that estimates particulate emissions (TSP, PM₁₀, and PM_{2.5}) from vehicles traveling on unpaved roads:

$$E = \left[k \times \left(\frac{s}{12}\right)^a \times \left(\frac{W}{3}\right)^b \right] \times \frac{365-P}{365}$$

The equation's variables are as followed:

- *E* denotes emission factor of pounds of particulate per vehicle mile traveled (VMT);
- *k* denotes particle size multiplier (e.g., 4.9 lb TSP per VMT, 1.5 for PM₁₀, and 0.15 for PM_{2.5});
- *s* denotes the road surface silt content (e.g., 10 percent; mean value for stone quarrying and processing);
- *W* denotes the average vehicle weight (e.g., approximately 27 tons per delivery truck);
- *P* denotes the number of wet days per year (e.g., 126.6 days).

The constants *a* and *b* used to complete the unpaved road equation are provided as followed:

Constant	TSP	PM ₁₀	PM _{2.5}
a	0.7	0.9	0.9
b	0.45	0.45	0.45

The TSP emission factor (pound [lb] per VMT) associated with a pre-ground limestone delivery truck traveling on an unpaved road is as followed:

$$E = \left[4.9 \times \left(\frac{10}{12}\right)^{0.7} \times \left(\frac{27}{3}\right)^{0.45} \right] \times \frac{365-126.6}{365} = 7.57 \text{ lb TSP/VMT}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

There are approximately 10.4 pre-ground limestone delivery / haul trucks per hour, and each truck carries 26 tons. The round-trip distance each truck travels is approximately 0.987 miles. The uncontrolled pound per hour and the annual TSP emissions is as followed:

⁸ AP-42, Volume I, Fifth Edition, "13.2.2 Unpaved Roads," November 2006

$$\frac{7.57 \text{ lb TSP}}{\text{VMT}} \times \frac{0.987 \text{ miles}}{1 \text{ truck}} \times \frac{10.4 \text{ trucks}}{1 \text{ hr}} = 7.47 \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{7.57 \text{ lb TSP}}{\text{VMT}} \times \frac{0.987 \text{ miles}}{1 \text{ truck}} \times \frac{1 \text{ truck}}{26 \text{ tons}} \times \frac{560,640 \text{ tons}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 9.71 \times 10^{-2} \frac{\text{ton TSP}}{\text{year}}$$

A watering truck provides roadway dust suppression (95 percent control). Therefore, the controlled pound per hour and the annual TSP emissions is as followed:

$$7.47 \frac{\text{lb TSP}}{\text{hr}} \times \left(1 - \frac{95}{100}\right) = 3.74 \times 10^{-1} \frac{\text{lb TSP}}{\text{hr}}$$

$$9.71 \times 10^{-2} \frac{\text{ton TSP}}{\text{year}} \times \left(1 - \frac{95}{100}\right) = 4.86 \times 10^{-3} \frac{\text{ton TSP}}{\text{year}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

1.2 STORAGE SILO BIN VENT

Pre-ground limestone is conveyed pneumatically to one of two storage silos. The two silos are identical and have identical particulate control systems. Dust-laden air leaving the silo passes through a bin vent, which has a fabric filter. The bin vent fabric filter has a flow capacity of 3,160 actual cubic feet per minute. The estimated outlet grain loading rate is 0.02 grains per standard cubic feet. The system is expected to operate 8,760 hours per year. The pound per hour and annual TSP, PM₁₀, and PM_{2.5} emissions from the silo pressure system operation is as followed:

$$\frac{0.02 \text{ grains}}{\text{scf}} \times \frac{3160 \text{ scf}}{\text{min}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{60 \text{ min}}{1 \text{ hour}} = 5.42 \times 10^{-1} \frac{\text{lb}}{\text{hour}}$$

$$\frac{0.02 \text{ grains}}{\text{scf}} \times \frac{3160 \text{ scf}}{\text{min}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} \times \frac{60 \text{ min}}{1 \text{ hour}} \times \frac{8760 \text{ hrs}}{1 \text{ year}} = 2.37 \frac{\text{tons}}{\text{year}}$$

ATTACHMENT 6

**EMISSION FACTORS AND CALCULATION OF PARTICULATE
EMISSIONS FROM GYPSUM HANDLING PROCESS (73-0013-19)**

KINGSTON FOSSIL PLANT: GYPSUM HANDLING PROCESS PARTICULATE EMISSIONS FROM SIGNIFICANT SOURCES

EMISSION UNIT NO.	DESCRIPTION	EMISSION UNIT COMPONENT	EMISSION [1] EQUATION	INPUT PARAMETERS [2] PARAMETER			EMISSION FACTORS				SCALING FACTORS (PROCESS MEASURE)		UNCONTROLLED			CONTROLS	CONTROL [3] EFFICIENCY	CONTROLLED		
				TSP	PM10	PM2.5	TSP	PM10	PM2.5	UNITS	PM	LB/HR	TON/YR	PM	LB/HR			TON/YR		
40	TRANSFER CONVEYOR AND TEMPORARY STACKING AREA	GYPSUM FROM TRANSFER CONVEYOR	BATCH/CONTINUOUS DROP OPERATIONS (AP-42, SEC. 13.2.4)	H2O CONTENT, %	10	10	10	1.28E-04	6.06E-05	9.17E-06	LB/TON	1 CONVEYOR	TSP	1.15E-02	5.05E-02	NONE	0	TSP	1.15E-02	5.05E-02
		TEMPORARY STACKING AREA	WIND EROSION OF FREQ-DISTURBD PILE (EPA, 1992, SEC. 2.3.1.3.3)	AVG WIND SPEED, MPH	3	3	3					90 TONS/HR	PM10	5.45E-03	2.39E-02			PM10	5.45E-03	2.39E-02
41	GYPSUM LOADOUT	GYPSUM FROM TEMP STACKING AREA TO HAUL TRUCKS	BATCH/CONTINUOUS DROP OPERATIONS (AP-42, SEC. 13.2.4)	PARTICLE SIZE MULTIPLIER, k	0.74	0.35	0.053					0.518 ACRES	PM2.5	8.25E-04	3.62E-03			PM2.5	8.25E-04	3.62E-03
				WIND EROSION OF FREQ-DISTURBD PILE (EPA, 1992, SEC. 2.3.1.3.3)	SILT CONTENT, %	100	100	100	9.20E-01	4.60E-01	4.60E-01	LB/ACRE-DY			TSP	1.98E-02	8.69E-02	NONE	0	TSP
42	GYPSUM HAULING TO GYPSUM DISPOSAL AREA	ON-SITE ARTICULATED TRUCKS	UNPAVED ROAD (AP-42, SEC. 13.2.2)	WET DAYS PER YEAR, P	126.6	126.6	126.6					1 FRNT-LDER	PM10	9.92E-03	4.35E-02			PM10	9.92E-03	4.35E-02
		WATERING TRUCK	UNPAVED ROAD (AP-42, SEC. 13.2.2)	AVG WIND SPEED, MPH	3	3	3	1.28E-04	6.06E-05	9.17E-06	LB/TON	377 TONS/HR	TSP	4.83E-02	5.03E-02	NONE	0	TSP	4.83E-02	5.03E-02
43	TRUCK UNLOADING AT GYPSUM DISPOSAL AREA	GYPSUM UNLOADING FROM TRUCKS	BATCH/CONTINUOUS DROP OPERATIONS (AP-42, SEC. 13.2.4)	PARTICLE SIZE MULTIPLIER, k	4.9	1.5	0.15	1.28E+01	3.78E+00	3.78E-01	LB/VMT	1.52 MI/TRUCK	TSP	2.04E+02	1.89E+02	WET	95	TSP	1.02E+01	9.44E+00
				WATERING TRUCK	UNPAVED ROAD (AP-42, SEC. 13.2.2)	AVG WIND SPEED, MPH	10	10	10					36.0 TONS/TRUCK	PM10	6.01E+01	5.57E+01	SUPPRESSION		PM10
44	GYPSUM DISPOSAL AREA PILE OPERATIONS	PILE MAINTENANCE SPREADING (DOZER)	UNPAVED ROAD (AP-42, SEC. 13.2.1)	AVG WEIGHT OF VEHICLE, TONS	87.0	87.0	87.0					10.5 TRUCKS/HR	PM2.5	6.01E+00	5.57E+00			PM2.5	3.00E-01	2.79E-01
				WET DAYS PER YEAR, P	126.6	126.6	126.6	7.70E+00	2.27E+00	2.27E-01	LB/VMT	10 MPH	416 HRS/YR	TSP	7.70E+01	1.60E+01	WET	95	TSP	3.85E+00
45	GYPSUM SALES	TRUCK HAULING OFFSITE (UNPAVED ROAD)	UNPAVED ROAD (AP-42, SEC. 13.2.2)	PARTICLE SIZE MULTIPLIER, k	4.9	1.5	0.15	1.28E-04	6.06E-05	9.17E-06	LB/TON	36.0 TONS/TRUCK	TSP	4.83E-02	4.48E-02	NONE	0	TSP	4.83E-02	4.48E-02
				WATERING TRUCK (UNPAVED ROAD)	UNPAVED ROAD (AP-42, SEC. 13.2.1)	AVG WIND SPEED, MPH	3	3	3	3.32E+01	1.55E+01	1.55E+00	LB/VMT	10.5 TRUCKS/HR	PM10	2.29E-02	2.12E-02			PM10
45	GYPSUM SALES	TRUCK HAULING OFFSITE (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	PARTICLE SIZE MULTIPLIER, k	0.011	0.0022	0.00054					1,855 HR/YR	PM2.5	3.46E-03	3.21E-03			PM2.5	3.46E-03	3.21E-03
				WATERING TRUCK (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	WET DAYS PER YEAR, P	126.6	126.6	126.6	3.86E+01	1.80E+01	1.80E+00	LB/VMT	10 MPH	TSP	3.86E+02	8.02E+01	WET	95	TSP
45	GYPSUM SALES	TRUCK HAULING OFFSITE (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	SILT CONTENT, %	100	100	100	9.20E-01	4.60E-01	4.60E-01	LB/ACRE-DY	10 ACRES	TSP	3.83E-01	1.68E+00	NONE	0	TSP	3.83E-01	1.68E+00
				WATERING TRUCK (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	AVG WIND SPEED, MPH	10	10	10	7.57E+00	2.23E+00	2.23E-01	LB/VMT	0.52 MI/TRUCK	PM10	1.92E-01	8.39E-01			PM10
45	GYPSUM SALES	TRUCK HAULING OFFSITE (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	AVG WEIGHT OF VEHICLE, TONS	27	27	27					14.5 TRUCKS/HR	TSP	5.72E+01	6.44E+00	WET	95	TSP	2.86E+00	3.22E-01
				WET DAYS PER YEAR, P	126.6	126.6	126.6	7.70E+00	2.27E+00	2.27E-01	LB/VMT	10 MPH	416 HRS/YR	PM10	1.69E+01	1.90E-01	SUPPRESSION		PM10	8.43E-01
45	GYPSUM SALES	TRUCK HAULING OFFSITE (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	PARTICLE SIZE MULTIPLIER, k	4.9	1.5	0.15	1.97E+00	3.93E-01	9.65E-02	LB/VMT	2.07 MI/TRUCK	TSP	5.90E+01	6.65E+00	WET	95	TSP	2.95E+00	3.32E-01
				WATERING TRUCK (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	AVG WIND SPEED, MPH	8.2	8.2	8.2	2.04E+00	4.08E-01	1.00E-01	LB/VMT	10 MPH	PM10	1.18E+01	1.33E+00	SUPPRESSION		PM10
45	GYPSUM SALES	TRUCK HAULING OFFSITE (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	AVG WEIGHT OF VEHICLE, TONS	27	27	27					85,000 TONS/YR	PM2.5	2.90E+00	3.26E-01			PM2.5	1.45E-01	1.63E-02
				WET DAYS PER YEAR, P	126.6	126.6	126.6	2.04E+00	4.08E-01	1.00E-01	LB/VMT	416 HRS/YR	TSP	2.04E+01	4.24E+00	WET	95	TSP	1.02E+00	2.12E-01
45	GYPSUM SALES	TRUCK HAULING OFFSITE (PAVED ROAD)	PAVED ROAD (AP-42, SEC. 13.2.1)	SILT LOADING, g/m ²	8.2	8.2	8.2					85,000 TONS/YR	PM10	4.08E+00	8.49E-01	SUPPRESSION		PM10	2.04E-01	4.24E-02
				WET DAYS PER YEAR, P	126.6	126.6	126.6							PM2.5	1.00E+00	2.08E-01			PM2.5	5.01E-02
TOTAL																	TSP	5.11E+01	2.40E+01	
TOTAL																	PM10	1.93E+01	9.17E+00	
TOTAL																	PM2.5	2.23E+00	1.73E+00	

NOTES:

(1) EMISSION EQUATIONS

- A. BATCH DROP OPERATIONS: EPA, AP-42, 5TH EDITION, SECTION 13.2.4, NOVEMBER 2006
- B. PAVED ROAD FUGITIVE DUST: EPA, AP-42, 5TH EDITION, SECTION 13.2.1, JANUARY 2011
- C. UNPAVED ROAD FUGITIVE DUST: EPA, AP-42, 5TH EDITION, SECTION 13.2.2, NOVEMBER 2006
- D. WIND EROSION OF ACTIVE STORAGE PILES: EPA, EPA-450/2-92-004, SECTION 2.3.1.3.3, SEPTEMBER 1992

(2) METEOROLOGICAL PARAMETERS

- A. AVERAGE WIND SPEED: KIF METEOROLOGICAL TOWER, 1986-1987 DATABASE
- B. NUMBER OF WET DAYS: NATIONAL WEATHER SERVICE, KNOXVILLE, TENNESSEE DATA, 1942-94 AVERAGE
- C. FREQUENCY OF WINDS GREATER THAN 12 MPH: KIF METEOROLOGICAL TOWER, 1986-1987 DATABASE

(3) CONTROL EFFICIENCY

- A. WET SUPPRESSION: AWMA, AIR POLLUTION ENGINEERING MANUAL, PG. 143-144, 1992

SAMPLE CALCULATIONS FOR THE GYPSUM HANDLING PROCESS KINGSTON FOSSIL PLANT

1.0 PROPOSED PARTICULATE MATTER EMISSIONS

The proposed particulate matter (TSP, PM₁₀, and PM_{2.5}) hourly and annual emissions are determined from good engineering judgments, manufacture's guarantees, and AP-42 emission factors.

The gypsum dewatering plant consists of two 100 percent horizontal vacuum belt filter and hydrocyclone trains designed to produce wallboard grade gypsum. Effluent slurry (ES) from the main FGD area is directed to a slurry tank at the dewatering plant. The ES is then fed from the tank to the hydrocyclones, which remove about 50 percent of the water. From the hydrocyclones, the ES goes to the vacuum belt filter(s). Vacuum pumps connected to the vacuum belt filter remove the moisture (filtrate) from the ES for a dewatered cake moisture content of approximately 10 percent. Gypsum cake (i.e., gypsum) production is estimated to be 785,000 tons per year.

1.1 GYPSUM TRANSFER TO DRY STACKING AREA

The dewatered cake remains on the cloth belt portion of the vacuum belt filter and is discharged into chutes at the end of the vacuum belt onto a gypsum transfer conveyor. The gypsum transfer conveyor moves the cake to a temporary dry stacking area where it is stacked for loading and transport to the GDA or offsite if it is sold.

AP-42⁹ provides the following equation that estimates particulate emissions from batch or continuous drop operations:

$$E = k \times 0.0032 \times \left[\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \right]$$

The variables are as followed:

- E denotes emission factor of pounds of particulate per ton of material transferred;
- k denotes particle size multiplier (e.g., 0.74 for total suspended particulates [TSP], 0.35 for PM₁₀, and 0.053 for PM_{2.5});
- U denotes the mean wind speed in miles per hour (e.g., 3.0 mph);
- M denotes the material moisture content, in percent (e.g., approximately 10 percent for gypsum cake).

Substituting in these variables provides the following TSP emission factor:

$$E = 0.74 \times 0.0032 \times \left[\frac{\left(\frac{3.0}{5}\right)^{1.3}}{\left(\frac{10}{2}\right)^{1.4}} \right] = 1.28 \times 10^{-4} \frac{lb\ TSP}{ton}$$

⁹ AP-42, Volume I, Fifth Edition, "13.2.4 Aggregate Handling and Storage Piles," November 2006

Similar calculations are performed for PM₁₀ and PM_{2.5}.

The amount of gypsum cake that will be conveyed to the dry stacking area will be 90 tons per hour and occurs continuously. Therefore, the hourly and annual TSP emissions are provided as followed:

$$\frac{1.28 \times 10^{-4} \text{ lb TSP}}{\text{ton}} \times \frac{90 \text{ tons}}{1 \text{ hr}} = 1.15 \times 10^{-2} \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{1.28 \times 10^{-4} \text{ lb TSP}}{\text{ton}} \times \frac{90 \text{ tons}}{1 \text{ hr}} \times \frac{8760 \text{ hr}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 5.05 \times 10^{-2} \frac{\text{tons TSP}}{\text{yr}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}. Additionally, the gypsum cake loading to haul trucks associated with on-site disposal (Gypsum Disposal Area [GDA]) or off-site sales follow the same calculation methodology.

1.2 GYPSUM HAULING

Once the gypsum has been loaded onto the temporary stacking area, hauling trucks haul the gypsum to the disposal area (GDA) or offsite to be sold. Travel to the GDA occurs on the unpaved roads; whereas, travel offsite occurs on unpaved and paved roads.

1.2.1 UNPAVED ROAD

AP-42¹⁰ provides the following equation that estimates particulate emissions (TSP, PM₁₀, and PM_{2.5}) from vehicles traveling on unpaved roads:

$$E = \left[k \times \left(\frac{s}{12} \right)^a \times \left(\frac{W}{3} \right)^b \right] \times \frac{365-P}{365}$$

The equation's variables are as followed:

- E denotes emission factor of pounds of particulate per vehicle mile traveled (VMT);
- k denotes particle size multiplier (e.g., 4.9 lb TSP per VMT, 1.5 for PM₁₀, and 0.15 for PM_{2.5});
- s denotes the road surface silt content (e.g., 10 percent; mean value for stone quarrying and processing);

¹⁰ AP-42, Volume I, Fifth Edition, "13.2.2 Unpaved Roads," November 2006

- W denotes the average vehicle weight (e.g., approximately 87 tons per [on-site] articulated truck);
- P denotes the number of wet days per year (e.g., 126.6 days).

The constants a and b used to complete the unpaved road equation are provided as followed:

Constant	TSP	PM ₁₀	PM _{2.5}
a	0.7	0.9	0.9
b	0.45	0.45	0.45

The TSP emission factor (pound [lb] per VMT) associated with an articulated truck traveling to and from the GDA is as followed:

$$E = \left[4.9 \times \left(\frac{10}{12} \right)^{0.7} \times \left(\frac{87}{3} \right)^{0.45} \right] \times \frac{365-126.6}{365} = 1.28 \times 10^1 \text{ lb TSP/VMT}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

There are approximately 10.5 articulated trucks per hour, and each articulated truck can carry 36 tons. The round-trip distance each truck travels is approximately 1.52 miles. The uncontrolled pound per hour and the annual TSP emissions is as followed:

$$\frac{1.28 \times 10^1 \text{ lb TSP}}{\text{VMT}} \times \frac{1.52 \text{ miles}}{1 \text{ truck}} \times \frac{10.5 \text{ trucks}}{1 \text{ hr}} = 204 \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{1.28 \times 10^1 \text{ lb TSP}}{\text{VMT}} \times \frac{1.52 \text{ miles}}{1 \text{ truck}} \times \frac{1 \text{ truck}}{36 \text{ tons}} \times \frac{7.00 \times 10^5 \text{ tons}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 189 \frac{\text{ton TSP}}{\text{year}}$$

A watering truck provides roadway dust suppression (95 percent control). Therefore, the controlled pound per hour and the annual TSP emissions is as followed:

$$204 \frac{\text{lb TSP}}{\text{hr}} \times \left(1 - \frac{95}{100} \right) = 10.2 \frac{\text{lb TSP}}{\text{hr}}$$

$$189 \frac{\text{ton TSP}}{\text{year}} \times \left(1 - \frac{95}{100} \right) = 9.44 \frac{\text{ton TSP}}{\text{year}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

1.2.2 PAVED ROAD

Gypsum hauling offsite occurs on unpaved and paved roads. Particulate emissions associated with unpaved roads are discussed in section 1.2.1. For paved road gypsum hauling, AP-42¹¹ provides the following equation that estimates daily particulate emissions (TSP, PM₁₀, and PM_{2.5}) from vehicles:

$$E = [k \times sL^{0.91} \times W^{1.02}] \times \left(1 - \frac{P}{4N} \right)$$

¹¹ AP-42, Volume I, Fifth Edition, "13.2.1 Paved Roads," January 2011

The variables are as followed:

- E denotes emission factor of pounds of particulate per vehicle mile traveled (VMT);
- k denotes particle size multiplier (e.g., 0.011 lb TSP per VMT, 0.0022 for PM₁₀, and 0.00054 for PM_{2.5});
- sL denotes the road surface silt content in grams per meter square (g/m²) (e.g., assumed 8.2 g/m²; see Table 13.2.1-3);
- W denotes the average vehicle weight (e.g., approximately 27 tons per off-site haul dump truck);
- P denotes the number of wet days per year (e.g., 126.6 days);
- N denotes the number of days per year (i.e., 365 days).

The TSP emission factor (pound [lb] per VMT) associated with an off-site haul truck is as followed:

$$E = [0.011 \times 8.2^{0.91} \times 27^{1.02}] \times \left(1 - \frac{126.6}{4 \times 365}\right) = 1.97 \text{ lb TSP/VMT}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

There are approximately 14.5 off-site haul trucks per hour, and each truck carries 26 tons. The round-trip distance each truck travels on paved road is approximately 2.07 miles. The uncontrolled pound per hour and the annual TSP emissions is as followed:

$$\frac{1.97 \text{ lb TSP}}{\text{VMT}} \times \frac{2.07 \text{ miles}}{1 \text{ truck}} \times \frac{14.5 \text{ trucks}}{1 \text{ hr}} = 59.0 \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{1.97 \text{ lb TSP}}{\text{VMT}} \times \frac{2.07 \text{ miles}}{1 \text{ truck}} \times \frac{1 \text{ truck}}{26 \text{ tons}} \times \frac{8.50 \times 10^4 \text{ tons}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 6.65 \frac{\text{ton TSP}}{\text{year}}$$

A watering truck provides roadway dust suppression (95 percent control). Therefore, the controlled pound per hour and the annual TSP emissions is as followed:

$$59.0 \frac{\text{lb TSP}}{\text{hr}} \times \left(1 - \frac{95}{100}\right) = 2.95 \frac{\text{lb TSP}}{\text{hr}}$$

$$6.65 \frac{\text{ton TSP}}{\text{year}} \times \left(1 - \frac{95}{100}\right) = 3.32 \times 10^{-1} \frac{\text{ton TSP}}{\text{year}}$$

Similar calculations are performed for PM₁₀ and PM_{2.5}.

1.3 WIND EROSION OF DRY STACKING AREAS

Gypsum cake is stored either at the temporary dry stacking area or at the GDA. Both locations are uncovered and exposed to wind currents. Wind erosion will results in the release of fugitive particulate matter. Storage pile wind erosion is discussed in an EPA fugitive dust background document¹². The following equation provides fugitive emissions for frequently disturbed storage piles:

$$E_{TSP} = 1.7 \times \left(\frac{s}{1.5}\right) \times \left(\frac{365-P}{235}\right) \times \left(\frac{f}{15}\right)$$

¹² Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, EPA-450/2-92-004, pg. 2-25

The variables are as followed:

- E_{TSP} denotes emission factor in pounds of TSP per day per acre;
- s denotes the silt content of material (e.g., 100 percent);
- P denotes the number of wet days per year (e.g., 126.6 days);
- f denotes the percent of time wind speed exceeds 12 miles per hour (i.e., 0.12 percent).

Additionally, the cited EPA fugitive dust document states that the “fraction of TSP which is PM_{10} is estimated at 0.5.” This fraction is applied to both PM_{10} and $PM_{2.5}$.

The TSP emission factor (pound [lb] per day-acre) associated with the temporary storage area (area of the pile that is continuously active) is as followed:

$$E_{TSP} = 1.7 \times \left(\frac{100}{1.5}\right) \times \left(\frac{365-126.6}{235}\right) \times \left(\frac{0.12}{15}\right)$$

$$E_{TSP} = 9.20 \times 10^{-1} \text{ lb/day} - \text{acre}$$

Similar calculations are performed for PM_{10} and $PM_{2.5}$ taking into account that the fraction of TSP which is PM_{10} (and $PM_{2.5}$) is 0.5.

The total TSP for the temporary storage area is as followed:

$$\frac{9.20 \times 10^{-1} \text{ lb TSP}}{\text{day-acre}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times 0.518 \text{ acres} = 1.98 \times 10^{-2} \frac{\text{lb TSP}}{\text{hr}}$$

$$\frac{9.20 \times 10^{-1} \text{ lb TSP}}{\text{day-acre}} \times \frac{365 \text{ days}}{1 \text{ year}} \times 0.518 \text{ acres} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 8.69 \times 10^{-2} \frac{\text{tons TSP}}{\text{year}}$$

The same method is used to estimate PM_{10} and $PM_{2.5}$ emissions.

ATTACHMENT 7

NONAPPLICABLE REQUIREMENTS

TABLE OF CONTENTS

	Page Numbers
1. State of Tennessee Division 68 – 201 Tennessee Air Quality Act	73
2. State of Tennessee Division 1200-03 Air Pollution Control Regulations	74
3. U.S. Environmental Protection Agency (EPA) Code of Federal Regulations (CFR) Title 40	92

Tennessee Code Annotated (TCA) 68-201 – Air Pollution Control

Citation	Title	Applicable Regulation	Comments
PART 1 - AIR QUALITY			
68-201-101	Short Title	No	Gives this part the title “Tennessee Air Quality Act.” No Applicable Requirement
68-201-102	Definitions	Yes	Defines terms used in this part. No Applicable Requirement
68-201-103	Intent and Purpose	No	States intent and purpose of the Act. No Applicable Requirement
68-201-104	Creation of Air Pollution Control Board - Members - Meetings - Organization	No	Provides for creation of the Air Pollution Control Board, and its organization, members, and meetings. No Applicable Requirement
68-201-105	Powers and Duties of Board and Department	No	Establishes that the Board may require sources to furnish information required in order for it to perform its duties. Allows for inspections of sources. No Applicable Requirement
68-201-106	Matters to Be Considered in Exercising Powers	No	The Board has no jurisdiction with respect to air pollution existing solely within a facility. Specifies what must be considered by the Board in exercising its powers to prevent/abate/control air pollution. No Applicable Requirement
68-201-107	Powers and Duties of Technical Secretary	Yes	Establishes the powers and duties of the Technical Secretary which include declaring air pollution episodes, and holding hearings. Respondent/petitioner to a hearing may appeal any determination in writing within 15 days of receipt of any order. State Only Requirement
68-201-108	Conduct Hearings	Yes	A source may request a hearing before the Board regarding a decision/action of the Technical Secretary regarding a permit/order/assessment. Provides for public hearings. State Only Requirement
68-201-109	Emergency Stop Orders for Air Contaminant Sources- Hearings	Yes	A source must stop immediately or reduce emission of air contaminants if ordered by the Commissioner should he find that these emissions are causing imminent danger to human health/safety. A hearing on the matter is required within 24-hours. State Only Requirement
68-201-110	Judicial Review	Yes	Provides for appeals from any final order/determination by any person adversely affected by such. State Only Requirement
68-201-111	Right of Board or Commissioner to Injunctive Relief	No	Board/Commissioner may institute civil litigation to prevent violation of any board rule/regulation/order. No Applicable Requirement
68-201-112	Penalty for Violations - Duty of District Attorneys General - Abatement of Public Nuisance	Yes	Provides for fines for willful/knowing violations. Provides authority to the Board to abate public nuisances. State Only Requirements
68-201-113	Existing Civil or Criminal Remedies Not Impaired	No	Existing civil/criminal remedies for wrongful actions are not impaired by this part. No Applicable Requirement
68-201-114	Intent or Remedies - Rights of Action Unaffected	No	Remedies provided for in this part are to provide additional/cumulative remedies to prevent/abate/control air pollution and do not affect any other rights/actions. No Applicable Requirement
68-201-115	Local Pollution Control Programs. Exemption from State Supervision. Applicability Part to Air Contaminant Sources Burning Wood Waste	No	Provides for establishment of local air pollution control programs. Local entities must hold a certificate of exemption from state supervision. Part does not apply to burning of wood waste for disposition of such. No Applicable Requirement
68-201-116	Orders and Assessments of Damages and Civil Penalty Appeal	Yes	Upon order by the Technical Secretary, in response to a violation, a source must comply with the order within the time specified. Part provides for civil/criminal penalties. Approved local programs may issue an assessment against a violator. Anyone who receives an assessment may appeal by filing a petition for review within 30 days with the Technical Secretary. Provides for citizen intervention. State Only Requirement
68-201-117	Levy of Noncompliance and Non-payment Penalties - Suit for Collection or Assessment of	Yes	If found in violation, a source must pay any assessed non-compliance penalties authorized by the board/EPA/exempted local programs. Board/local programs are authorized to file suit for such.

Tennessee Code Annotated (TCA) 68-201 – Air Pollution Control

Citation	Title	Applicable Regulation	Comments
	Penalty		State Only Requirement
68-201-118	Variances	Yes	Allows for the filing of variances by a source. Hearings may be held, but are not required. Variances are for a 1-year period, but may be extended for 1 year at a time. Burden of proof is on the source. State Only Requirement
PART 2 - MISCELLANEOUS PROVISIONS			
68-201-201		No	Repealed. No Applicable Requirement
68-201-202	Local Ordinances	No	Allows cities/towns/counties with a population >600,000 (1960 federal census) to enact ordinances/regulations no less stringent than the provisions of Part I. Violations are misdemeanors. No Applicable Requirement
68-201-203	Emissions from Light-duty Vehicles	No	Allows the State air pollution control board to initiate a voluntary inspection and maintenance program to study emissions from light-duty vehicles in the metropolitan area in and around Davidson County. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
CHAPTER 1200-03-01 GENERAL PROVISIONS			
1200-03-01-.01	General Rules	No	Titles all Division 1200-03 regulations as “Tennessee Air Pollution Control Regulations” (APCR). Defines “ambient air standard” and intent of such standards. Pollutant limits must be effect-related. For multiple sources in an area, limitations must be on each source. Defines “emission standard”. No Applicable Requirement
1200-03-01-.02	Severability	No	If any portion of the APCR is adjudged to be invalid or unconstitutional, all other parts remain unaffected. No Applicable Requirement
CHAPTER 1200-03-02 DEFINITIONS			
1200-03-02-.01	General Definitions	Yes	Defines terms in the APCR not elsewhere defined. No Applicable Requirement
1200-03-02-.02	Abbreviations	Yes	Explains meanings of abbreviations used in the APCR, unless context clearly indicates otherwise. No Applicable Requirement
CHAPTER 1200-03-03 AMBIENT AIR QUALITY STANDARDS			
1200-03-03-.01	Primary Air Quality Standard	No	Explains what a primary ambient air quality standard is intended to do. No Applicable Requirement
1200-03-03-.02	Secondary Air Quality Standard	No	Explains what a secondary ambient air quality standard is intended to do. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-03-.03	Tennessee's Ambient Standard Air Quality Standards	No	Presents, in tabular form, the primary and secondary ambient air quality standards (AAQS) for the State and specifies that all averaging periods are to be consecutive time periods. No Applicable Requirement
1200-03-03-.04	Nondegradation of standard	No	AAQS are not to allow any significant deterioration of air quality in the State. No Applicable Requirement
1200-03-03-.05	Achievement	No	Establishes schedules of achievement with the AAQS for each pollutant for which a standard has been established. No Applicable Requirement
CHAPTER 1200-03-04 OPEN BURNING			
1200-03-04-.01	Purpose	No	States purpose of this chapter. No Applicable Requirement
1200-03-04-.02	Definitions	Yes	Defines terms used in this chapter. Terms not defined here have meaning given them in 1200-03-02. No Applicable Requirement
1200-03-04-.03	Open Burning Prohibited	Yes	Open burning is prohibited unless specifically exempted. Specifies material prohibited from being burned. Applicable Requirement
1200-03-04-.04	Exceptions to Open Burning	Yes	Specific exemptions which allow open burning are presented, including disposition of wood waste. Applicable Requirement
1200-03-04-.05	Repealed	No	No Applicable Requirement
CHAPTER 1200-03-05 VISIBLE EMISSION REGULATIONS			
1200-03-05-.01	General Standards	Yes	Opacity from any source is not to exceed 20% (aggregate of more than 5 minutes in any one hour or more than 20 minutes in any 24-hour period). For fuel burning installations with heat input >600 MMBtu/hr, opacity is not to exceed 20% (6-minute average), except for one six-minute period per hour of not more than 40%. Said standards apply unless otherwise specified in a subsequent rule. Applicable Requirement
1200-03-05-.02	Exceptions	Yes	Opacity exceedances are allowed for routine startup/shutdown, and other temporary conditions. A log of these activities is required to be maintained, unless such activities are part of the permit conditions. Applicable Requirement
1200-03-05-.03	Methods of Evaluation and Recording	Yes	Opacity is to be determined by a certified evaluator pursuant to the rules of this chapter. Where the Technical Secretary has agreed in writing, an opacity monitor, which meets the criteria contained in 1200-03-10-.02, may be used to determine compliance. Monitor must meet operational availability/quality assurance requirements. Use of monitor must be included in the operating permit and SIP. These standards do not apply to NSPS sources (1200-03-16). Applicable Requirement
1200-03-05-.04	Exemption	Yes	For an existing source, in order to determine compliance with an opacity standard to which an identical new source must comply, the owner or operator must notify the Technical Secretary in writing that this is a revision to the existing source's requirement and an in-stack monitor must be installed in accordance with 1200-03-10-.02. Applicable Requirement
1200-03-05-.05	Standard for Certain Existing Sources	Yes	Existing sources which meet the criteria specified herein may elect to be subject to an opacity standard not to exceed 40%. Applicable Requirement
1200-03-05-.06	Large Wood-Fired Fuel Burning Equipment	No	No affected units on site. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-05-.07		No	Repealed. No Applicable Requirement
1200-03-05-.08	Titanium Dioxide (TiO ₂) Manufacturing	No	No affected units on site. No Applicable Requirement
1200-03-05-.09	Kraft Mill Recovery Furnaces	No	No affected unit on site. No Applicable Requirement
1200-03-05-.10	Choices of Visible Emission Standard for Certain Fuel Burning Equipment	Yes	Fuel burning equipment with heat input >50 MMBtu/hr and <600 MMBtu/hr in operation on July 31, 1981, and subject to 1200-03-05-.01 may opt for an opacity limit of 20%. All fuel-burning equipment at an installation will be subject. Applicable Requirement
1200-03-05-.11	Soda Recovery Boilers	No	No affected unit on site. No Applicable Requirement
1200-03-05-.12	Coke Battery Underfire (combustion) Stacks	No	No affected unit on site. No Applicable Requirement
CHAPTER 1200-03-06 NON-PROCESS EMISSION STANDARDS			
1200-03-06-.01	General Non-Process Emissions	Yes	Owner or operator of an existing (under construction/in operation prior to April 3, 1972) fuel-burning installation proposing to modify, rebuild, or replace a source, may do so only if the source will meet the maximum allowable emission standards for a new installation. Other than for PSD affected units, a fuel change is not a modification. PSD non-process sources must comply with 1200-03-09, as do sources in or impacting nonattainment areas. Applicable Requirement
1200-03-06-.02	Non-Process Particulate Emission Standards	Yes	Procedures for determining non-process PM emission standards for existing and new fuel burning equipment, and incinerators are presented herein. Applicable Requirement
1200-03-06-.03	General Non-Process Gaseous Emissions	Yes	Stationary sources established after April 3, 1972, which emit gaseous contaminants must install and utilize BACT. Applicable Requirement
1200-03-06-.04	Nitrogen Oxides (Repealed)	No	No Applicable Requirement
1200-03-06-.05	Wood-Fired Fuel Burning Equipment	No	No affected unit on site No Applicable Requirement
1200-03-06-.06	Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999	No	No affected unit on site No Applicable Requirement
CHAPTER 1200-03-07 PROCESS EMISSION STANDARDS			
1200-03-07-.01	General Process Particulate Emission Standards	Yes	Owner/operator of an existing process emission source, proposing to modify, rebuild or replace said source, may do so only if the source will meet the maximum allowable emission standard for a new process emission source. A change in fuels is not a modification. Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-07-.02	Choice of Particulate Emission Standards - Existing Process	Yes	Sources under construction/in operation prior to August 9, 1969, shall determine a PM standard from the diffusion equation or process weight tables specified herein if written notification is provided to the Technical Secretary prior to July 1, 1972. Otherwise the table 1 process weight standards apply. For sources under construction on or after August 9, 1972, and before July 7, 1974, the diffusion equation must be used to determine the standard, unless written notification to the Technical Secretary indicates that the tabulated process weight standard is preferred. Otherwise, the tabulated standard will apply. Applicable Requirement
1200-03-07-.03	New Processes	Yes	Allowable PM from process emission sources beginning operation on/after April 3, 1972, shall be determined from Process Weight Table 2. BACT may be required in nonattainment areas. Sources in/impacting nonattainment areas must comply with 1200-03-09-.01 (5) (nonattainment New Source Review). Applicable Requirement
1200-03-07-.04	Limiting Allowable Emissions	Yes	PM process emissions shall not be required to be <0.02 grains/dry scf corrected to 70 degrees F and 1 atm unless found necessary by the Board. Likewise, maximum allowable is 0.25 gr/dscf at 70 degrees F/1 atm. Does not apply to vents from liquid storage tanks. Applicable Requirement
1200-03-07-.05	Specific Process Emission Standards	Yes	Standards specified in 1200-03-07-.02 through -.04 apply if a standard for a specifically designated type of process emission source is contained in a subsequent rule of this chapter. Applicable Requirement
1200-03-07-.06	Standards of Performance for New Stationary Sources	Yes	The State has adopted EPA's NSPS and will designate new standards as promulgated by EPA. Applicable Requirement
1200-03-07-.07	General Provisions and Applicability for Process Gaseous Emission Standards	Yes	After April 3, 1972, any new/modified source of gaseous air contaminants must utilize equipment/technology deemed reasonable/proper by the Technical Secretary. Applicable Requirement
1200-03-07-.08	Specific Process Emission Standards	No	No affected units at the facility. No Applicable Requirement
1200-03-07-.09	Sulfuric Acid Mist	No	No affected unit on site. No Applicable Requirement
1200-03-07-.10	Grain Loading Limit for Certain Existing Sources	Yes	A certificate of validation for a PM limit of 1.0 gr/dscf at 70° F and 1 atm may be granted to a source in lieu of the standards of 1200-03-07-.04 (02) if the source commenced operation prior to April 3, 1972, and other specified criteria are met. Applicable Requirement
1200-03-07-.11	Carbon Monoxide, Electric Arc Furnaces	No	No affected unit on site. No Applicable Requirement
1200-03-07-.12	Carbon Monoxide, Catalytic Cracking Units	No	No affected unit on site. No Applicable Requirement
CHAPTER 1200-03-08 FUGITIVE DUST			
1200-03-08-.01	Fugitive Dust	Yes	Reasonable precautions must be used to prevent airborne PM. A non-inclusive list of precautions is specified herein. Any visible emission beyond the property line in excess of 5 minutes/hour or 20 minutes/day (excluding those from malfunctions as specified in 1200-03-20) are prohibited. Compliance schedules are presented. Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-08-.02	Special Additional Control Area Fugitive Dust Requirements	No	Specific fugitive dust requirements for particulate Additional Control Area No Applicable Requirement
1200-03-08-.03	New and/or Modified Source	Yes	Fugitive dust sources constructed or modified after November 6, 1988, must meet emission standards specified in their construction and subsequent operating permits. Standards will be visible emission standards to be read by technique specified in said permit(s). No Applicable Requirement
CHAPTER 1200-03-09 CONSTRUCTION AND OPERATING PERMITS			
1200-03-09-.01	Construction Permits	Yes	Requires a person to apply for and obtain a permit from the Technical Secretary to construct or modify an air contaminant source prior to construction or modification. Specifies requirements for applying for and obtaining a construction permit, including PSD and nonattainment New Source Review, for construction of a new or modification of an existing air contaminant source. Applicable Requirements
1200-03-09-.02	Operating Permits	Yes	Requires a person operating an air contaminant source to obtain an operating permit from the Technical Secretary within specified time frames and specifies certain procedures for obtaining a permit. Also specifies requirements in accordance with Title V of the federal Clean Air Act for operating permit applications and for operating permit issued under the Title V permit regulations. Applicable Requirements
1200-03-09-.03	General Provisions	Yes	Specifies generally applicable provisions including requirement to comply with all regulations at the earliest practicable time, prohibits circumvention of the regulations, prohibits emissions from causing a traffic hazard, limits transferability of a construction or operating permit, and provides authority to the Technical Secretary to suspend or revoke a permit. Applicable Requirements
1200-03-09-.04	Exemptions	Yes	Specifies air contaminant sources that are exempt from permitting requirements. Specifies major source operating permit insignificant emission units and requirements applicable to those units. Applicable Requirements
1200-03-09-.05	Appeal of Permit Application Denials and Permit Conditions	Yes	Provides for appealing a permit denied by the Technical Secretary or the Department and specifies procedures for the appeal process. Applicable Requirements.
CHAPTER 1200-03-10 REQUIRED SAMPLING, RECORDING, AND REPORTING			
1200-03-10-.01	Sampling Required to Establish Air Contaminant Emission Levels	Yes	Regulation requires new sources to provide adequate sampling ports, safe access thereto, and other sampling and testing facilities that may be required. Applicants for operating permits may be required to conduct performance test. Technical Secretary may conduct tests. For existing source, the Technical Secretary may require the sources to perform compliance testing. For existing sources, he may require performance test in support of an operating permit application. Source may test or Technical Secretary may test. Periodic tests may be required as a permit condition. Emission data may be required to be filed with the Technical Secretary for a minimum of one year. Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-10-.02	Monitoring of Source Emissions, Recording, and Reporting of the Same are Required	Yes	Technical Secretary may require the source to install, calibrate, operate, and maintain prescribed sampling equipment; to sample in accordance with prescribed methods; to establish and maintain records; and to make periodic emission reports. Specific sources required to comply include fossil fuel-fired steam generators (construction commenced after April 3, 1972). All required monitoring equipment must meet the performance specifications given in Federal Register Volume 40, Number 194 and be installed, calibrated, operated, and maintained per these rules. Schedules for ordering, installing, testing, and operating equipment, and submitting detailed monitoring programs are presented. Allowance is made for failure to monitor as a result of approved monitoring system malfunctions. A log of malfunction must be maintained and must contain the data specified here. Written quarterly excess emission reports are required of specified sources. Requirements for completing this excess emissions summary are specified herein. Applicable Requirement
1200-03-10-.03	Malfunction of Equipment, Reports Required (Repealed)	No	No Applicable Requirement
1200-03-10-.04	Sampling, Reporting and Recording Required for Major Stationary Sources	Yes	Authorizes the Technical Secretary to require by permit condition any periodic or enhanced monitoring, recording or reporting deemed necessary for verification of a source's compliance with applicable requirements as specified in 1200-03-09-.02(11). Applicable Requirements
CHAPTER 1200-03-11 HAZARDOUS AIR CONTAMINANTS			
1200-03-11-.01	General Provisions	Yes	Lists designated hazardous air pollutants (HAPs) including asbestos. New/modified sources of HAPs require a construction permit. Information on the HAPs sources which must be filed with the Technical Secretary is specified per the schedules specified herein. Notification schedule for startups is given. Source changes, other than modifications, must be reported within 30 days after the change. Sources not previously required to have a construction or operating permit must do so within 90 days following the Board's determination that the sources= emissions are HAPs. Terms are defined herein. Existing sources of HAPs become new sources upon modification where an applicable standard applies. Methods of determining emission rates and their units are specified. Activities that do not constitute modifications are listed. Requirements for monitoring, recordkeeping, and reporting, where required by a rule, are specified. State Only Requirement
1200-03-11-.02	Asbestos	Yes	Demolition/renovation activities at this facility must meet the requirements specified herein. Requirements include determination of amount of material affected, written notification, prevention of atmospheric asbestos PM emissions. Sources subject to this rule are exempt from the General Provisions (1200-03-11-.01).
1200-03-11-.03	Beryllium	No	No affected unit on site. No Applicable Requirement
1200-03-11-.04	Mercury	No	No affected unit on site. No Applicable Requirement
1200-03-11-.05	Vinyl Chloride	No	No affected unit on site. No Applicable Requirement
1200-03-11-.06	Equipment Leaks (Fugitive Emission Sources)	No	No affected unit on site. No Applicable Requirement
1200-03-11-.07	Equipment Leaks (Fugitive Emission Sources) of Benzene	No	No affected activities on site. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-11-.08	Reserved	No	Reserved No Applicable Requirement
1200-03-11-.09	Inorganic Arsenic Emissions From Glass Manufacturing Plants	No	No affected unit on site. No Applicable Requirement
1200-03-11-.10	Inorganic Arsenic Emissions From Primary Copper Smelters	No	No affected unit on site. No Applicable Requirement
1200-03-11-.11	Inorganic Arsenic Emissions From Arsenic Trioxide and Metallic Arsenic Production Facilities	No	No affected unit on site. No Applicable Requirement
CHAPTER 1200-03-12 METHODS OF SAMPLING AND ANALYSIS			
1200-03-12-.01	General	Yes	Required samples are to be taken in such number, duration, and location as to be statistically significant and representative. Alternate materials, equipment, and procedures may be used in place of those specified upon reliable demonstration that results produced are comparable to those obtained from specified materials, equipment, and procedures. Applicable Requirement
1200-03-12-.02	Procedures for Ambient Air Sampling and Analysis	Yes	Should a source be required to perform ambient sampling and analysis of sulfur dioxide, ozone (O ₃), PM ₁₀ , photochemical oxidants, carbon monoxide (CO), non-methane hydrocarbons (NMHC), nitrogen dioxide (NO ₂), and fluorides, the procedures to be used are specified herein. Alternate/equivalent procedures may be approved. Applicable Requirement
1200-03-12-.03	Sources Sampling and Analysis	Yes	Procedures and equipment to be used in source sampling/analysis are specified herein. Applicable Requirement
1200-03-12-.04	Monitoring Required for Determining Compliance of Certain Large Sources	Yes	Provides sources a choice of methods for determining compliance with sulfur dioxide (SO ₂) limitations based upon type of fuel burned. These include use of fuel analysis or in-stack continuous emissions monitors (CEMS). Applicable Requirement
CHAPTER 1200-03-13 VIOLATIONS			
1200-03-13-.01	Violation Statement	Yes	Failure to comply with any of these regulations is a violation subject to enforcement. Applicable Requirement
CHAPTER 1200-03-14 CONTROL OF SULFUR DIOXIDE EMISSIONS			
1200-03-14-.01	General Provisions	Yes	Establishes 8 categories for classifying counties based upon limits necessary to attain/maintain the SO ₂ AAQS. Hawkins County is classified as Class V. Regardless of limits specified herein, source must comply with PSD and NSR requirements. Fuel burning sources > 1000 MMBtu/hr must monitor SO ₂ AAQ. Sources, upon approval of petition to Technical Secretary, may terminate sampling if data for 2 calendar years verifies compliance with Tennessee AAQS. Specific conditions that must be met for petition approval are stipulated. Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-14-.02	Non-Process Emission Standards	Yes	Fuel burning installations in operation prior to April 3, 1972, with heat input >1 Billion Btu/hr and located in a Class V county must not exceed 4.0 lb SO ₂ /MMBtu (24-hr basis). If ≤ 600 MMBtu/hr, limit is determined on a 1-hr basis. Equipment constructed after April 3, 1972, with a rated capacity ≤ 250 MMBtu/hr is limited to 4.0 lb SO ₂ /MMBtu (1-hr average) in a Class V county. Sources constructed after April 3, 1972, with capacity > 250 MMBtu/hr are limited to 0.80 lb SO ₂ /MMBtu (maximum 1-hour average) when liquid fossil fuel is burned; to 1.2 lb SO ₂ /MMBtu (maximum 1-hour average) when solid fossil fuel is burned; or to the limit established by the equation herein specified when burning different fossil fuels simultaneously. Applicable Requirement
1200-03-14-.03	Process Emission Standards	No	No affected units at this facility. No Applicable Requirement
1200-03-14-.04	CAIR Annual SO ₂ Trading Program	No	See comments for 40 CFR 96 and 97.
CHAPTER 1200-03-15 EMERGENCY EPISODE REQUIREMENTS			
1200-03-15-.01	Purpose	Yes	The purpose of this chapter is to establish criteria to prevent undesirable levels of air contaminants during adverse meteorological conditions. Primary responsibility to initiate activity required by this Chapter rests with the Technical Secretary. No specific requirements. No Applicable Requirement
1200-03-15-.02	Episode Criteria	Yes	Air pollution episode criteria are established. No specific regulatory requirement. No Applicable Requirement
1200-03-15-.03	Required Emissions Reduction	Yes	Upon declaration, by the Technical Secretary, of an air pollution alert, sources must follow the requirements for the corresponding episode level as tabulated herein, or follow the approved emissions reduction plan for the source or facility. Major sources significantly impacting a nonattainment area must submit an acceptable air pollution episode emissions reduction plan to the Technical Secretary. Major sources are specified herein. Plans may be required of non-major sources. The Technical Secretary may via a hearing establish a plan for a source that fails to submit an approved plan. Applicable Requirement
CHAPTER 1200-03-16 NEW SOURCE PERFORMANCE STANDARDS¹³			

¹³ TAPCR 1200-03-16 is not included in Tennessee’s State Implementation Plan. Applicable rules in this chapter are State-only regulations.

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-16-.01	General Provisions	Yes	Visible emissions, PM, SO ₂ , and other pollutant standards specified for an affected facility herein, supersede standards in any other rule. Standards apply to any new or modified facility which commenced after the date specified in each rule. Limitations established pursuant to PSD and NSR requirements must comply with such regardless of the standards established herein. Terms used in this Chapter are defined. Performance test requirements and procedures are specified. Regulations specifying compliance with standards and maintenance requirements are presented. Notification, recordkeeping and monitoring requirements are established. Requirements regarding modifications are presented, as are those for reconstruction. General control device requirements and specifications are established. No Applicable Requirement
1200-03-16-.02	Fossil Fuel-Fired Steam Generating Units for Which Construction is Commenced After April 3, 1972	Yes	Applies to units constructed after April 3, 1972. Construction commenced on units at this facility in 1952. No affected units at this facility. No Applicable Requirement
1200-03-16-.03	Electric Utility Steam Generating Units for Which Construction Commenced After September 18, 1978	Yes	Applies to units constructed after September 18, 1978. Construction commenced on units at this facility in 1952. No affected units at this facility. No Applicable Requirement
1200-03-16-.04	Incinerators	No	No affected unit on site. No Applicable Requirement
1200-03-16-.10	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After April 21, 1976, and Prior to May 19, 1978	No	No affected unit on site No Applicable Requirement
1200-03-16-.11	Standard of Performance for Storage Vessels for Petroleum Liquids Constructed After May 18, 1978	No	No affected unit on site No Applicable Requirement
1200-03-16-.22	Coal Preparation Plants	Yes	State-Only Requirement
1200-03-16-.53	Non-Metallic Mineral Processing Plants	No	No affected units on site. No Applicable Requirement
1200-03-16-.58	[Reserved]	[Reserved]	[Reserved]
1200-03-16-.59	Industrial-Commercial-Institutional Steam Generating Units	No	Applies only to units constructed, modified, and reconstructed after November 6, 1988 with heat input greater than 100 MMBtu/hr. Units at this facility were constructed prior to this date. No affected units at the site. No Applicable Requirement
1200-03-16-.61	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After June 2, 1990.	Yes	No affected units at the facility. No Applicable Requirement
1200-03-16-.62 through 1200-03-16-.73	[Reserved]	[Reserved]	[Reserved]
1200-03-16-.75 through 1200-03-16-.99	[Reserved]	[Reserved]	[Reserved]

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-16-.32 through 1200-03-16-.52 , 1200-03-16-.54 through 1200-03-16-.57, 1200-03-16-.60, 1200-03-16-.74	Standards of performance for various manufacturing operations	No	No affected unit on site for any of the listed rules. No Applicable Requirement
CHAPTER 1200-03-17 CONFLICT OF INTEREST			
(Repealed)			
CHAPTER 1200-03-18 VOLATILE ORGANIC COMPOUNDS			
1200-03-18-.01	Definitions	Yes	Provides definitions of terms used in this chapter. No Applicable Requirement
1200-03-18-.02	General Provisions and Applicability	Yes	Describes provisions that are generally applicable and the sources subject to the provisions. Applicable Requirement
1200-03-18-.03	Compliance Certification, Recordkeeping, and Reporting Requirements for Coating and Printing Sources	No	Specifies compliance certification, recordkeeping, and reporting requirements for coating and printing sources. No Applicable Requirement
1200-03-18-.04	Compliance Certification, Recordkeeping, and Reporting Requirements for Non-coating and Non-printing Sources	Yes	Specifies compliance certification, recordkeeping, and reporting requirements for non-coating and non-printing sources. Applicable Requirement
1200-03-18-.05	[Reserved]	[Reserved]	[Reserved]
1200-03-18-.06	Handling, Storage, and Disposal of Volatile Organic Compounds (VOC)	No	Specifies requirements for facilities in Davidson, Rutherford, Sumner, Williamson, and Wilson County for the handling, storage, and disposal of volatile organic compounds. No Applicable Requirement
1200-03-18-.07	Source-specific Compliance Schedules	Yes	Allows for existing sources to petition for a source-specific compliance schedule meeting certain criteria and containing specific information. Applicable Requirement
1200-03-18-.08 through 1200-03-18-.10	[Reserved]	[Reserved]	[Reserved]
1200-03-18-.20	Coating of Miscellaneous Metal Parts	Yes	Specifies requirements for certain miscellaneous metal parts and products coating line. No Applicable Requirements
1200-03-18-.24	Gasoline Dispensing Facilities - Stage I and Stage II Vapor Recovery	No	Specifies requirements for gasoline dispensing facilities in Davidson, Rutherford, Shelby, Sumner, Williamson, and Wilson County meeting certain criteria. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-18-.28	Petroleum Liquid Storage in External Floating Roof Tanks	Yes	Specifies requirements for floating roof tanks meeting certain criteria. No Applicable Requirement
1200-03-18-.29	Petroleum Liquid Storage in Fixed Roof Tanks	Yes	Specifies requirements for fixed roof tanks meeting certain criteria No Applicable Requirement
1200-03-18-.31	Solvent Metal Cleaning	Yes	Specifies requirements for solvent metal cleaning sources meeting certain criteria. No Applicable Requirement
1200-03-18-.79	Other Facilities That Emit Volatile Organic Compounds (VOC's)	No	Specifies requirements for facilities in Davidson, Rutherford, Sumner, Williamson, or Wilson County emitting volatile organic compounds meeting certain criteria. No Applicable Requirement
1200-03-18-.80	Test Methods and Compliance Procedures: General Provisions	Yes	Describes general provisions for test methods and compliance procedures for sources subject to this chapter. Applicable Requirement
1200-03-18-.83	Test Methods and Compliance Procedures: Emission Capture and Destruction or Removal Efficiency and Monitoring Requirements	Yes	Specifies test methods and compliance procedures for determining the efficiency of volatile organic compound capture systems. Applicable Requirement
1200-03-18-.84	Test Methods and Compliance Procedures: Determining the Destruction or Removal Efficiency of a Control Device	Yes	Specifies test methods to determine volatile organic compound concentrations in a gas stream. Applicable Requirement
1200-03-18-.86	Performance Specifications for Continuous Emissions Monitoring of Total Hydrocarbons	Yes	Provides performance specifications for continuous emission monitoring of total hydrocarbons. Applicable Requirement
1200-03-18-.87	Quality Control Procedures for Continuous Emission Monitoring Systems (CEMS)	Yes	Requires owner or operator of a CEMS to develop and implement a CEMS quality control program and specifies the minimum requirements for such a program. Applicable Requirement
CHAPTER 1200-03-19 EMISSION STANDARDS AND MONITORING REQUIREMENT FOR ADDITIONAL CONTROL AREAS			
1200-03-19-.01	Purpose	No	Establishes that the purpose of this Chapter is to establish specific emission standards for existing air contaminant sources located in or significantly impacting upon an additional control area. No specific regulatory requirements. No Applicable Requirement
1200-03-19-.02	General Requirements	No	Requirements apply only to sources which are located in or significantly impact on the areas specified in 1200-03-19. No Applicable Requirement
1200-03-19-.03	Particulate and Sulfur Dioxide Additional Control Areas within Tennessee	No	Describes additional control areas for PM and SO ₂ . No specific regulatory requirements. No Applicable Requirement
1200-03-19-.04		No	Reserved. No Applicable Requirement
1200-03-19-.05	Operating Permits and Emission Limiting Conditions	No	No Applicable Requirement
1200-03-19-.06	Logs for Operating Hours	No	No affected units at the facility. No Applicable Requirement

State of Tennessee
Division 1200-03
Tennessee Air Pollution Control Regulations

Citation	Title	Applicable Regulation	Comments
1200-03-19-.07 through 1200-03-19-.10	[Reserved]	[Reserved]	[Reserved]
1200-03-19-.11	Particulate Matter Emission Regulations for the Bristol Additional Control Area	No	No affected units at the facility. No Applicable Requirement
1200-03-19-.12	Particulate Matter Emission Regulations for Air Contaminant Sources in or Significantly Impacting the Particulate Additional Control Areas in Campbell County	No	No affected units at the facility. No Applicable Requirement
1200-03-19-.13	Particulate Matter Emission Regulations for the Bull Run Additional Control Area and Odoms Bend Additional Control Area	No	No Applicable Requirement
1200-03-19-.14	Sulfur Dioxide Emission Regulations for the New Johnsonville Additional Control Area	No	Specifies sulfur dioxide emission limits for coal fired fuel burning installations and for electric generating turbines. No Applicable Requirement
1200-03-19-.15 through 1200-03-19-.18	[Reserved]	[Reserved]	[Reserved]
1200-03-19-.19	Sulfur Dioxide Emission Standards for Copper Basin Additional Control Area	No	No affected unit on the site. No Applicable Requirement
CHAPTER 1200-03-20			
LIMITS ON EMISSION DUE TO MALFUNCTION, STARTUPS, AND SHUTDOWNS			
1200-03-20-.01	Purpose	No	The purpose of this Chapter is to place reasonable limits on emissions from fuel burning, process emission, and other sources which result from malfunctions, startups, or shutdowns. No specific regulatory requirements. No Applicable Requirement
1200-03-20-.02	Reasonable Measures Required	Yes	Reasonable measures are required to minimize emissions during startups/shutdowns/malfunctions. Contains a non-inclusive list of minimization measures. Sources in or significantly affecting a nonattainment area and which have failures due to poor maintenance, careless operation, other preventable upset condition, or preventable equipment breakdown are not malfunctions and are considered violations. Applicable Requirement
1200-03-20-.03	Notice Required When Malfunction Occurs	Yes	Exceedances of emission standards or emissions of such quantity or duration that cause damage to property or public health must be reported along with pertinent information to the Technical Secretary. Opacity violations (excluding emissions caused by hazardous air pollutants) of < 20 minutes per day (midnight to midnight) need not be reported. Prompt notification by phone within 24 hours is required. When the condition causing the exceedance is corrected and equipment returns to operation, additional notification is required. No notification is required of sources in attainment or unclassified areas which do not significantly impact a nonattainment area and which will not or do not occur over more than a 24-hour period (or will not reoccur over more than a 24-hr period), provided no property or public health damage is anticipated. Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-20-.04	Logs and Reports	Yes	Logs of all malfunctions, startups, shutdowns resulting in emissions exceedances must be kept at the plant. Specifications of data to be entered and schedule for data entry are specified. Sources located in or significantly impacting on a nonattainment area must submit a report within 30 days after the end of each calendar quarter. Data required in this report is specified. Emissions reported under 1200-03-10-.02 or 1200-03-16 are not required to be reported under this section. Applicable Requirement
1200-03-20-.05	Copies of Logs Required	Yes	Technical Secretary may require submittal of upset log within 10 days after receipt of request by the source. Applicable Requirement
1200-03-20-.06	Report Required Upon the Issuance of a Notice of Violation (NOV)	Yes	Excess emissions from units subject to regulation shall be automatically cited with an NOV (except for visible emission from startup or shutdown under 1200-03-05-.02(1) or de minimis under 1200-03-20-.06). Source is required to submit within 20 days, data specified herein, to be used by the Technical Secretary in determining whether to excuse or validate the NOV. Information not submitted in the required time is precluded from consideration for excusing an NOV. No NOV will be issued for units using properly certified/operated CEMS unless the de minimis levels specified herein are violated. Irrespective of startup and shutdown exemptions, no emission shall be allowed to cause or contribute to a violation of the Ambient Air Quality Standards (AAQS). Applicable Requirement
1200-03-20-.07	Special Reports Required	Yes	Technical Secretary may require of the source a quarterly report which contains at least the information specified herein. Said report must be submitted within 30 days after the end of each calendar quarter. Applicable Requirement
1200-03-20-.08	Rights Reserved	Yes	Nothing in this Chapter shall be construed to limit the obligation of the source to attain and maintain AAQS. No specific regulatory requirements. Applicable Requirement
1200-03-20-.09	Additional Sources Covered	Yes	Technical Secretary may require reporting in accordance with the provisions of this Chapter for sources in nonattainment areas or significantly impacting nonattainment areas, if there is reason to believe an AAQS may be violated in the general vicinity where the source is located. Criteria for determining "reason" are specified. No affected units at this facility. No Applicable Requirement
CHAPTER 1200-03-21 GENERAL ALTERNATE EMISSION STANDARDS			
1200-03-21-.01	General Alternate Emission Standard	Yes	Owner or operator of any PM, SO ₂ , CO, and /or NO _x source regulated by other rules in these regulations may apply to the Technical Secretary for a Certification of Alternate Control if the specifications presented here are met. Alternate emission standards and emissions shall be considered as an addition to existing standard, be subject to public hearing, and included in the SIP. GEP is required on all stacks. Certificate becomes void 90 days after the Board amends any rule or regulation listed on the certificate if said change reduces allowable emissions. Applicable Requirement
CHAPTER 1200-03-22 LEAD EMISSION STANDARDS			
1200-03-22-.01	Definitions	Yes	Terms used in this Chapter are defined here. No specific regulatory requirements. No Applicable Requirements
1200-03-22-.02	General Lead Emission Standards	No	No affected unit on the site. No Applicable Requirement
1200-03-22-.03	Specific Emission Standard for Existing Sources of Lead	No	No affected unit on the site. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-22-.04	Standards for New or Modified Sources of Lead	No	No affected unit on the site. No Applicable Requirement
1200-03-22-.05	Source Sampling and Analysis	No	No affected unit on the site. No Applicable Requirement
1200-03-22-.06	Lead Ambient Monitoring Requirements	No	No affected unit on the site. No Applicable Requirement
CHAPTER 1200-03-23 VISIBILITY PROTECTION			
1200-03-23-.01	Purpose	No	Stated purpose of Chapter is to assure reasonable progress in preventing any future or remedying any existing visibility impairment in Class I Federal areas resulting from man-made sources. No specific regulatory requirements. No Applicable Requirements
1200-03-23-.02	Definitions	Yes	Terms used in this Chapter are defined here. No specific regulatory requirements. No Applicable Requirements
1200-03-23-.03	General Visibility Protection Standards	Yes	Sources are prohibited from producing emissions in excess of the standards in this Chapter. Permit conditions must be met. Applicable Requirement
1200-03-23-.04	Specific Emission Standards for Existing Stationary Facilities	Yes	Technical Secretary must specify BART (Best Available Retrofit Technology) as a permit condition for an existing stationary source that causes visibility impairment in any Class I Federal area. No affected units at the facility. No Applicable Requirement
1200-03-23-.05	Specific Emission Standards for Existing Sources	Yes	Technical Secretary may specify a limitation equivalent to BART as a permit condition for any source that causes visibility impairment in any Class I Federal area, except existing stationary sources. No affected units at the facility. No Applicable Requirement
1200-03-23-.06	Visibility Standards for New and Modified Sources	Yes	New major stationary sources or major modification in attainment/unclassifiable areas must meet PSD requirements. No affected units at this facility. No Applicable Requirement
1200-03-23-.07	Visibility Monitoring Requirements	Yes	Visibility monitoring may be required in the vicinity of a source regulated by this Chapter. No Applicable Requirement
1200-03-23-.08	Exemptions from BART Requirements	Yes	Sources may apply for exemptions from BART. Fossil fuel-fired power plants with capacity ≥ 750 MWe must demonstrate that it is located at such a distance from <u>all</u> mandatory Class I Federal areas that it does or will not, by itself or in combination with other sources, emit any air pollutant which may reasonably be anticipated to cause or contribute to significant visibility impairment in said areas. Written notification to all Federal Land Managers is required. Opportunity for public hearing is required. Applicable Requirement
CHAPTER 1200-03-24 STACK HEIGHT REGULATIONS GOOD ENGINEERING PRACTICE			
1200-03-24-.01	General Provisions	Yes	Good Engineering Practice (GEP) stack height is required of all sources constructed after December 31, 1970. Coal-fired steam electric generating units which commenced operation prior to July 1, 1957, whose stacks were constructed under contract awarded before February 8, 1974 are not subject to GEP. Applicable Requirement
1200-03-24-.02	Definitions	Yes	Terms used in this Chapter are defined here. Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-24-.03	Good Engineering Practice Stack Height Standards	Yes	Standards prescribed in this Chapter may not be exceeded. Applicable Requirement
1200-03-24-.04	Specific Emission Standards	Yes	For an affected source, the emission limit determined to be necessary under the provisions of this Chapter must be specified on the construction/operating permit which is subject to public hearing and included in the SIP. No Applicable Requirement.
CHAPTER 1200-03-25 STANDARD FOR INFECTIOUS WASTE INCINERATORS			
1200-03-25-.01 through 1200-03-25-.10	Compliance requirements for infectious waste incinerators.	No	No affected units on the site. No Applicable Requirement
CHAPTER 1200-03-26 ADMINISTRATIVE FEES SCHEDULE			
1200-03-26-.01	Tennessee Visible Emissions Evaluation Course Fees	Yes	Specifies fees for the Tennessee Visible Emissions Evaluation Course. Applicable Requirement
1200-03-26-.02	Construction, Modification, and Annual Emission Fees	Yes	Establishes fees for construction, modification, and annual emissions. Provides definitions used in this chapter, specifies fee schedules, required payment of fees, and late fees. Applicable Requirement
1200-03-26-.03	Repealed	No	Repealed
CHAPTER 1200-03-27 NITROGEN OXIDES			
1200-03-27-.01	Definitions	Yes	Provides definitions of terms used in this chapter. No Applicable Requirement
1200-03-27-.02	General Provisions and Applicability	Yes	Specifies the general provisions applicable to sources subject to this chapter and specifies the applicability of this chapter. Applicable Requirement
1200-03-27-.03	Standards and Requirements	No	Specifies nitrogen oxide emission standards for certain sources in Davidson, Rutherford, Sumner, Williamson or Wilson County and specifies compliance schedules for meeting the emission standards. No Applicable Requirement
1200-03-27-.04	Standards for Cement Kilns	No	Specifies NO _x emission control requirements for certain cement kilns and includes compliance certification and recording requirements. No Applicable Requirement
1200-03-27-.05	Reserved	[Reserved]	[Reserved]
1200-03-27-.07	Voluntary NO _x Emissions Reduction Program	No	Establishes the Voluntary NO _x Emissions Reduction Program. No Applicable Requirement.
1200-03-27-.08	[Reserved]	[Reserved]	[Reserved]
1200-03-27-.09	Compliance Plans for NO _x Emissions from Stationary Internal Combustion (IC) Engines		No affected units on the site. No Applicable Requirement
1200-03-27-.10	CAIR NO _x Annual Trading Program	No	See comments for 40 CFR 96 and 97.
1200-03-27-.11	CAIR NO _x Ozone Season Trading Program	No	See comments for 40 CFR 96 and 97.
CHAPTER 1200-03-29 LIGHT-DUTY MOTOR VEHICLE INSPECTION AND MAINTENANCE			

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-29-.01 through 1200-03-29-.10	Requirements for light-duty motor vehicle inspection and maintenance.	No	No Applicable Requirements
CHAPTER 1200-03-30 ACID PRECIPITATION CONTROL			
1200-03-30-.01	Acid Rain Program General Provisions	Yes	Describes the general provisions of the Acid Rain Program, specifies the definitions of terms and measurements, abbreviations, and acronyms to be used in the Chapter, the applicability of the regulations, exemption for new sources, exemption for retired units and standard requirements to be met by applicable units. Applicable Requirements
1200-03-30-.02	Designated Representative	Yes	Describes the requirement for and responsibilities of the designated representative. Applicable Requirements
1200-03-30-.03	Acid Rain Permit Application	Yes	Specifies the requirement for the designated representative of any source with an affected unit to submit an Acid Rain permit application by specific dates and describes the implications of submitting a complete application. Applicable Requirements
1200-03-30-.04	Acid Rain Compliance Plan and Compliance Options	Yes	Specifies the requirement for including a complete compliance plan with an Acid Rain permit application and describes the content of the compliance plan and options for conditional approval and repowering extensions. Applicable Requirements
1200-03-30-.05	Acid Rain Permit	Yes	Specifies the contents of an Acid Rain permit and the implications of a permit shield. Applicable Requirements
1200-03-30-.06	Acid Rain Permit Issuance Procedures	No	Describes the procedures to be followed by the Technical Secretary in issuing an Acid Rain permit and the procedures to be followed in the event of an appeal of an Acid Rain permit. No Applicable Requirements
1200-03-30-.07	Permit Revisions	Yes	Describes the permit revision process, the types of permit modifications and what qualifies for each type. Applicable Requirements
1200-03-30-.08	Compliance Certification	Yes	Specifies the requirement for submittal of an annual compliance certification report by the designated representative. Applicable Requirements
1200-03-30-.09	Nitrogen Oxides Emissions Reduction Program	No	Reserved
1200-03-30-.10	Sulfur Dioxide Opt-Ins	No	Reserved
CHAPTER 1200-03-31 CASE-BY-CASE DETERMINATION OF HAZARDOUS AIR POLLUTANT CONTROL REQUIREMENTS			
1200-03-31-.01	General Provisions	No	Reserved
1200-03-31-.02	Definitions	Yes	Provides definitions used in the chapter including a list of hazardous air pollutants, including an exclusion of electric utility steam generating units until EPA decides that they should be regulated pursuant to Section 112(n) of the Clean Air Act. No Applicable Requirement
1200-03-31-.03	Intent of the Board	Yes	Describes the intent of the Board in implementing the chapter and instructing the Technical Secretary on things to consider and requirements in setting more stringent requirements than those set by EPA. No Applicable Requirement
1200-03-31-.04	Standard for Existing Sources	Yes	Describes emission requirements for existing sources. No Applicable Requirement

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-31-.05	Standard for New Sources	Yes	Describes emission requirements for new sources. No Applicable Requirement
1200-03-31-.06	Opportunity for Early Reductions Schedule	Yes	Describes provisions to be met to allow for 6 additional years to comply with future MACT requirements by taking early reductions in emissions before a MACT is established. No Applicable Requirement
1200-03-31-.07	Residual Risk and Revisions to MACT	Yes	Specifies required action to be taken if the existing MACT standards are insufficient to protect the public pursuant to the residual risk provisions of Section 112(f) of the Clean Air Act. No Applicable Requirement
1200-03-31-.08 through -.12	Reserved	No	Reserved
1200-03-31-.13	Perchloroethylene Air Emission Standards for Dry Cleaning Facilities	No	No Applicable Requirement
CHAPTER 1200-03-32 PREVENTION OF ACCIDENTAL RELEASES			
1200-03-32-.01	Purpose and Intent	No	Describes the purpose and intent of the Chapter. No Applicable Requirement
1200-03-32-.02	Definitions	Yes	Provides definitions specific to the Chapter. No Applicable Requirement
1200-03-32-.03	Duty to File Accidental Release Plans	Yes	Requires sources subject to Section 112(r) of the Clean Air Act to file any plan or submittal required with the Technical Secretary, describes the responsibility and authority of the Technical Secretary, and requires annual certification of compliance with the plan. No Applicable Requirement
CHAPTER 1200-03-033 REGULATIONS FOR THE ACCREDITATION AND CERTIFICATION OF ASBESTOS ABATEMENT PERSONNEL			
1200-03-33	Repealed	No	No Applicable Requirements
CHAPTER 1200-03-34 CONFORMITY			
1200-03-34-.01	Conformity of Transportation Plans, Programs, and Projects	No	Describes the procedures for interagency consultation and resolution of conflicts before making conformity determinations and developing applicable implementation plans, specifies roles and responsibilities of various participants in the interagency, definitions of terms used, applicability of the requirements, specifies conformity determination criteria and procedures, requirements for adoption or approval of projects by recipients of funds designated under title 23 U.S.C. or the Federal Transit Act, procedures for determining regional transportation-related emissions, procedures for determining localized CO and PM ₁₀ concentrations, using the motor vehicle emissions budget, enforceability of design concept and scope and project-level mitigation and control measures, and a list of types of projects exempt from the conformity determination requirements. No Applicable Requirements

**State of Tennessee
 Division 1200-03
 Tennessee Air Pollution Control Regulations**

Citation	Title	Applicable Regulation	Comments
1200-03-34-.02	Conformity of General Federal Actions	Yes	Prohibits any department, agency or instrumentality of the Federal Government from engaging in, supporting or financially assisting any activity which does not conform to an applicable implementation plan with specified exceptions, defines terms used in the regulations, specifies the applicability of the requirements, specifies the requirements for a conformity analysis, reporting, public participation, frequency of determinations, criteria for determining conformity of general Federal actions, procedures for conformity determinations of general Federal actions, and the requirements for mitigation of air quality impacts. Applicable Requirements
CHAPTER 1200-03-36 MOTOR VEHICLE TAMPERING			
1200-03-36-.01	Purpose	No	Describes the purpose and content of the regulations. No Applicable Requirement
1200-03-36-.02	Definitions	Yes	Provides the definition of terms used in the regulations. No Applicable Requirement
1200-03-36-.03	Motor Vehicle Tampering Prohibited	Yes	Prohibits any person from tampering with a motor vehicle or motor vehicle engine that is in compliance with Federal motor vehicle standards. No Applicable Requirement
1200-03-36-.04	Recordkeeping Requirements	Yes	Requires maintaining complete record of all emission repairs for a minimum of one year. Applicable Requirement
1200-03-36-.05	Exemptions	Yes	Permits the Technical Secretary to exempt motor vehicles or motor vehicle engines from the rule. No Applicable Requirement
CHAPTER 1200-03-37 CLEAN AIR MERCURY RULE			
1200-03-37	Clean Air Mercury Rule	No	No Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 52 – Approval and Promulgation of Implementation Plans**

Part	Title	Applicable Regulations	Comment
52.01	Definitions	No	Provides information not regulatory in nature. No Applicable Requirements
52.02	Introduction	No	Outlines contents of Part and Administrator’s approval process. No Applicable Requirements
52.03	Extensions	No	Indicates that each subpart includes Administrator’s determination with respect to Section 110(b) of the Act for deadline extensions. No Applicable Requirements
52.04	Classification of Regions	No	States the location of criteria used for area classifications. No Applicable Requirements
52.05	Public Availability of Emission Data	No	Indicates that each subpart includes Administrator’s disapproval of plans and procedures for making emissions data available to the public and that the Administrator has promulgated requirements.

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 52 – Approval and Promulgation of Implementation Plans**

Part	Title	Applicable Regulations	Comment
			No Applicable Requirements
52.06	Legal Authority	No	Reviews Administrator’s actions when a plan does not contain demonstration of adequate legal authority. No Applicable Requirements
52.07	Control Strategies	No	Outlines approval procedures for control strategies contained in Plans. No Applicable Requirements
52.08	Rules and Regulations	No	Indicates that each subpart will identify only those rules and regulations which have been disapproved. No Applicable Requirements
52.09	Compliance Schedules	No	Indicates that each subpart will identify those compliance schedules which have been disapproved. It is also noted that individual source plans have not been evaluated. Finally, if a source is operating under a compliance plan under review by the Administrator, it must comply with the plan regardless of the approval status. No Applicable Requirements unless a specific compliance plan has been submitted to the Administrator.
52.10	Review of New Sources and Modifications	No	States that if a state NSR program does not meet specific requirements the Administrator has the authority to prevent construction or modification. No Applicable Requirements
52.11	Prevention of Air Pollution Emergency Episodes	No	Indicates that each subpart will identify those portions of the contingency plans which are disapproved. No Applicable Requirements
52.12	Source Surveillance	No	Indicates that each subpart will identify those portions of the source surveillance program which are disapproved. No Applicable Requirements
52.13	Air Quality Surveillance; Resources; Intergovernmental Cooperation	No	Indicates that each subpart will identify those portions of the air quality surveillance program which are disapproved. No Applicable Requirements
52.14	State Ambient Air Quality Standards	No	States that any state standard less stringent than a national standard will not be considered part of the plan. No Applicable Requirements
52.15	Public Availability of Plans	No	States the Plan must be made available to the Public. No Applicable Requirements
52.16	Submission to Administrator	Yes	Identifies where requests and reports required by regulations must be submitted. Applicable requirement if dictated by other regulation, or due to a request by the USEPA.
52.18	Abbreviations	No	Abbreviations are those contained in 40 CFR 60.
52.20	Attainment Dates for National Standards	No	Attainment dates are contained in each subpart for the affected areas. No Applicable Requirements
52.21	Prevention of Significant Deterioration of Air Quality	Yes	Outlines the PSD program for any plan for which that section has not been approved. The regulations contained herein are applicable to a source located in an attainment area. The regulations do not contain applicable requirements with respect to Title V. However, the terms and conditions attached to any permit issued pursuant to these regulations do constitute applicable requirements.
52.23	Violation and Enforcement	Yes	States violation of an applicable Plan approved regulatory provision or permit condition is subject to enforcement under Section 113. No Applicable Requirements
52.24	Statutory Restriction on New Sources (NSR)	Yes	Outlines the NSR program for any plan for which that section has not been approved. The regulations contained herein are applicable to a source located in a nonattainment area. The regulations do not contain applicable requirements with respect to Title V. However, the terms and conditions attached to any permit issued pursuant to these regulations do constitute applicable requirements.

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 52 – Approval and Promulgation of Implementation Plans**

Part	Title	Applicable Regulations	Comment
52.26	Visibility Monitoring Strategy	No	Provides regulations for plans whose general visibility provisions have been disapproved. No action required by a source. No Applicable Requirements
52.27	Protection of Visibility from Sources in Attainment Areas	No	Provides regulations for plans whose visibility provisions for attainment areas have been disapproved. No action required by a source. No Applicable Requirements
52.28	Protection of Visibility from Sources in Nonattainment Areas	No	Provides regulations for plans whose visibility provisions for nonattainment areas have been disapproved. No action required by a source. No Applicable Requirements
52.29	Visibility Long-term Strategies	No	Provides regulations for plans whose visibility provisions for Class I areas have been disapproved. No action required by a source. No Applicable Requirements
52.30	Criteria for Limiting Application of Sanctions Under Section 110(m) of the Clean Air Act on a Statewide Basis	No	Describes criteria EPA is to consider in determining whether to limit sanctions after a deficiency in a SIP has been identified. No Applicable Requirements
52.31	Selection of Sequence of Mandatory Sanctions for Findings Made Pursuant to Section 179 of the Clean Air Act	No	Provides schedule and criteria for invoking emission offset sanctions and highway funding sanctions in nonattainment areas for which the Part D implementation plan revision has not been approved. No Applicable Requirements
52.32	Sanctions Following Findings of SIP inadequacy	No	Provides that the Administrator may determine that a state implementation plan is inadequate and start the sanction process outlined in Section 52.31. No Applicable Requirements
Subpart RR - Tennessee			
52.2219	Reserved	No	Reserved
52.2220	Identification of Plan	Yes	Sets forth the applicable Tennessee State Implementation Plan and incorporates all EPA approvals prior to December 1, 1998. Applicable Requirement
52.2221	Classification of Regions	No	Specifies the priority classifications for all areas of the state. No Applicable Requirements
52.2222	Approval Status	No	Lists the approval status of the plan. No Applicable Requirements
52.2223	Compliance Schedules	No	Compliance schedules for owners or operators of boilers >250 million Btu/hr heat input who elect to meet requirements of TAPCR 1200-03-14 by either low-sulfur fuel or stack gas desulfurization. No Applicable Requirements
52.2224	Legal Authority	No	Identifies specific areas lacking specific legal authority. No Applicable Requirements
52.2225	VOC Rule Deficiency Correction	No	Approves revisions concerning RACT rules and identifies specific deficiencies in Tennessee's, Nashville's and Memphis' regulations. No Applicable Requirements
52.2226	Extensions	No	Identifies the NAAQS compliance extensions granted the state by the administrator. No Applicable Requirements

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 52 – Approval and Promulgation of Implementation Plans**

Part	Title	Applicable Regulations	Comment
52.2227	Prevention Of Air Pollution Emergency Episodes	No	Identifies a deficiency in the state plan concerning mobile sources. No Applicable Requirements
52.2228	Review of New Sources and Modifications	No	State did not submit a plan for review of new or modified sources. Conditional approval of Nashville-Davidson County regulations. No Applicable Requirements
52.2229	Rules And Regulations	No	Specific rules of Memphis-Shelby County and Knox County are disapproved for inconsistencies with EPA policy and requirements. No Applicable Requirements
52.2230	Attainment Dates for National Standards	No	Lists the dates by which the NAAQS are to be attained by region. No Applicable Requirements
52.2231	Control Strategy: Sulfur Oxides and Particulate Matter	No	Conditional approval of Chattanooga TSP plan. Certification of emission limits not being based on dispersion techniques not permitted by EPA's stack height rule (excludes Johnsonville 1-10). No Applicable Requirements
52.2232	Reserved	No	Reserved
52.2233	Significant Deterioration of Air Quality	No	Disapproves paragraph 1200-03-09-.01(4)-(0)-2 concerning innovative control technology waivers. Also EPA retains authority for permits which involve vessel emissions where a source is not willing to include all vessel emissions in the definition of source. No Applicable Requirements
52.2234	Visibility Protection	No	Part indicates the Plan is disapproved for visibility protection of Class I areas. No Applicable Requirements
52.2235	Control Strategy: Ozone	No	Determines that Nashville ozone nonattainment area has attained the ozone standard and nonattainment provisions of the Clean Air Act do not apply so long as no violations of the standard are monitored. No Applicable Requirements
52.2236	Control Strategy; lead	No	Indicates acceptance of Tennessee's maintenance plan for Fayette County lead nonattainment area. No Applicable Requirement
52.2237	NOx RACT and NOx conformity exemption	No	EPA approves Tennessee's RACT rule and request for NOx conformity exemption. No Applicable Requirement
52.2239	Original Identification of plan section	Yes	Section identifies the original "Tennessee Air Pollution Control Implementation Plan" and all revisions submitted by Tennessee that were federally approved prior to December 1, 1998. Applicable Requirement
52.2240	Interstate pollutant transport provisions (NO _x)	Yes	52.2240(d) and (e) are Applicable Requirements.
52.2241	Interstate pollutant transport provisions (SO ₂)	Yes	52.2241(c) is an Applicable Requirement.

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR Subpart 58 – Ambient Air Quality Surveillance**

Subpart	Title	Applicable Regulations	Comment
A	General Provisions	Yes	Contains definitions, states purpose and defines applicability which includes owners or operators of proposed sources. Applicable Requirements
B	Monitoring Criteria	Yes	Specifies monitoring criteria for monitoring networks including quality assurance requirements which specifies compliance with Appendix B for PSD monitors. No Applicable Requirements
C	State and Local Air Monitoring Stations (SLAMS)	No	Requires the establishment of SLAMS networks and describes monitoring program requirements for SLAMS networks. No Applicable Requirements
D	National Air Monitoring Stations (NAMS)	No	Requires the establishment of NAMS networks and describes monitoring program requirements for NAMS networks. No Applicable Requirements
E	Photochemical Assessment Monitoring Stations (PAMS)	No	Requires the establishment of PAMS networks and describes monitoring program requirements for PAMS networks. No Applicable Requirements
F	Air Quality Index Reporting	No	Requires states to report air quality indexes in areas with populations greater than specified. No Applicable Requirements
G	Federal Monitoring	No	Provides for establishing of federal monitoring networks under certain circumstances. No Applicable Requirements
App. A	Quality Assurance Requirements for State and Local Monitoring Stations (SLAMS)	No	Specifies quality assurance requirements for SLAMS networks. No Applicable Requirements
App. B	Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring	Yes	Specifies quality assurance requirements for PSD monitoring stations. No Applicable Requirements
App. C	Ambient Air Quality Monitoring Methodology	No	Specifies monitoring methods to be used in SLAMS networks. No Applicable Requirements
App. D	Network Design for SLAMS, NAMS, and PAMS	No	Describes monitoring objectives and general criteria for establishing SLAMS, NAMS, and PAMS networks. No Applicable Requirements
App. E	Probe Siting Criteria for Ambient Air Quality Monitoring	No	Describes probe siting criteria for air monitors in SLAMS, NAMS, and PAMS networks. No Applicable Requirements
App. F	Annual SLAMS Air Quality Information	No	Describes information to be compiled and submitted annually to EPA for SLAMS stations. No Applicable Requirements
App. G	Uniform Air Quality Index and Daily Reporting	No	Describes the uniform air quality index to be used by States required to report indexes. No Applicable Requirements

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 60 – Standards of Performance for New Stationary Sources**

Subpart	Standard of Performance For:	Proposed Date	Effective Date	Affected Unit	Comment
A	General Provisions		11/17/75	Yes	Applies to any source which contains an affected unit or facility designated in Part 60.
B	Adoption and Submittal of State Plans for Designated Facilities		11/17/75	No	Applies to State actions only.
C	Emission Guidelines and Compliance Times		10/18/77	No	No affected units
D	Fossil-Fuel Fired Steam Generators for Which Construction is Commenced after August 17, 1971	8/17/71	12/23/71	No	No affected units
Da	Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978	9/18/78	6/11/79	No	No affected units
Db	Industrial-Commercial-Institutional Steam Generating Units	6/19/84	11/25/86	No	No affected units
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	6/9/89	9/12/90	No	No affected units
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and Prior to May 19, 1978	6/11/73	3/8/74	No	No affected units
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and Prior to July 23, 1984	5/18/78	4/5/80	No	No affected units
Kb	Storage Vessels for Volatile Organic Liquids for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	7/23/84	4/8/87	No	No affected units
Y	Coal Preparation Plants	10/24/74	1/15/76	Yes	Applicable requirement
GG	Stationary Gas Turbines	10/3/77	9/10/79	No	No affected units
OOO	Nonmetallic Minerals Processing Plants	8/31/83	8/1/85	No	No affected units
App. B	Performance Specifications		3/30/83	Yes	Applicable requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 61 – National Emission Standards for Hazardous Air Pollutants**

Subpart	National Emission Standard For:	Affected Unit	Comment
A	General Provisions	Yes	Applies to any stationary source of a regulated pollutant for which a standard is prescribed in this Part.
C	Beryllium	No	No affected units
E	Mercury	No	No affected units
M	Asbestos	Yes	Renovation or demolition activities involving asbestos containing materials at any unit or facility is applicable (40 CFR 61.145, Standard for Demolition and Renovation). Likewise, should the “Source” apply asbestos containing materials by spraying, the requirements of 40 CFR 61.146 (Standard for Spraying) are applicable.
Y	Benzene Emissions from Benzene Storage Vessels	No	No affected units

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 63 – National Emission Standards for Hazardous Air Pollutants for Source Categories**

Subpart	Title	Affected Unit	Comment
A	General Provisions	Yes	These provisions are applicable when a subsequent subpart is applicable. Applicable Requirement.
B	Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections 112(g) and 112(j)	Yes	Applies to a major source of HAPs in a source category/subcategory for which EPA has failed to promulgate a standard by the 112(j) deadline. Duty to file a permit application. Applicable Requirement.
D	Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants	No	Applicable only if TVA files an application for compliance extension for early reductions. No affected units.
H	National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks	No	No affected units
Q	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers	No	No affected units
T	National Emission Standards for Halogenated Solvent Cleaning	No	No affected units
UUUUU	National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fire Electric Utility Steam Generating Units	Yes	Nine affected units.

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 64 – Compliance Assurance Monitoring**

Part	Title	Applicable Regulations	Comments
64.1	Definitions	No	Provides definitions for terms used in the regulation No Applicable Requirement
64.2	Applicability	Yes	Describes the general applicability of the regulation and specifies what emission limitation or standard and what units are exempt from the regulation. Applicable Requirement
64.3	Monitoring design criteria	Yes	Provides general criteria for monitoring design, performance criteria, evaluation factors and special criteria. Applicable Requirement
64.4	Submittal requirements	Yes	Specifies the information which the owner or operator of the source must submit to the regulatory authority concerning the monitoring system and documentation of compliance. Applicable Requirement
64.5	Deadlines for submittals	Yes	Specifies deadlines for submittal of required information. Applicable Requirement
64.6	Approval of monitoring	Yes	Requires the regulatory authority to act on monitoring submitted in the application and specifies minimum requirements for permit terms and conditions. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 64 – Compliance Assurance Monitoring**

Part	Title	Applicable Regulations	Comments
64.7	Operation of approved monitoring	Yes	Requires the owner or operator of the source to conduct monitoring in accordance with the issued part 70 or 71 permit, to provide proper maintenance of the monitors, when to collect acceptable data from the monitors, actions to be taken in response to excursions or exceedances during startup, shutdown, or malfunction conditions to minimize emissions and information needed to document such conditions, and what to do if emission limits are exceeded and the monitoring does not indicate the exceedances. Applicable Requirement
64.8	Quality improvement plan (QIP) requirements	Yes	Specifies when a QIP may be required, the elements contained in a QIP, when the owner or operator must develop a QIP, and when a QIP must be modified. Applicable Requirement
64.9	Reporting and recordkeeping requirements	Yes	Specifies what information must be reported as a minimum to the permitting authority and what records must be maintained and how to maintain the records. Applicable Requirement
64.10	Savings provisions	Yes	Indicates that compliance with this requirement does not affect compliance with other regulatory requirements or limits the authority of the administrator or permitting authority. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 66 – Assessment And Collection Of Noncompliance Penalties by EPA**

Part	Title	Applicable Regulations	Comment
Subpart A - Purpose and Scope			
66.1	Applicability and Effective Date	No	Describes applicability of this part to proceedings for the assessment by EPA of a noncompliance penalty. No Applicable Requirement
66.2	Program Description	No	Describes what is contained in part 66. No Applicable Requirement
66.3	Definitions	No	Provides definitions of terms used in this part. No Applicable Requirement
66.4	Limitation on Review of Regulations	Yes	Describes what may not be challenged, reviewed or re-examined in a hearing conducted under this part and specifies limitations on review. Applicable Requirement
66.5	Savings Clause	No	Specifies the impact of proceedings under this part on other proceedings. No Applicable Requirement
66.6	Effect of Litigation: Time Limits	No	Describes the impact of failure of meeting time limits contained in this part on other proceedings under these regulations. No Applicable Requirement
Subpart B - Notice of Noncompliance			
66.11	Issuance of Notices of Noncompliance	No	Specifies the responsibilities of the Administrator in issuing a notice of noncompliance. No Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 66 – Assessment And Collection Of Noncompliance Penalties by EPA**

Part	Title	Applicable Regulations	Comment
66.12	Content of Notices of Noncompliance	No	Describes the content of a notice of noncompliance. No Applicable Requirement
66.13	Duties of Source Owner or Operator Upon Receipt of a Notice of Noncompliance	Yes	Specifies the action a source owner or operator must take within 45 days of receipt of a notice of noncompliance. Applicable Requirement
Subpart C - Calculation of Noncompliance Penalties			
66.21	How to Calculate the Penalty	Yes	Requires all penalty calculations be in accordance with the Technical Support Document and the Manual. Applicable Requirement
66.22	Contracting Out Penalty Calculation	No	Allows the Administrator to contract out the penalty calculation if the source owner or operator fails to carry out responsibilities under §66.13. No Applicable Requirement
66.23	Interim Recalculation of Penalty	Yes	Specifies action to be taken by the Administrator or source’s owner if either feels that the penalty calculation is no longer accurate. Applicable Requirement
Subpart D - Exemption Requests; Revocation of Exemptions			
66.31	Exemptions Based on an Order, Extension or Suspension	Yes	Describes specific situations which are exempt from penalties and specifies the conditions for an exemption and the required demonstration by the source owner. Applicable Requirement
66.32	De Minimis Exemptions	Yes	Allows the Administrator to exempt an owner or operator from penalties for de minimis noncompliance upon petition for such exemption and specifies what the Administrator must consider and do in making the determination. Applicable Requirement
66.33	De Minimis Exemptions: Malfunctions	Yes	Allows the Administrator to exempt an owner or operator from penalties for de minimis noncompliance due to a malfunction upon petition demonstrating entitlement to such exemption and specifies what the Administrator must consider and do in making the determination. Applicable Requirement
66.34	Termination of Exemptions	No	Specifies when an exemption from penalty will be terminated and the actions required by the Administrator in terminating the exemption. No Applicable Requirement
66.35	Revocation of Exemptions	No	Specifies when an exemption from penalty will be revoked and the actions required by the Administrator in revoking the exemption. No Applicable Requirement
Subpart E - Decisions on Exemption Requests and Challenges to Notices of Noncompliance			
66.41	Decision on Petitions	No	Describes the actions the Administrator must take within 30 days after receipt of a petition. No Applicable Requirement
66.42	Procedure for Hearings	No	Specifies procedures for holding hearings and the time frames for the Presiding Officer to issue an initial decision. No Applicable Requirement
66.43	Final Decision; Submission of Penalty Calculation	Yes	Requires the owner or operator to submit penalty calculations and payment within 45 days of an adverse Agency decision. Applicable Requirement
Subpart F - Review of Penalty Calculation			
66.51	Action Upon Receipt of Penalty Calculation	No	Describes action to be taken by the Administrator within 30 days of receipt of a penalty calculation.

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 66 – Assessment And Collection Of Noncompliance Penalties by EPA**

Part	Title	Applicable Regulations	Comment
			No Applicable Requirement
66.52	Petitions for Reconsideration of Calculation.	Yes	If an owner or operator wished to challenge EPA's recalculation of a penalty, they must file a petition within 45 days of receipt of notice containing specified information. Applicable Requirement
66.53	Decisions on Petitions	No	Describes action to be taken by the Administrator within 30 days of receipt of a petition for reconsideration. No Applicable Requirement
66.54	Procedures for Hearing	No	Describes procedures for hearings. No Applicable Requirement
Subpart G - Payment			
66.61	Duty to Pay	Yes	Specifies when payments of penalties must be made. Applicable Requirement
66.62	Method of Payment	Yes	Describes how payments are to be made. Applicable Requirement
66.63	Nonpayment Penalty	Yes	Specifies a nonpayment penalty for failure to make a timely payment of a penalty. Applicable Requirement
Subpart H - Compliance and Final Adjustment			
66.71	Determination of Compliance	Yes	Requires the owner or operator paying a penalty to notify the Administrator when he believes the source is in full compliance and submit all necessary information. Specifies when the Administrator must make a determination of compliance. Provides for the owner or operator to petition for reconsideration or notify that the violated applicable requirement has been superseded and specifies when the Administrator must respond to the petition. Applicable Requirement
66.72	Additional Payment or Reimbursement	Yes	Specifies when the owner or operator is to submit recalculation of penalties after achieving compliance and what action the Administrator is to take. Applicable Requirement
66.73	Petition for Reconsideration and Procedure for Hearing	Yes	Specifies the time frame and form for petitioning for reconsideration and for the evaluation of and hearing on the petition. Applicable Requirement
Subpart H - Compliance and Final Adjustment			
66.74	Payment or Reimbursement	Yes	Specifies a time frame after any adjustment of a penalty when payment or reimbursement of any deficiency or overpayment is to occur. Applicable Requirement
Subpart I - Final Action			
66.81	Final Action	No	Describes what constitutes a final Agency action and specifies what final Agency actions are appealable. No Applicable Requirement
Subpart J - Supplemental Rules for Formal Adjudicatory Hearings			
66.91	Applicability of Supplemental Rules	No	Specifies what rules will govern all hearings held under this part. No Applicable Requirement
66.92	Commencement of Hearings	No	Specifies what actions must be taken upon the Administrator granting a hearing. No Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 66 – Assessment And Collection Of Noncompliance Penalties by EPA**

Part	Title	Applicable Regulations	Comment
66.93	Time Limits	No	Specifies when the Presiding Officer is to schedule a hearing and issue an initial decision. No Applicable Requirement
66.94	Presentation of Evidence	Yes	Specifies the sequence for the Administrator and the owner or operator to present evidence and what evidence is to be presented. Applicable Requirement
66.95	Decisions of the Presiding Officer; Appeal to the Administrator	Yes	Specifies requirements for the Presiding Officer to issue decisions and calculate penalties. Also specifies procedures for appealing the issued decision. Applicable Requirement
Appendices to Part 66			
App. A	Technical Support Document		See Appendix A to Part 67
App. B	Instruction Manual		See Appendix B to Part 67
App. C	Computer Program		See Appendix C to Part 67

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 68 – Chemical Accident Prevention Provisions**

Part	Title	Applicable Regulations	Comment
Subpart A - General			
68.1	Scope	No	Describes the scope of part 68 provisions. No Applicable Requirement
68.3	Definitions	Yes	Provides definitions of terms used in this part. No Applicable Requirement
68.10	Applicability	Yes	Details compliance dates and eligibility criteria for the 3 prevention programs. No Applicable Requirement
68.12	General Requirements	Yes	Lists requirements for processes in each of the prevention programs. No Applicable Requirement
68.15	Management	Yes	Describes management systems required for Programs 2 or 3. No Applicable Requirement
Subpart B - Hazard Assessment			
68.20	Applicability	Yes	Specifies hazard assessment requirements for each program. Not an Applicable Requirement
68.22	Offsite Consequence Analysis Parameters	Yes	Lists parameters to be used in offsite consequence analyses. Not an Applicable Requirement
68.25	Worst-Case Release Scenario Analysis	Yes	Details methodologies to be used in worst-case release analyses. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 68 – Chemical Accident Prevention Provisions**

Part	Title	Applicable Regulations	Comment
68.28	Alternative Release Scenario Analysis	Yes	Provides details on alternative release scenario analyses. Not an Applicable Requirement
68.30	Defining Offsite Impacts - Population	Yes	Requires estimation of populations potentially affected by releases. Not an Applicable Requirement
68.33	Defining Offsite Impacts - Environment	Yes	Requires identification of environmental receptors potentially affected. Not an Applicable Requirement
68.36	Review and Update	Yes	Requires updates of offsite consequence analyses every 5 years or with significant changes. Not an Applicable Requirement
68.39	Documentation	Yes	Lists records on offsite consequence analyses to be retained on site. Not an Applicable Requirement
68.42	Five-year Accident History	Yes	Requires accident histories for releases causing deaths, injuries, or significant property damages. Not an Applicable Requirement
Subpart C - Program 2 Prevention Program			
68.48	Safety Information	Yes	Details safety information that sources are required to develop. Not an Applicable Requirement
68.50	Hazard Review	Yes	Requires review of hazards associated with substances and processes. Not an Applicable Requirement
68.52	Operating Procedures	Yes	Requires development of procedures for safe process operation. Not an Applicable Requirement
68.54	Training	Yes	Requires employees be trained in the process operating procedures. Not an Applicable Requirement
68.56	Maintenance	Yes	Requires maintenance procedures be developed for processes. Not an Applicable Requirement
68.58	Compliance Audits	Yes	Requires an audit of compliance with provisions of this subpart every 3 years. Not an Applicable Requirement
68.60	Incident Investigation	Yes	Details investigation required for any incident that resulted in, or could have caused, a catastrophic release. Not an Applicable Requirement
Subpart D - Program 3 Prevention Program			
68.65	Process Safety Information	Yes	Requires compilation of process safety information. Not an Applicable Requirement
68.67	Process Hazard Analysis	Yes	Requires performance of an initial process hazard analysis, with updates every 5 years, and establishment of a system to address findings and recommendations from the analysis. Not an Applicable Requirement
68.69	Operating Procedures	Yes	Requires development of procedures for safe process operation. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 68 – Chemical Accident Prevention Provisions**

Part	Title	Applicable Regulations	Comment
68.71	Training	Yes	Requires employees be trained in the process operating procedures. Not an Applicable Requirement
68.73	Mechanical Integrity	Yes	Requires development of maintenance procedures, employee training, and inspection and testing for specified process equipment. Not an Applicable Requirement
68.75	Management of Change	Yes	Requires development of procedures to manage process changes. Not an Applicable Requirement
68.77	Pre-startup Review	Yes	Requires performance of a pre-startup safety review for new and modified sources. Not an Applicable Requirement
68.79	Compliance Audits	Yes	Requires an audit of compliance with provisions of this subpart every 3 years. Not an Applicable Requirement
68.81	Incident Investigation	Yes	Details investigation required for any incident that resulted in, or could have caused, a catastrophic release. Not an Applicable Requirement
68.83	Employee Participation	Yes	Requires consultation with employees and their representatives on process safety matters. Not an Applicable Requirement
68.85	Hot Work Permit	Yes	Requires issuance of an internal permit for welding and similar operations on or near covered processes. Not an Applicable Requirement
68.87	Contractors	Yes	Specifies that contractors are to be informed about process safety procedures. Not an Applicable Requirement
Subpart E - Emergency Response			
68.90	Applicability	Yes	Details exemption from emergency response program requirements. Not an Applicable Requirement
68.95	Emergency Response Program	Yes	Requires development of emergency response program with specified elements. Not an Applicable Requirement
Subpart F - Regulated Substances for Accidental Release Prevention			
68.100	Purpose	No	Establishes purpose of this subpart. Not an Applicable Requirement
68.115	Threshold Determination	Yes	Details procedures to determine whether a threshold quantity of a regulated substance is present at a source. Applicable Requirement
68.120	Petition Process	Yes	Specifies requirements for petitions to modify list of regulated substances. Not an Applicable Requirement
68.125	Exemptions	No	Provides an exemption for ammonia used in farming. Not an Applicable Requirement
68.130	List of Substances	Yes	Establishes the list of regulated substances. Not an Applicable Requirement
Subpart G - Risk Management Plan			
68.150	Submission	Yes	Requires submittal of a single Risk Management Plan (RMP) for all covered processes. Not an Applicable Requirement
68.155	Executive Summary	Yes	Details requirements for the RMP executive summary. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 68 – Chemical Accident Prevention Provisions**

Part	Title	Applicable Regulations	Comment
68.160	Registration	Yes	Specifies identifying information to be provided in the RMP. Not an Applicable Requirement
68.165	Offsite Consequence Analysis	Yes	Specifies data on offsite consequence analysis to be given in the RMP. Not an Applicable Requirement
68.168	Five-year Accident History	Yes	Specifies data on 5-year accident history to be given in the RMP. Not an Applicable Requirement
68.170	Prevention Program/Program 2	Yes	Specifies data on Program 2 processes to be given in the RMP. Not an Applicable Requirement
68.175	Prevention Program/Program 3	Yes	Specifies data on Program 3 processes to be given in the RMP. Not an Applicable Requirement
68.180	Emergency Response Program	Yes	Specifies information on emergency response plan to be given in the RMP. Not an Applicable Requirement
68.185	Certification	Yes	Details requirements for certification to be given in the RMP. Not an Applicable Requirement
68.190	Updates	Yes	Details requirements for RMP updates at least every 5 years. Not an Applicable Requirement
Subpart H - Other Requirements			
68.200	Recordkeeping	Yes	Requires maintenance of relevant records for 5 years. Not an Applicable Requirement
68.210	Availability of Information to the Public	Yes	Specifies that the RMP shall be available to the public. Not an Applicable Requirement
68.215	Permit Content and Air Permitting Authority or Designated Agency Requirements	Yes	Details interface with Part 70 Operating Permit program. Not an Applicable Requirement
68.220	Audits	Yes	Provides for RMP audits by implementing agency with mechanism for requiring revisions in the RMP. Not an Applicable Requirement
Appendices to Part 68			
App. A	Table of Toxic Endpoints		Toxic endpoints to be used in offsite consequence analyses

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 70 – State Operating Permit Programs**

Part	Title	Applicable Regulations	Comment
70.1	Program Overview	No	Provides an overview of the Title V permit program, allows states to establish additional or more stringent requirements, includes Title IV permits in the Title V program, and allows the coordination of the issuance of the permit with permits under RCRA and the Clean Water Act. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 70 – State Operating Permit Programs**

Part	Title	Applicable Regulations	Comment
70.2	Definitions	No	Provides definitions of terms used in this part. Not an Applicable Requirement
70.3	Applicability	Yes	Specifies what sources must have a permit and what sources are exempt from the permitting requirements and allows sources not subject to permits to opt into the permit program. Requires inclusion of fugitive emissions in the same manner as stack emissions. Applicable Requirement
70.4	State Program Submittals and Transition	Yes	Requires the Governor of each state to submit by a specified deadline a proposed part 70 program and specifies the elements of a program that must be contained in the proposed program for approval. Allows the Administrator to grant full, partial, or interim approval of programs under certain conditions and specifies state action in response to approval. Applicable Requirement
70.5	Permit Application	Yes	Requires the owner or operator of a part 70 source to submit a timely and complete permit application and specifies the time frames for submittal of a complete application. Requires states to provide standard application forms and specifies what the application form must include and the information that the owner or operator of the source must provide. Allows the state to develop a list of insignificant sources which may be exempt from the permitting requirements. Applicable Requirement
70.6	Permit Content	Yes	Specifies the standard requirements and content of a permit issued under this part. Requires the permit to be federally enforceable and specify compliance requirements. Provides for general permits and permits for temporary sources. Allows for a permit shield to be granted. Defines what is an emergency and how it may be used as a defense for noncompliance with a permit condition. Applicable Requirement
70.7	Permit Issuance, Renewal, Reopenings, and Revisions	Yes	Specifies the conditions under which a permit may be issued and prohibits a part 70 source from operating without a permit unless it has submitted a timely and complete application. Requires that permit renewal applications be timely and complete and subject to the same procedural requirements as an initial permit. Defines what an administrative permit amendment is and when it can be used. Defines a permit modification and specifies when and how it may be used. Provides for reopening of a permit for cause. Allows for public participation. Applicable Requirement
70.8	Permit Review by EPA and Affected States	No	Requires that the Administrator and affected states review permits before issuance and submit recommendations and objections to the permitting authority. Specifies EPA's role and responsibility in issuing a permit. Provides for public petition to the Administrator objecting to the issuance of a permit and specifies EPA action in response to a petition. Prohibits default issuance of a permit. Not an Applicable Requirement
70.9	Fee Determination and Certification	Yes	Requires owners and operators of a part 70 source to pay a fee and requires states to develop a fee program according to specified requirements that cover the cost of implementing the permit program. Applicable Requirement
70.10	Federal Oversight and Sanctions	No	Provides for federal oversight of the states permit program and specifies the actions and sanctions to be taken by the Administrator if a state fails to submit or implement a permit program. Specifies criteria for the withdrawal of a state program and provides for the federal collection of fees. Not an Applicable Requirement
70.11	Requirements for Enforcement Authority	No	Specifies required enforcement authority that each approved program must contain. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 72 – Permits Regulation**

Part	Title	Applicable Regulation	Comment
Subpart A - Acid Rain Program General Provisions			
72.1	Purpose and Scope	No	Provides the purpose and scope of the regulations in this part. Not an Applicable Requirement
72.2	Definitions	No	Provides definitions of terms used in this regulation. Not an Applicable Requirement
72.3	Measurements, Abbreviations, and Acronyms	No	Provides measurements, abbreviations, and acronyms used in this regulation. Not an Applicable Requirement
72.4	Federal Authority	No	Identifies authority reserved to the Administrator. Not an Applicable Requirement
72.5	State Authority	No	Allows states to adopt regulations not less stringent than EPA regulations. Not an Applicable Requirement
72.6	Applicability	No	Identifies what are affected units to which these regulations are applicable and provides for petition for determination of an affected unit. Not an Applicable Requirement
72.7	New Units Exemption	No	Provides for the exemption of certain new utility units from the requirements. Not an Applicable Requirement
72.8	Retired Units Exemption	No	Provides for the exemption of units retired before the issuance of a Phase II permit. Not an Applicable Requirement
72.9	Standard Requirements	Yes	Requires sources to apply for an Acid Rain permit, operate in compliance with the application or permit, including monitoring requirements, sulfur dioxide requirements, nitrogen oxides requirements, excess emissions requirements, and recordkeeping and reporting requirements. Applicable Requirement
72.10	Availability of Information	No	Provides for the availability of information to the public. Not an Applicable Requirement
72.11	Computation of Time	Yes	Specifies when a time period is to begin on the occurrence of an act or event. Applicable Requirement
72.12	Administrative Appeals	Yes	Provides for procedures for appeals of decisions of the Administrator. Applicable Requirement
72.13	Incorporation by Reference	Yes	Incorporates certain ASTM methods by reference. Applicable Requirement
Subpart B - Designated Representative			
72.20	Authorization and Responsibilities of the Designated Representative	Yes	Requires that a designated representative be identified for a source in accordance with certain requirements. Applicable Requirement
72.21	Submissions	Yes	Requires submission of Acid Rain Program submittals containing certain certifications by the designated representative to the Administrator and the owners or operators of affected units. Applicable Requirement
72.22	Alternate Designated Representative	Yes	Provides for the designation of an alternate designated representative. Applicable Requirement
72.23	Changing the Designated Representative, Alternate Designated Representative; Changes in the Owners and Operators	Yes	Provides for the changing of designated and alternate designated representatives, and owners and operators with certain conditions. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 72 – Permits Regulation**

Part	Title	Applicable Regulation	Comment
72.24	Certificate of Representation	Yes	Specifies the contents of a complete certificate of representation. Applicable Requirement
72.25	Objections	No	Specifies the effect of objections submitted to the Administrator and prohibits the Administrator from adjudicating any private legal dispute concerning actions of designated representatives. Not an Applicable Requirement
72.26	Delegation by designated representative and alternate designated representative	Yes	Specifies delegation authorities of designated representative and alternate designated representative. Applicable Requirement
Subpart C - Acid Rain Permit Applications			
72.30	Requirement to Apply	Yes	Requires designated representatives to submit complete Acid Rain permit applications by applicable deadlines. Applicable Requirement
72.31	Information Requirements for Acid Rain Permit Applications	Yes	Identifies specific information required for Acid Rain permit applications Applicable Requirement
72.32	Permit Application Shield and Binding Effect of Permit Application	Yes	Provides for an application shield upon submittal of a complete application and binds the source to operating according to the provisions in the application upon submittal of the application. Applicable Requirement
72.33	Identification of Dispatch System	Yes	Provides for the identification of dispatch systems for Phase I units. Applicable Requirement
Subpart D - Acid Rain Compliance Plan and Compliance Options			
72.40	General	Yes	Specifies the content and conditions of compliance plans and compliance options to be contained in an Acid Rain permit application. Applicable Requirement
72.41	Phase I Substitution Plans	No	Allows for the inclusion in the permit application of a substitution plan for Phase I units only. Specifies content and conditions of such a plan. Not an Applicable Requirement
72.42	Phase I Extension Plans	No	Provides for a 2-year extension of the deadline for meeting Phase I sulfur dioxide emission reduction requirements. Specifies the content of the required Early Ranking Application and the Phase I Extension Plan and conditions of an extension. Not an Applicable Requirement
72.43	Phase I Reduced Utilization Plans	No	Requires the inclusion of a reduced utilization plan in a Phase I permit application if the owner/operators plan to reduce utilization of a Phase I unit by shifting generation to another unit or through energy conservation. Specifies the contents of a reduced utilization plan and contains special provisions. Not an Applicable Requirement
72.44	Phase II Repowering Extensions	Yes	Allows for extension of Phase II compliance for units being repowered by qualifying repowering technology. Requires the submittal of a petition for approval of repowering technology and a repowering extension plan and specifies the content of such petition and plan. Applicable Requirement
Subpart E - Acid Rain Permit Contents			

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 72 – Permits Regulation**

Part	Title	Applicable Regulation	Comment
72.50	General	Yes	Specifies contents of an acid rain permit. Applicable Requirement
72.51	Permit Shield	Yes	Affected units operated in accordance with the acid rain permit are deemed to be operating in compliance with the acid rain program. Applicable Requirement
Subpart F - Federal Acid Rain Permit Issuance Procedures			
72.60	General	No	Describes the scope of the subpart and specifies a six month deadline for approval or disapproval of a permit application after receipt of a complete application. Not an Applicable Requirement.
72.61	Completeness	Yes	Specifies a 30 day time period for the Administrator to determine the completeness of an application and requires the designated representative to submit any supplemental requested information to the Administrator within 30 days of the Administrator’s request. Applicable Requirement
72.62	Draft Permit	No	The Administrator will issue a draft permit after receipt of a complete application. Provides for a 30 day public comment period on the draft permit. Not an Applicable Requirement
72.63	Administrative Record	No	Requires the Administrator to prepare an administrative record for an acid rain permit or denial of a permit and specifies the content of the records. Not an Applicable Requirement
72.64	Statement of Basis	No	Specifies what a statement of basis will contain. Not an Applicable Requirement
72.65	Public Notice of Opportunities for Public Comment	No	Requires the Administrator to give public notice of a draft permit or denial and opportunity for public review and comment and specifies the content of such public notice. Not an Applicable Requirement
72.66	Public Comments	No	Requires submittal of written comments from the public and specifies the form of the comment and limitations on the contents of public comments. Not an Applicable Requirement
72.67	Opportunity for Public Hearing	No	Provides opportunity for public hearing and allows the Administrator to hold a public hearing on his own motion or at the request of any person. Not an Applicable Requirement
72.68	Response to Comments	No	Requires the Administrator to consider comments received during public comment or public hearing, identify changes to draft permit and state reason for change and briefly describe and respond to relevant comments. Not an Applicable Requirement
72.69	Issuance and Effective Date of Acid Rain Permits	No	Requires the Administrator to issue or deny a permit after close of the public comment period. The term of the permit will be for 5 years and will take effect on January 1, 1995. Not an Applicable Requirement
Subpart G - Acid Rain Phase II Implementation			
72.70	Relationship to Title V Operating Permit Program	No	Requires each state permitting authority to incorporate Acid Rain Program requirements into each affected sources permit Not an Applicable Requirement
72.71	Acceptance of State and Rain Programs -	No	Requires each state to submit to the Administrator an operating permit program meeting Title V requirements. Upon

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 72 – Permits Regulation**

Part	Title	Applicable Regulation	Comment
	General		approval of a state program, the Administrator will suspend federal issuance of Phase II acid rain permits. The Administrator will issue all Phase I acid rain permits. Not an Applicable Requirement
72.72	Criteria for State Operating Permit Program	No	Specifies certain criteria and requirements for an approvable state permitting program to incorporate acid rain program requirements. Not an Applicable Requirement
72.73	State Issuance of Phase II Permits	No	Specifies the responsibilities of states with full, interim, or partial permit program approvals to issue Phase II permits and the dates by which the permits are to be issued and the term of the permits. Not an Applicable Requirement
72.74	Federal Issuance of Phase II Permits	No	Provides for the Administrator to issue the Phase II acid rain permits in states which do not have a full, interim, or partially approved permit program and specifies the dates for issuance of the permit. The Administrator will suspend federal issuance of the permit after approval of the state program. Not an Applicable Requirement
Subpart H - Permit Revisions			
72.80	General	No	Describes general requirements governing the Administrator or state revision of an acid rain permit. Not an Applicable Requirement
72.81	Permit Modifications	Yes	Specifies what permit revisions shall follow the permit modification procedures and the permit issuance requirements that the modifications must follow. Applicable Requirement
72.82	Fast-track Modifications	Yes	Specifies the responsibilities of the designated representative in requesting a fast-track modification, the procedures to be followed and the time frames for processing the modification request. Applicable Requirement
72.83	Administrative Permit Amendment	Yes	Specifies the type of permit revisions that shall follow the administrative permit amendment procedures. Applicable Requirement
72.84	Automatic Permit Amendment	Yes	Specifies the permit revisions that shall be deemed to automatically amend an acid rain permit. Applicable Requirement
72.85	Permit Reopenings	No	Describes when and how a permit is to be reopened. Not an Applicable Requirement
Subpart I - Compliance Certification			
72.90	Annual Compliance Certification Report	Yes	Specifies the deadline for submitting the annual report, the contents of the report and what the designated representative is certifying compliance with. Applicable Requirement
72.91	Phase I Unit Adjusted Utilization	No	Requires to be included in the annual certification report for Phase I units the adjusted utilization of the unit for the year and a confirmation report if a units annual compliance certification report estimates kilowatt hour savings or improvement in heat rate from energy conservation or improved efficiency under a reduced utilization plan. Not an Applicable Requirement
72.92	Phase I Unit Allowance Surrender	No	If a Phase I unit's adjusted utilization for the year is greater than zero, the report shall include the number of allowances that shall be surrendered along with other specified information.

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 72 – Permits Regulation**

Part	Title	Applicable Regulation	Comment
			Not an Applicable Requirement
72.93	Units With Phase I Extension Plans	No	Requires inclusion in the annual report for calendar year 1997 the start-up test results upon which the vendor is released from liability under the vendor certification of guaranteed sulfur dioxide removal efficiency. Not an Applicable Requirement
72.94	Units With Repowering Extension Plans	Yes	Identifies specific information concerning design, engineering and contract requirements which the designated representative must submit by January 1, 2000 for units under a repowering extension plan, and when certain notifications must be given. Applicable Requirement
72.95	Allowance Deduction Formula	Yes	Provides a formula to be used to determine the total number of allowances to be deducted for the calendar year from the allowances held in a unit's subaccount. Applicable Requirement
72.96	Administrator's Action on Compliance Certifications	No	Describes actions the Administrator may take concerning any compliance certification. Not an Applicable Requirement
App. A	Methodology for Annualization of Emissions Limits	Yes	Specifies a method for determining the annualized emission limit for affected units. Applicable Requirement
App. B	Methodology for Conversion of Emissions Limits	Yes	Specifies a methodology for conversion of various emission limits to pounds of SO ₂ per million Btu. Applicable Requirement
App. C	Actual 1985 Yearly SO ₂ Emissions Calculation	Yes	Specifies the equation to be used to calculate the yearly SO ₂ emissions. Applicable Requirement
App. D	Calculation of Potential Electric Output Capacity	Yes	Specifies the method for calculating the potential electric output capacity of a unit. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 73 – Sulfur Dioxide Allowance System**

Part	Title	Applicable Regulation	Comment
Subpart A - Background and Summary			
73.1	Purpose and Scope	No	Describes the purpose and scope of this Part. Not an Applicable Requirement
73.2	Applicability	No	Specifies to whom this Part is applicable. Not an Applicable Requirement
73.3	General	Yes	Identifies requirements from other Parts that are applicable to this Part. Applicable Requirement
Subpart B - Allowance Allocations			
73.10	Initial Allocations for Phase I and Phase II	Yes	Specifies Phase I and Phase II allowances to be allocated to affected units accounts. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 73 – Sulfur Dioxide Allowance System**

Part	Title	Applicable Regulation	Comment
73.11	Reserved		
73.12	Rounding Procedures	No	Requires allowances to be allocated as whole allowances and specifies how allowances are to be rounded and how to achieve exact allowance reserves and allowance totals. Not an Applicable Requirement
73.13	Procedures for Submittals	Yes	Specifies how submittals are to be made and procedures for appealing decisions as to eligibility or allocation of allowances. Applicable Requirement
73.14	Reserved		
73.15	Reserved		
73.16	Reserved		
73.17	Reserved		
73.18	Submittal Procedures for Units Commencing Commercial Operation during the Period From 1/1/93 Through 12/31/95	No	Describes eligibility of a unit, when to submit application for allowances and how commencement of commercial operation is determined. Not an Applicable Requirement
73.19	Certain Units With Declining SO ₂ Rates	No	Specifies eligibility of units for this section and submittal procedures to be eligible for allowance allocations under this section. Not an Applicable Requirement
73.20	Phase II Early Reduction Credits	Yes	Specifies eligibility of Phase II units to obtain credits for early reduction of SO ₂ emissions. Applicable Requirement
73.21	Phase II Repowering Allowances	Yes	Specifies how repowering allowances are determined and allocated. Applicable Requirement
73.22	Reserved		
73.23	Reserved		
73.24	Reserved		
73.25	Phase I Extension Reserve	No	Describes how the reserve is established, how the reserve is allocated and what happens to the remaining allowances. Not an Applicable Requirement
73.26	Conservation and Renewable Energy Reserve	No	Describes the establishment of the reserve and the distribution of allowances in the reserve. Not an Applicable Requirement
73.27	Special Allowance Reserve	No	Describes the establishment of the reserve, the reallocation of allowances and the distribution of proceeds from the auctions and sales of allowances. Not an Applicable Requirement
Subpart C - Allowance Tracking System			
73.30	Allowance Tracking System Accounts	Yes	Describes the nature and function of the allowance tracking system accounts. Applicable Requirement
73.31	Establishment of Accounts	Yes	Describes requirements for establishing accounts and specifies the requirements for opening an account. Applicable Requirement
73.32	Reserved		
73.33	Authorized Account Representative	Yes	Describes the responsibilities of the authorized account representative and allows for the designation of an alternate authorized account representative. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 73 – Sulfur Dioxide Allowance System**

Part	Title	Applicable Regulation	Comment
73.34	Recordation in Accounts	No	Specifies requirements for the Administrator for recording all allowances and deductions in accounts. Not an Applicable Requirement
73.35	Compliance	Yes	Describes the use of allowances in accounts for compliance. Applicable Requirement
73.36	Banking	Yes	Provides for the banking of allowances not used in a particular year. Applicable Requirement
73.37	Account Error and Dispute Resolution	Yes	Provides for notification of claim of account error, specifies what must be in a notification, and describes the process for dispute resolution. Applicable Requirement
73.38	Closing Accounts	Yes	Describes provisions for closing an account. Applicable Requirement
Subpart D - Allowance Transfers			
73.50	Scope and Submission of Transfers	Yes	Describes the scope of the transfers to and from accounts and requires authorized account representatives to request transfers according to a format. Applicable Requirement
73.51	Prohibition	No	Prohibits Administrator from making certain transfers. Not an Applicable Requirement
73.52	EPA Recordation	No	Requires the Administrator to record allowance transfers provided certain information is submitted. Not an Applicable Requirement
73.53	Notification	No	Specifies requirements for the Administrator to notify the authorized account representative of recordation or non-recordation of transfers. Not an Applicable Requirement
Subpart E - Auctions, Direct Sales, and Independent Power Producers Written Guarantee			
73.70	Auctions	No	Requires the Administrator to conduct annual auctions of allowances and specifies requirements for conducting such auctions Not an Applicable Requirement
73.71	Bidding	No	Specifies who may bid and how the bidding is to be conducted. Not an Applicable Requirement
73.72	Direct Sales	No	Requires the Administrator to conduct sales of allowances annually, establishes the price of allowances, and specifies how the sales are to be conducted. Not an Applicable Requirement
73.73	Delegation of Auctions and Sales and Termination of Auctions and Sales	No	Allows the Administrator to delegate the conduct of auctions and sales and provides for the termination of auctions and sales. Not an Applicable Requirement
Subpart F - Energy Conservation and Renewable Energy Reserve			
73.80	Operation of Allowance Reserve Program for Conservation and Renewable Energy	No	Requires the Administrator to allocate allowances from the Conservation and Renewable Energy Reserve for qualifying measures and specifies the termination of the reserve. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 73 – Sulfur Dioxide Allowance System**

Part	Title	Applicable Regulation	Comment
73.81	Qualified Conservation Measures and Renewable Energy Generation	No	Describes what is a qualified conservation measure and renewable energy generation. Not an Applicable Requirement
73.82	Application for Allowances from Reserve Program	No	Specifies the requirements for an application for allowances from the Reserve Program. Not an Applicable Requirement
73.83	Secretary of Energy's Action on Net Income Neutrality Application	No	Specifies the actions the Secretary of Energy must take in processing and certifying net income neutrality applications. Not an Applicable Requirement
73.84	Administrator's Action on Applications	No	Specifies the actions the Administrator must take in processing and approving Allowance Reserve applications. Not an Applicable Requirement
73.85	Administrator Review of the Reserve Program	No	Specifies when the Administrator must review the reserve program and actions to be taken upon review. Not an Applicable Requirement
73.86	State Regulatory Autonomy	No	Allows for states to provide incentives to encourage investment in conservation measures or renewable energy generation. Not an Applicable Requirement
App. A	List of Qualified Energy Conservation Measures, Qualified Renewable Generation, and Measures Applicable for Reduced Utilization	No	Provides a list of approved qualifying measures. Not an Applicable Requirement
Subpart G - Small Diesel Refineries			
73.90	Allowance Allocations for Small Diesel Refineries	No	Specifies the contents of an application for certification of eligibility of a refinery and the request for allowances and how the Administrator will allocate allowances. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 75 – Continuous Emission Monitoring**

Part	Title	Applicable Regulations	Comment
Subpart A - General			
75.1	Purpose and Scope	No	Describes the purpose and scope of part 75 to establish monitoring, recordkeeping and reporting requirements and statistical estimation procedures for missing data. Not an Applicable Requirement
75.2	Applicability	Yes	Specifies the applicability of the regulations to affected units subject to Acid Rain emission limitations or reductions requirements. Applicable Requirement
75.3	General Acid Rain Program Provisions	Yes	Specifies the applicability of other parts to this part 75. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 75 – Continuous Emission Monitoring**

Part	Title	Applicable Regulations	Comment
75.4	Compliance Dates	Yes	The provisions of this part apply to each affected unit on 2/10/93 and required completion of all certification tests for Phase I units by 11/15/93 and 1/1/95 for Phase II units. Applicable Requirement
75.5	Prohibitions	Yes	Prohibits operation of any affected unit in violation of any applicable regulation in this part, use of any nonapproved monitoring system or reference method, discharge of unaccounted emissions, or unpermissible disruption of monitoring equipment. Applicable Requirement
75.6	Incorporation by Reference	Yes	Incorporates by reference specified ASTM and ASME test methods and procedures. Applicable Requirement
75.7	Reserved		
75.8	Reserved		
Subpart B - Monitoring Provisions			
75.10	General Operating Requirements	Yes	Specifies general operating requirements for the measurement of opacity, SO ₂ , NO _x , CO ₂ , heat input and monitoring of operating parameters. Applicable Requirement
75.11	Specific Provisions for Monitoring SO ₂ Emissions (SO ₂ and flow monitors)	Yes	Describes specific monitoring requirements for certain situations and different fuels. Applicable Requirement
75.12	Specific Provisions for Monitoring NO _x Emission Rate (NO _x and diluent gas monitors)	Yes	Describes specific monitoring requirements for certain situations and different fuels and the calculation of NO _x emission rates. Applicable Requirement
75.13	Specific Provisions for Monitoring CO ₂ Emissions	Yes	Describes specific monitoring requirements for monitoring CO ₂ and the calculation of CO ₂ emission rates. Applicable Requirement
75.14	Specific Provisions for Monitoring Opacity	Yes	Describes specific monitoring requirements for certain situations and different fuels and sources exempt from monitoring. Applicable Requirement
75.15	Specific Provisions for Monitoring SO ₂ Emissions Removal by Qualifying Phase I Technology	No	Describes specific additional monitoring requirements for certain qualifying emissions removal technology and calculations necessary to demonstrate emissions removal efficiency. Not an Applicable Requirement
75.16	Special Provisions for Monitoring Emissions from Common, Bypass, and Multiple Stacks for SO ₂ Emissions and Heat Input Determinations	Yes	Describes specific provisions for monitoring SO ₂ and heat input determinations for emissions from common, bypass, and multiple stacks for Phase I and Phase II units. Applicable Requirement
75.17	Special Provisions for Monitoring Emissions From Common, Bypass, and Multiple Stacks for NO _x Emission Rate	Yes	Describes specific provisions for monitoring NO _x emissions from common, bypass, and multiple stacks. Applicable Requirement
75.18	Specific Provisions for Monitoring Emissions From Common and Bypass Stacks for Opacity	Yes	Describes specific provisions for monitoring opacity from common and bypass stacks. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 75 – Continuous Emission Monitoring**

Part	Title	Applicable Regulations	Comment
75.19	Optional SO ₂ , NO _x , and CO ₂ emissions calculation for low mass emissions (LME) units	No	Specifies optional SO ₂ , NO _x , and CO ₂ emissions calculation for low mass emissions (LME) units. Not an Applicable Requirement.
Subpart C - Operation and Maintenance Requirements			
75.20	Initial Certification and Recertification Procedures	Yes	Specifies the process for certification or recertification of required monitoring, testing notification and application for certification requirements. Applicable Requirement
75.21	Quality Assurance and Quality Control Requirements	Yes	Requires the operation, calibration, and maintenance of continuous monitoring systems according to specified quality assurance and quality control procedures. Applicable Requirement
75.22	Reference Test Methods	Yes	Specifies reference test methods included in appendix A to part 60 to be used for certification or recertification tests and quality assurance and quality control procedures. Applicable Requirement
75.23	Alternatives to Standards Incorporated by Reference	Yes	Specifies procedures for petitioning for an alternative to any standard incorporated by reference and prescribed in this part. Applicable Requirement
75.24	Out-of-Control Periods and Adjustment for System Bias	Yes	Describes what an out-of-control period is and specifies action to be taken during such period. Applicable Requirement
Subpart D - Missing Data Substitution Procedures			
75.30	General Provisions	Yes	Describes periods when there is missing data and requires the substitution of data for those missing data periods. Applicable Requirement
75.31	Initial Missing Data Procedures	Yes	Defines the initial missing data period and specifies the procedures for providing substitute data. Applicable Requirement
75.32	Determination of Monitor Data Availability for Standard Missing Data Procedures.	Yes	Requires the calculation and recording of the percent monitor data availability for SO ₂ , CO ₂ (or O ₂), NO _x , and flow monitors by a specified procedure. Applicable Requirement
75.33	Standard Missing Data Procedures for SO ₂ , NO _x and Flow Rate	Yes	Requires providing substitute data for missing data according to specified procedures for SO ₂ , NO _x , and flow monitoring data. Applicable Requirement.
75.34	Units With Add-on Emission Controls	Yes	Provides for petitioning the Administrator to use an alternate method for providing missing data for units with add-on SO ₂ or NO _x controls. Applicable Requirement
75.35	Missing Data Procedures for CO ₂ Data	Yes	Requires providing substitute data for missing CO ₂ data using specified procedures. Applicable Requirement
75.36	Missing Data Procedures for Heat Input Determinations	Yes	Requires providing substitute data for missing heat input data using specified procedures. Applicable Requirement
75.37	Missing data procedures for moisture	No	Requires providing substitute data for missing moisture data using specified procedures. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 75 – Continuous Emission Monitoring**

Part	Title	Applicable Regulations	Comment
Subpart E - Alternative Monitoring Systems			
75.40	General Demonstration Requirements	Yes	Provides for applying to the Administrator for approval of an alternative monitoring system (or system component) for collecting hourly SO ₂ , NO _x , or flow data. Applicable Requirement
75.41	Precision Criteria	Yes	Specifies methods and procedures for demonstrating the precision of the alternative method is equal to or better than the continuous monitoring system. Applicable Requirement
75.42	Reliability Criteria	Yes	Requires demonstrating the reliability of the alternative system to be equal to or better than the continuous monitoring system and meets the applicable requirements of App. B. Applicable Requirement
75.43	Accessibility Criteria	Yes	Requires demonstrating the accessibility of the alternative system to be equal to or better than the continuous monitoring system and meets the applicable requirements of subparts F and G. Applicable Requirement
75.44	Timeliness Criteria	Yes	Requires demonstrating the timeliness of the alternative system to be equal to or better than the continuous monitoring system and meets the applicable requirements of subparts F and G. Applicable Requirement
75.45	Daily Quality Assurance Criteria	Yes	Requires demonstrating that daily tests equivalent to those specified in App. B can be performed or that such tests are unnecessary. Applicable Requirement
75.46	Missing Data Substitution Criteria	Yes	Requires demonstrating that all missing data can be accounted for in a manner consistent with procedures specified in subpart D. Applicable Requirement
75.47	Criteria for a Class of Affected Units	Yes	Provides for applying to the Administrator for a class-approved alternative monitoring system and specifies information that must be provided. Applicable Requirement
75.48	Petition for an Alternative Monitoring System	Yes	Specifies information that must be submitted in the petition for approval of an alternative monitoring system. Applicable Requirement
Subpart F - Recordkeeping Requirements			
75.50	Reserved		
75.51	Reserved		
75.52	Reserved		
75.53	Monitoring Plan	Yes	Requires the preparation and maintenance of a monitoring plan and specifies the content of the plan. Specifies which requirements must be met before April 1, 2000 and which requirements must be met after April 1, 2000. Applicable Requirement
75.54	Reserved		
75.55	Reserved		
75.56	Reserved		
75.57	General Recordkeeping Provisions	Yes	Requires maintaining a file of all measurements, data, reports, and other information required by this part for at least three years and specifies the information to be maintained. Requirements apply on and after April 1, 2000. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 75 – Continuous Emission Monitoring**

Part	Title	Applicable Regulations	Comment
75.58	General Recordkeeping Provisions for Specific Situations	Yes	Specifies recordkeeping requirements for specific situations that are in addition to those already required. Requirements apply on and after April 1, 2000. Not an Applicable Requirement
75.59	Certification, Quality Assurance and Quality Control Record Provisions	Yes	Requires specific information to be collected for calibration error tests, interference tests, linearity checks, leak checks, relative accuracy tests, cycle time tests, and results of all trial runs and certification tests and quality assurance activities and measurements. Requirements apply on and after April 1, 2000. Applicable Requirement
Subpart G - Reporting Requirements			
75.60	General Provisions	Yes	Requires the submittal of various reports, applications, certifications, etc. and specifies to whom they are to be submitted. Applicable Requirement
75.61	Notifications	Yes	Requires the submittal of notification of initial certification and recertification tests to the Administrator, EPA Regional Office, and State regulatory agency within specified time limits. Applicable Requirement
75.62	Monitoring Plan	Yes	Requires submittal of the monitoring plan to the Administrator no later than 45 days prior to the certification test. Applicable Requirement
75.63	Initial Certification or Recertification Application	Yes	Requires the submission of an application for certification or recertification to the Administrator within 45 days after completing the test and specifies the content and format of the application. Applicable Requirement
75.64	Quarterly Reports	Yes	Requires the submission on a quarterly basis to the Administrator of certain reports in an electronic format. Applicable Requirement
75.65	Opacity Reports	Yes	Requires the submission of reports on excess emissions of opacity to the applicable state or local regulatory agency in a format specified by them. Applicable Requirement
75.66	Petitions to the Administrator	Yes	Provides for submitting petitions to the Administrator for alternative flow monitoring method, alternative to standards incorporated by reference, alternative monitoring system, parametric monitoring procedure, and missing data for units with add-on controls. Applicable Requirement
75.67	Retired Units Petitions	Yes	Provides for petitioning the Administrator for an exemption from the requirements for continuous emission monitoring for units that will be permanently retired prior to 1/1/95. Not an Applicable Requirement
Subpart H – NO_x Mass Emissions Provisions			
75.70	NO _x Mass Emissions Provisions	Yes	Provides the general provisions of the requirements, including what units are subject to the requirement, compliance dates, prohibitions, initial certification and recertification procedures, quality assurance and quality control requirements, missing data procedures, reporting data prior to initial certification, requirements for petitions for alternate requirements Applicable Requirement
75.71	Specific Provisions for Monitoring NO _x Emission Rate and Heat Input for the Purpose of Calculating NO _x Mass Emissions	Yes	Provides specific requirements for monitoring NO _x emission rates and heat inputs for coal-fired units, making moisture correction, gas-fired nonpeaking units or oil-fired nonpeaking units, gas-fired or oil-fired peaking units, and other units. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 75 – Continuous Emission Monitoring**

Part	Title	Applicable Regulations	Comment
75.72	Determination of NO _x Mass Emissions	Yes	Specifies how NO _x mass emission rates are to be determined for a unit utilizing common stack with other affected unit(s), a unit utilizing common stack with nonaffected unit(s), unit with a bypass stack, unit with multiple stacks, units using a NO _x concentration monitoring system and a flow monitoring system to determine NO _x mass emissions, units using the low mass emitter excepted methodology, and procedures for apportioning heat input to the unit level. Applicable Requirement
75.73	Recordkeeping and Reporting	Yes	Provides general recordkeeping and reporting requirements. Applicable Requirement
75.74	Annual and Ozone Season Monitoring and Reporting Requirements	Yes	Describes what monitoring and reporting requirements a source must meet if the source is subject to both an Acid Rain emissions limitation and a State or federal NO _x mass reduction program during the entire calendar year or if only subject to the requirements during the ozone season. Applicable Requirement
75.75	Additional Ozone Season Calculation Procedures for Special Circumstances	Yes	Describes additional calculations for units that are required to calculate ozone season heat input for determining allocations. Applicable Requirement
Appendices to Part 75			
App. A	Specifications and Test Procedures	Yes	Provides specification and test procedures for installation and measurement location, equipment specifications, performance specifications, data acquisition and handling systems, calibration gas, certification tests and procedures, and calculations. Applicable Requirement
App. B	Quality Assurance and Quality Control Procedures	Yes	Requires the development and implementation of a quality control program and specifies the minimum requirements, and specifies the frequency of certain required testing and the recording of information. Applicable Requirement
App. C	Missing Data Estimation Procedures	Yes	Specifies parametric monitoring procedures for missing SO ₂ concentration or NO _x emission rate data, and load-based procedures for missing flow rate and NO _x emission rate data. Applicable Requirement
App. D	Optional SO ₂ Emissions Data Protocol for Gas-Fired and Oil-Fired Units	No	Specifies optional procedures for determining hourly SO ₂ emissions from gas-fired and oil-fired units. Not an Applicable Requirement
App. E	Optional NO _x Emissions Estimation Protocol for Gas-Fired Peaking Units and Oil-Fired Peaking Units	No	Describes provisions and procedures for determining the average NO _x emission rate and hourly NO _x emission rate for gas-fired and oil-fired peaking units. Not an Applicable Requirement
App. F	Conversion Procedures	Yes	Specifies procedures for converting measured data from a monitor into the appropriate units of the standard. Applicable Requirement
App. G	Determination of CO ₂ Emissions	Yes	Provides procedures for estimating CO ₂ mass emissions from combustion and sorbent used in wet flue gas desulfurization control system, fluidized bed boiler or other emission controls. Applicable Requirement
App. H	Revised Traceability Protocol No. 1	Reserved	
App. I	Optional F-Factor/Fuel Flow Method	Reserved	
App. J	Compliance Dates for Revised Recordkeeping Requirements and Missing Data Procedures	Reserved	

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 76 – Acid Rain Nitrogen Oxides Emission Reduction Program**

Part	Title	Applicable Regulations	Comment
76.1	Applicability	Yes	Applies to all coal-fired utility units subject to an Acid Rain emissions limitation or reduction requirement for SO ₂ under Phase I or Phase II and requires the NO _x emission limit apply on the date the unit must meet the SO ₂ reduction requirement. Applicable Requirement
76.2	Definitions	No	Provides definitions for all terms used in this part. Not an Applicable Requirement
76.3	General Acid Rain Program Provisions	Yes	Specifies requirements contained in part 72 that apply to this part. Applicable Requirement
76.4	Incorporation By Reference	Yes	Specifies certain test methods and procedures that are required to be used in this part which are incorporated by reference. Applicable Requirement
76.5	NO _x Emission Limitation for Group 1 Boilers	Yes	Specifies the NO _x emission limits for tangentially-fired and dry bottom wall-fired Group 1 boilers and the dates on which compliance with those limits must be achieved. Not an Applicable Requirement
76.6	NO _x Emission Limitations for Group 2 Boilers	No	Specifies the NO _x emission limits Group 2 coal-fired boilers with cell burner, cyclone, wet bottom, or vertically fired boilers. Not an Applicable Requirement
76.7	Revised NO _x Emission Limitations for Group I, Phase II Boilers	Yes	Specifies the NO _x emission limits for Group I, Phase II coal-fired boilers with tangentially fired or dry bottom wall-fired boilers. Applicable Requirement
76.8	Early Election for Group 1, Phase II Boilers	Yes	Describes provisions for early election for a Group 1 Phase II boiler to meet the applicable NO _x emission limitation not later than 1/1/97. Requires the submission of an early election plan and specifies the content of the plan. Applicable Requirement
76.9	Permit Application and Compliance Plans	Yes	Requires the submittal of a complete Acid Rain permit application that includes a complete compliance plan for NO _x emissions covering the unit. Specifies the dates for submittal and the contents of a NO _x compliance plan. Applicable Requirement
76.10	Alternative Emission Limitations	Yes	Provides for petitioning for an alternative less stringent emission limitation if unable to meet the required limit by using specified technology. Specifies required demonstration of inability to meet the required emission limit, the content of a petition for an alternate standard, and actions to be taken to renew or change the alternate standard. Applicable Requirement
76.11	Emissions Averaging	Yes	Provides for averaging NO _x emissions for all units under control of the same owner or operator and having the same designated representative under an averaging plan. Requires the submittal of an averaging plan and specifies the content of such plan. Applicable Requirement
76.12	Phase I NO _x Compliance Extensions	No	Provides for applying for a 15-month extension of the deadline for meeting the emission limitation for certain situations and specifies the content of Phase I NO _x compliance extension plans. Not an Applicable Requirement
76.13	Compliance and Excess Emissions	Yes	Specifies the method for calculating excess emissions of NO _x . Applicable Requirement
76.14	Monitoring, Recordkeeping, and Reporting	Yes	Describes the content of a petition for an alternative emission limitation demonstration period and petition for alternative emission limitation and requires reporting of costs of low NO _x burner technology applied to Group I, Phase I boilers. Applicable Requirement
76.15	Test Methods and Procedures	Yes	Specifies tests required to be used for the basis for a petition for a final alternative emission limitation. Applicable Requirement
App. A	Phase I Affected Coal-Fired Utility Units With Group 1 or Cell Burner Boilers	No	Tables listing all Phase I affected coal-fired utility units with Group 1 or cell burner boilers. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
Code of Federal Regulations (CFR) Title 40
40 CFR 76 – Acid Rain Nitrogen Oxides Emission Reduction Program**

Part	Title	Applicable Regulations	Comment
App. B	Procedures and Methods for Estimating Costs of Nitrogen Oxides Controls Applied to Group 1, Phase I Boilers	No	Specifies the procedures, methods, and data to be used by the Administrator in establishing the degree of reduction achievable and estimating the average capital cost and average cost-effectiveness of installed low NO _x burner technology applied to Group 1, Phase I boilers. Specifies information required to be submitted by each designated representative of a Phase I affected unit. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
Code of Federal Regulations (CFR) Title 40
40 CFR 77 – Excess Emissions**

Part	Title	Applicable Regulations	Comment
77.1	Purpose and Scope	No	Describes the purpose and scope of this part which specifies the excess emissions offset planning and offset penalty requirements. Not an Applicable Requirement
77.2	General	Yes	Specifies the applicability of sections of part 72 to this part and the procedures for appeals. Applicable Requirement
77.3	Offset Plans for Excess Emissions of Sulfur Dioxide	Yes	Requires an excess emissions offset plan for each unit having excess emissions in a calendar year and specifies the content of the plan. Applicable Requirement
77.4	Administrator’s Action on Proposed Offset Plans	Yes	Describes the action of the Administrator in processing a proposed offset plan and requires the designated representative to submit any additional information requested by the Administrator with 30 days of request. Applicable Requirement
77.5	Deduction of Allowances to Offset Excess Emissions of Sulfur Dioxide	Yes	Specifies how deduction of allowances to offset excess emissions will be made and requires the designated representative to hold sufficient allowances in the appropriate account to cover the deductions. Applicable Requirement
77.6	Penalties for Excess Emissions of Sulfur Dioxide and Nitrogen Oxides	Yes	Requires the payment of penalties for excess emissions of SO ₂ and NO _x and specifies how the penalties are to be calculated. Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 78 – Appeal Procedure For Acid Rain Program**

Part	Title	Applicable Regulations	Comment
78.1	Purpose and Scope	Yes	Specifies the decisions of the Administrator that may be appealed, requires the filing of a petition for administrative review with the Environmental Appeals Board to appeal a decision. Applicable Requirement
78.2	General	Yes	Specifies sections of part 72 that apply to this part. Applicable Requirement
78.3	Petition for Administrative Review and Request for Evidentiary Hearing	No	Specifies who may appeal specific decisions and what must be contained in a petition for administrative review. Not an Applicable Requirement
78.4	Filings	No	Specifies what must be contained in a filing for administrative review, who may make a filing, and who must be notified of a filing. Not an Applicable Requirement
78.5	Limitation on Filing or Presenting New Evidence and Raising New Issues	No	Specifies when new evidence or new issues may be presented or raised and provides exceptions to the requirement. Not an Applicable Requirement
78.6	Action on Petition for Administrative Review	No	Describes what action the Environmental Appeals Board can take upon receipt of a petition for Administrative Review. Not an Applicable Requirement
78.7	Reserved		
78.8	Consolidation and Severance of Appeals Proceedings	No	Describes the authority of the Environmental Appeals Board to consolidate proceedings or sever issues or parties from a proceeding. Not an Applicable Requirement
78.9	Notice of the Filing of Petition for Administrative Review	No	Requires the Administrator to publish a notice in the Federal Register concerning an administrative review. Not an Applicable Requirement
78.10	Ex parte Communications During Pendency of a Hearing	Yes	Prohibits any ex parte communications between all parties involved in an appeal and describes actions to be taken if ex parte communications occur. Applicable Requirement
78.11	Intervenors	No	Provides for filing motion for leave to intervene and specifies conditions for granting the motion. Not an Applicable Requirement
78.12	Standard of Review	No	Specifies the responsibilities of the parties involved in the hearing to pursue the review. Not an Applicable Requirement
78.13	Scheduling Orders and Pre-hearing Conferences.	No	Requires the Presiding Officer to issue an order scheduling certain activities. Not an Applicable Requirement
78.14	Evidentiary Hearing Procedure	No	Describes the authority of the Presiding Officer during an evidentiary hearing, and requires all testimony be filed in written form. Not an Applicable Requirement
78.15	Motions in Evidentiary Hearings	No	Describes who may file motion in an evidentiary hearing and on what the motions can be filed. Not an Applicable Requirement
78.16	Record of Appeal Proceeding	No	Requires a record of appeal proceedings and specifies what will be in the record and the process involved with filing the record. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
Code of Federal Regulations (CFR) Title 40
40 CFR 78 – Appeal Procedure For Acid Rain Program**

Part	Title	Applicable Regulations	Comment
78.17	Proposed Findings and Conclusions and Supporting Brief	No	Specifies when a party may file proposed findings and conclusions with the Hearing Clerk after the complete transcript is available. Not an Applicable Requirement
78.18	Proposed Decision	No	Provides for decisions by the Presiding Officer becoming final Agency action unless appealed within 30 days. Not an Applicable Requirement
78.19	Interlocutory Appeal	No	Provides for filing interlocutory appeals and describes actions to be taken by the Presiding Officer and the Environmental Appeals Board. Not an Applicable Requirement
78.20	Appeal of Decision of Administrator or Proposed Decision to the Environmental Appeals Board	No	Provides for appealing a proposed decision of the Presiding Officer and the responsibilities of the involved parties following the appeal and specifies the impact of an order issued by the Environmental Appeals Board. Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
Code of Federal Regulations (CFR) Title 40
40 CFR 96 – NO_x Budget Trading Program and CAIR NO_x and SO₂ Trading Programs for State Implementation Plans
40 CFR 97 – Federal NO_x Budget Trading Program and CAIR NO_x and SO₂ Trading Programs**

Part	Title	Applicable Regulations	Comment
96.1 through 96.88 97.1 through 97.88	Subparts A through I – NO _x Budget Trading Program	No	Pursuant to 40 CFR §51.121, “Notwithstanding any provisions of paragraph (p) of this section, subparts A through I of part 96 of this chapter, and any State’s SIP to the contrary, the Administrator will not carry out any of the functions set forth for the Administrator in subparts A through I of part 96 of this chapter, or in any emissions trading program in a State’s SIP approved under paragraph (p) of this section, with regard to any ozone season that occurs after September 30, 2008.” Not an Applicable Requirement
96.101 through 96.188; 97.101 through 97.188	Subparts AA through II – CAIR NO _x Annual Trading Program	No	Pursuant to 40 CFR §52.2240(c), “Notwithstanding any provisions of paragraphs (a) and (b) of this section and subparts AA through II and AAAA through IIII of part 97 of this chapter to the contrary: (1) With regard to any control period that begins after December 31, 2011, (i) The provisions in paragraphs (a) and (b) of this section relating to NO _x annual or ozone season emissions shall not be applicable; and (ii) The Administrator will not carry out any of the functions set forth for the Administrator in subparts AA through II and AAAA through IIII of part 97 of this chapter; and (2) The Administrator will not deduct for excess emissions any CAIR NO _x allowances or CAIR NO _x Ozone Season allowances allocated for 2012 or any year thereafter...” Not an Applicable Requirement
96.201 through 96.288; 97.201 through 97.288	Subparts AAA through III – CAIR SO ₂ Annual Trading Program	No	Pursuant to 40 CFR §52.2241(b), “Notwithstanding any provisions of paragraph (a) of this section and subparts AAA through III of part 97 of this chapter and any State’s SIP to the contrary: (1) With regard to any control period that begins after December 31, 2011, (i) The provisions of paragraph (a) of this section relating to SO ₂ emissions shall not be applicable; and (ii) The Administrator will not carry out any of the functions set forth for the Administrator in subparts AAA through III of part 97 of this chapter...” Not an Applicable Requirement
96.301 through 96.388; 97.301 through 97.388	Subparts AAAA through IIII – CAIR NO _x Ozone Season Trading Program	No	Pursuant to 40 CFR §52.2240(c), “Notwithstanding any provisions of paragraphs (a) and (b) of this section and subparts AA through II and AAAA through IIII of part 97 of this chapter to the contrary: (1) With regard to any control period that begins after December 31, 2011, (i) The provisions in paragraphs (a) and (b) of this section relating to NO _x annual or ozone season emissions shall not be applicable; and (ii) The Administrator will not carry out any of the functions set forth for the Administrator in subparts AA through II and AAAA through IIII of part 97 of this chapter; and (2) The Administrator will not deduct for excess emissions any CAIR NO _x allowances or CAIR NO _x Ozone Season allowances allocated for 2012 or any year thereafter...” Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 97 – TR NO_x and SO₂ Trading Programs**

Part	Title	Applicable Regulations	Comment
97.401 through 97.435	Subpart AAAAA – TR NO _x Annual Trading Program (all provisions)	Yes	Applicable Requirement
97.501 through 97.535	Subpart BBBBB – TR NO _x Annual Trading Program (all provisions)	Yes	Applicable Requirement
97.601 through 97.635	Subpart CCCCC – TR SO ₂ Group 1 Trading Program (all provisions)	Yes	Applicable Requirement
97.701 through 97.735	Subpart DDDDD – TR SO ₂ Group 2 Trading Program (all provisions)	No	Not an Applicable Requirement

**U.S. Environmental Protection Agency (EPA)
 Code of Federal Regulations (CFR) Title 40
 40 CFR 98 – Mandatory Greenhouse Gas Reporting**

Part	Title	Applicable Regulations	Comment
98.1 through 98.9	Subpart A – General Provisions	Yes	Applicable Requirement
Reserved	Subpart B – Reserved		
98.30 through 98.38	Subpart C – General Stationary Fuel Combustion Sources	No	Not an Applicable Requirement
98.40 through 98.48	Subpart D – Electricity Generation	Yes	Applicable Requirement
98.50 through 98.298	Subparts E through CC	No	GHG reporting requirements for various source categories. Not an Applicable Requirement
98.300 through 98.308	Subpart DD—Electrical Transmission and Distribution Equipment Use	Yes	Applicable Requirement
98.300 through 98.449	Subparts EE through RR	No	GHG reporting requirements for various source categories. Not an Applicable Requirement
98.450 through 98.458	Subpart SS—Electrical Equipment Manufacture or Refurbishment	Yes	Applicable Requirement
98.460 through 98.478	Subparts TT through UU	No	GHG reporting requirements for various source categories. Not an Applicable Requirement

ATTACHMENT 8

ACID RAIN PERMIT

**TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531**



PHASE II ACID RAIN PERMIT

This permit fulfills the requirements of the federal regulations promulgated at 40 CFR Parts 72, 73, 75, 77, and 78. This permit is issued in accordance with the applicable provisions of rule 1200-03-30 of the Tennessee Air Pollution Control Regulations. The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued: April 3, 2012 **Permit Number:** 863256
Effective Dates: April 3, 2012, through April 2, 2017

Issued By:
Tennessee Air Pollution Control Board
Tennessee Department of Environment and Conservation

Issued To:
Tennessee Valley Authority
Kingston Fossil Plant

Installation Address:
714 Swan Pond Road
Harriman

Emission Source Reference Number: 73-0013 **ORIS/Facility Code:** 3407

Acid Rain Permit Contents:

1. Statement of Basis.
2. SO₂ allowances allocated under this permit and NO_x requirements for each affected unit.
3. Standard Requirements (40 CFR 72.9 and TAPCR 1200-03-30-.01(6))
4. Comments, notes, and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.
4. The permit application and NO_x compliance plan submitted for this source, as corrected by the Tennessee Department of Environment and Conservation. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.
5. Summary of previous actions and present action.

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Tennessee Code Annotated 68-201-105 and 4-5-202 and Titles IV and V of the Clean Air Act, the Tennessee Air Pollution Control Board and Tennessee Department of Environment and Conservation issue this permit pursuant to Chapter 1200-03-30 and Paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations and 40 CFR Part 76 of the Federal Regulations.

2. SO₂ Allowance Allocations and NO_x Requirements for each affected unit

		2012	2013	2014	2015	2016
Unit 1	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	4,158	4,158	4,158	4,158	4,158
	NO _x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.57 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 10,878,551 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
Unit 2	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	3,966	3,966	3,966	3,966	3,966
	NO _x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.57 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 10,947,792 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
Unit 3	SO ₂ allowances,	4,760	4,760	4,760	4,760	4,760

	under Tables 2, 3, or 4 of 40 CFR part 73.					
	NO_x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.57 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 10,803,474 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
	SO₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	5,050	5,050	5,050	5,050	5,050
Unit 4	NO_x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.57 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 10,862,760 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
Unit 5	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	6,206	6,206	6,206	6,206	6,206
	NO _x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.39 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 9,413,019 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
Unit 6	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	6,358	6,358	6,358	6,358	6,358
	NO _x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.39 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 5,165,382 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
Unit 7	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	6,200	6,200	6,200	6,200	6,200
	NO _x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.39 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 6,110,364 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
Unit 8	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	5,794	5,794	5,794	5,794	5,794
	NO _x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.39 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 4,203,972 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2012	2013	2014	2015	2016
	SO₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	6,417	6,417	6,417	6,417	6,417
Unit 9	NO_x limit	<p>Pursuant to 40 CFR Part 76, the Tennessee Department of Environment and Conservation approves five (5) NO_x emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2010, 2011, 2012, 2013, and 2014. Under each plan, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.50 lb/MMBtu. In addition, this unit shall not have an annual heat input greater than 13,971,884 MMBtu.</p> <p>Under each plan, the actual Btu-weighted annual average NO_x emissions rate for the units in each plan shall be less than or equal to the Btu-weighted annual average NO_x emissions rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7, except that for any early election units, the applicable emissions limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under each respective plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plans shall be final only when the Alabama Department of Environmental Management, Kentucky Department for Environmental Protection, and Memphis-Shelby County Health Department have also approved the averaging plans.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

3. Standard Requirements (40 CFR 72.9 and TAPCR 1200-03-30-.01(6)): Included with permit application.

4. Comments, Notes, and Justifications: Affected units are nine (9) coal fired boilers.

5. Permit Application and NO_x Compliance Plan: Attached.

6. Summary of Previous Actions and Present Action:

Previous Actions:

1. Draft permit, including SO₂ compliance plan, issued for public comment: **August 5, 1997**
2. SO₂ portion of permit finalized and issued: **November 10, 1997**
3. Permit revised to include a draft nitrogen oxides Emissions Early Election Compliance Plan for Units 1, 2, 3, and 4, issued for public comment on the NO_x portion only: **October 8, 1998**
4. NO_x portion of permit finalized and issued. **April 1, 1999**

Present Action:

5. Draft renewal permit issued for public comment: **January 15, 2012**

Attachment:
Acid Rain Permit Application and
NO_x Compliance Plan

Kingston

Facility (Source) Name (from STEP 1)

Permit Requirements

STEP 3

Read the standard requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
 - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
 - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
 - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - (ii) Have an Acid Rain Permit.

Monitoring Requirements

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

- (1) The owners and operators of each source and each affected unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Kingston

Facility (Source) Name (from STEP 1)

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.

(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:

(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and

(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

Kingston
Facility (Source) Name (from STEP 1)

Recordkeeping and Reporting Requirements, Cont'd.

STEP 3, Cont'd.

- (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating

Kingston

Facility (Source) Name (from STEP 1)

Effect on Other Authorities, Cont'd.

STEP 3, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

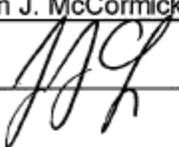
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

STEP 4

Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	John J. McCormick	
Signature		Date 12-15-09

2009 DEC 17 PM 1:12



Phase II NO_x Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9.

This submission is: New Revised **2009 DEC 17 PM 1:13**

STEP 1

Indicate plant name, State, and ORIS code from NADB, if applicable

Kingston	TN	3407
Plant Name	State	ORIS Code

STEP 2

Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.

ID# 1	ID# 2	ID# 3	ID# 4	ID# 5	ID#
Type T	Type				

(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)	<input type="checkbox"/>	<input type="checkbox"/>				
(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(e) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II tangentially fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)	<input type="checkbox"/>	<input type="checkbox"/>				
(j) NO _x Averaging Plan (include NO _x Averaging form)	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)	<input type="checkbox"/>	<input type="checkbox"/>				
(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO _x Averaging (check the NO _x Averaging Plan box and include NO _x Averaging form)	<input checked="" type="checkbox"/>	<input type="checkbox"/>				



Phase II NO_x Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9

This submission is: New Revised

STEP 1

Indicate plant name, State, and ORIS code from NADB, if applicable

Kingston	TN	3407
Plant Name	State	ORIS Code

STEP 2

Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.

ID# 6	ID# 7	ID# 8	ID# 9	ID#	ID#
Type T	Type T	Type T	Type T	Type	Type

(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II tangentially fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(j) NO _x Averaging Plan (include NO _x Averaging form)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO _x Averaging (check the NO _x Averaging Plan box and include NO _x Averaging form)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plant Name (from Step 1) **Kingston**

STEP 2, cont'd.

ID# 1	ID# 2	ID# 3	ID# 4	ID# 5	ID# 6
Type T					

(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)

(n) AEL (include Phase II AEL Demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)

(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing

(p) Repowering extension plan approved or under review

STEP 3

Read the standard requirements and certification, enter the name of the designated representative, sign & date.

Standard Requirements

General. This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Permit.

Special Provisions for Early Election Units

Nitrogen Oxides. A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO_x as provided under 40 CFR 76.8(a)(2) except as provided under 40 CFR 76.8(e)(3)(iii).

Liability. The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.

Termination. An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	John J. McCormick	
Signature		Date 12-15-09

Plant Name (from Step 1) **Kingston**

STEP 2, cont'd.

ID# 7	ID# 8	ID# 9	ID#	ID#	ID#
Type T	Type T	Type T	Type	Type	Type

(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)

(n) AEL (include Phase II AEL Demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)

(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing

(p) Repowering extension plan approved or under review

STEP 3
Read the standard requirements and certification, enter the name of the designated representative, sign & date.

Standard Requirements

General. This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Permit.

Special Provisions for Early Election Units

Nitrogen Oxides. A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO_x as provided under 40 CFR 76.8(a)(2) except as provided under 40 CFR 76.8(e)(3)(iii).

Liability. The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.

Termination. An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	John J. McCormick	
Signature		Date 12-15-09



Phase II NO_x Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

2009 DEC 17 PM 1:14

Page 1

This submission is: New Revised

Page 1 of 4

STEP 1

Identify the units participating in this averaging plan by plant name, State, and boiler ID# from NADB. In column (a), fill in each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7. In column (b), assign an alternative contemporaneous annual emissions limitation (ACEL) in lb/mmBtu to each unit. In column (c), assign an annual heat input limitation in mmBtu to each unit. Continue to page 3 if necessary.

Plant Name	State	ID#	(a) Emission Limitation	(b) ACEL	(c) Annual Heat Input Limit
Allen	TN	1	0.86	0.76	17,348,181
Allen	TN	2	0.86	0.76	15,500,918
Allen	TN	3	0.86	0.76	16,941,173
Bull Run	TN	1	0.40	0.63	59,269,756
Colbert	AL	1	0.50	0.48	9,479,205
Colbert	AL	2	0.50	0.48	10,155,383
Colbert	AL	3	0.50	0.48	11,500,927
Colbert	AL	4	0.50	0.48	11,587,558
Colbert	AL	5	0.50	0.45	28,464,183

STEP 2

Use the formula to enter the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan and the Btu-weighted annual average emission rate for the same units if they are operated in compliance with 40 CFR 76.5, 76.6, or 76.7. The former must be less than or equal to the latter.

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan

Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7

0.5708

≤

0.5713

$$\frac{\sum_{i=1}^n (R_{Li} \times HI_i)}{\sum_{i=1}^n HI_i}$$

≤

$$\frac{\sum_{i=1}^n [R_{ii} \times HI_i]}{\sum_{i=1}^n HI_i}$$

Where,

- R_{Li} = Alternative contemporaneous annual emission limitation for unit i, in lb/mmBtu, as specified in column (b) of Step 1;
- R_{ii} = Applicable emission limitation for unit i, in lb/mmBtu, as specified in column (a) of Step 1;
- HI_i = Annual heat input for unit i, in mmBtu, as specified in column (c) of Step 1;
- n = Number of units in the averaging plan

STEP 1

Continue the identification of units from Step 1, page 1, here.

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Cumberland	TN	1	0.68	0.56	77,769,426
Cumberland	TN	2	0.68	0.56	77,173,361
Gallatin	TN	1	0.45	0.29	15,485,326
Gallatin	TN	2	0.45	0.29	15,608,313
Gallatin	TN	3	0.45	0.34	18,717,826
Gallatin	TN	4	0.45	0.34	18,455,217
John Sevier	TN	1	0.40	0.42	12,648,030
John Sevier	TN	2	0.40	0.42	12,651,121
John Sevier	TN	3	0.40	0.42	12,773,319
John Sevier	TN	4	0.40	0.42	12,490,535
Johnsonville	TN	1	0.45	0.52	7,904,732
Johnsonville	TN	10	0.50	0.51	6,242,572
Johnsonville	TN	2	0.45	0.51	8,672,996
Johnsonville	TN	3	0.45	0.51	8,912,834
Johnsonville	TN	4	0.45	0.51	8,991,300
Johnsonville	TN	5	0.45	0.51	7,881,125
Johnsonville	TN	6	0.45	0.51	6,942,716
Johnsonville	TN	7	0.50	0.51	5,356,695
Johnsonville	TN	8	0.50	0.51	6,651,211
Johnsonville	TN	9	0.50	0.51	6,877,482
Kingston	TN	1	0.40	0.57	10,878,551
Kingston	TN	2	0.40	0.57	10,947,792
Kingston	TN	3	0.40	0.57	10,803,474
Kingston	TN	4	0.40	0.57	10,862,760
Kingston	TN	5	0.40	0.39	9,413,019
Kingston	TN	6	0.40	0.39	5,165,382

STEP 1

Continue the identification of units from Step 1, page 1, here.

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Kingston	TN	7	0.40	0.39	6,110,364
Kingston	TN	8	0.40	0.39	4,203,972
Kingston	TN	9	0.40	0.50	13,971,884
Paradise	KY	1	0.86	0.90	48,926,900
Paradise	KY	2	0.86	0.90	45,893,042
Paradise	KY	3	0.86	0.90	66,121,361
Shawnee	KY	1	0.46	0.43	8,810,737
Shawnee	KY	2	0.46	0.43	7,664,953
Shawnee	KY	3	0.46	0.43	8,630,718
Shawnee	KY	4	0.46	0.43	8,578,830
Shawnee	KY	5	0.46	0.43	8,709,308
Shawnee	KY	6	0.46	0.43	9,212,743
Shawnee	KY	7	0.46	0.43	9,187,847
Shawnee	KY	8	0.46	0.43	9,041,547
Shawnee	KY	9	0.46	0.43	8,430,581
Widows Creek	AL	1	0.46	0.50	3,589,059
Widows Creek	AL	2	0.46	0.50	3,099,420
Widows Creek	AL	3	0.46	0.50	4,509,249
Widows Creek	AL	4	0.46	0.50	5,310,876
Widows Creek	AL	5	0.46	0.50	3,871,690
Widows Creek	AL	6	0.46	0.50	5,202,135
Widows Creek	AL	7	0.40	0.44	36,247,301
Widows Creek	AL	8	0.40	0.44	34,307,989

STEP 3

Mark one of the two options and enter dates.

- This plan is effective for calendar year _____ through calendar year _____ unless notification to terminate the plan is given.
- Treat this plan as **5** identical plans, each effective for one calendar year for the following calendar years: **2010, 2011, 2012, 2013, and 2014** unless notification to terminate one or more of these plans is given.

STEP 4

Read the special provisions and certification, enter the name of the designated representative, and sign and date.

Special Provisions

Emission Limitations

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the following requirements are met:

- (i) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/mmBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and
- (a) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan,
- (b) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan, or
- (ii) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7.
- (iii) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i).

Liability

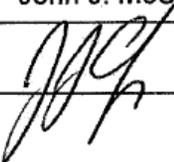
The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act.

Termination

The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for which the plan is to be terminated.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	John J. McCormick	
Signature		Date 12-15-09

TITLE V PERMIT STATEMENT

Company	Tennessee Valley Authority
Facility Name:	Tennessee Valley Authority – Kingston Fossil Plant
City:	Harriman
County:	Roane

Date Application Received:	March 19, 2006 (revised application received December 14, 2011)
Date Application Deemed Complete:	March 19, 2006

Emission Source Reference No.:	73-0013
Permit No.:	560775

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-3-9-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to TVA Kingston Fossil Plant and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the Title V Operating Permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD - Prevention of Significant Deterioration
NESHAP - National Emission Standards for Hazardous Air Pollutants
NSPS - New Source Performance Standards
MACT - Maximum Achievable Control Technology
NSR - New Source Review

I. Identification Information

A. Source Description

Emission Source Number	Description
73-0013-01-09	Coal-fired boilers.
73-0013-11	Coal handling facility
73-0013-17	Limestone handling process
73-0013-18	Dry Fly Ash Handling
73-0013-19	Gypsum Dewatering and Handling

B. Facility Classification

1. Attainment or Non-Attainment Area Location: The facility is located in a nonattainment area (Roane County) for the annual and 24-hour PM_{2.5} standards. The facility is located in an attainment area for the 8-hour ozone standard.
2. This facility is located in a Class II area.

C. Regulatory Status

1. PSD/NSR: This facility is a major source for PSD.
2. Title V Major Source Status by Pollutant

Pollutant	Is the pollutant emitted?	If emitted, what is the facility's status? (Major Source or Non-Major Source)
PM	Yes	Major Source
PM ₁₀	Yes	Major Source
SO ₂	Yes	Major Source
VOC	Yes	Major Source
NO _x	Yes	Major Source
CO	Yes	Major Source
Individual HAP	Yes	Major Source
Total HAPs	Yes	Major Source

3. MACT Standards for Sources contained in this Title V Application: 40 CFR 63 Subpart UUUUU
4. Program Applicability: Are the following programs applicable to the facility?
 - PSD: Yes
 - NESHAP: Yes
 - NSPS: Yes (40 CFR 60 Subpart Y)

D. Permitting Activities since Original Permit Issuance: See Attachment A.

E. Permit Renewal Changes: See Attachment A.

II. Compliance Information

A. Compliance Status

Is this portion of the facility currently in compliance with all applicable requirements? yes
Are there any applicable requirements that will become effective during the permit term? yes

Note: EPA may finalize a utility MACT or provide guidance for States in the absence of Federal standards. If either of these actions occurs, the permit may be reopened to include additional applicable requirements.

III. Other Requirements

- A. Emissions Trading: This facility is involved in several emissions trading programs (Acid Rain program, Transport Rule SO₂ and NO_x trading programs).
- B. Acid Rain Requirements: This facility is subject to the requirements in Title IV of the Clean Air Act.
- C. Prevention of Accidental Releases: This facility is subject to the accidental release requirements of Section 112(r) of the Clean Air Act.

IV. Public Participation Procedures

Notification of this draft permit was mailed to the following environmental agencies:

1. EPA
2. North Carolina Department of Environment and Natural Resources
3. Kentucky Department for Environmental Protection
4. Knox County Health Department, Division of Air Quality Management

RESPONSE TO COMMENTS – TITLE V PERMIT

General Information

Facility Name:	Tennessee Valley Authority – Kingston Fossil Plant
Emission Source Reference No.:	73-0013
Permit No.:	560775
Date Application Received:	March 19, 2006 (revised application received December 14, 2011)
Date Application Deemed Complete:	March 19, 2006
Public Notice Date:	January 15, 2012
Public Hearing Date	None Requested

Comment Summary (Draft Permit)

Commenter	Comment	Response
TVA	Add the following language to Condition B10: “For emissions monitored by CEMs or COMs, the quarterly CEMs or COMs reports shall satisfy this requirement.” This language was used in the previous permit but was omitted from the draft renewal.	The requested language was added to the proposed permit.
TDEC-APC	The Actual Emissions Analysis provisions in Condition E1 were corrected as follows: btu/yr = actual annual heat input to the boiler for the previous calendar year <u>annual accounting period</u> . Actual Non-VOC gaseous group (HAP without a standard) shall be calculated for the previous calendar year <u>annual accounting period</u> and as reported in the National Emissions Inventory.	
There were <u>no other comments</u> received during the public comment period for this permit.		

EPA Comments (Proposed Permit)

Comment	Response
<p>Section E2-1(b)(1) states that semiannual reports shall include any recordkeeping and monitoring required by Condition E3-4(b). This condition pertains to the major source pollutant PM. However, the facility is also a major source for SO₂, VOC, and NO_x. Please clarify why recordkeeping and monitoring for these additional pollutants is not required to be included in semiannual reports.</p>	<p>Quarterly reporting is required for SO₂ emissions (see conditions E2-1(a) and E3-13). The only applicable NO_x requirements for this facility are the Acid Rain Program (Condition A19 and Attachment 8) and Transport Rule (Condition E3-14) and the reporting requirements of those rules apply. There are no other NO_x-related monitoring or recordkeeping requirements in the proposed permit for which quarterly or semiannual reporting would be required. The Title V permit does not require quarterly or semiannual reporting for VOC because the permit does not establish VOC emission limits, recordkeeping requirements, or monitoring requirements that would require quarterly or semiannual reporting.</p> <p>Additional review of the proposed permit indicated several conditions that were omitted from semiannual reporting requirements, but which should have been included in Condition E2-1(b)(1): The corrected language reads:</p> <p style="padding-left: 40px;">“A summary of any recordkeeping and monitoring required by Conditions <i>E3-4(b), E4-1, E5-1, E5-2, E6-2, E6-3, and E7-1</i> of this permit. A summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.”</p>
<p>Section E2-1(b)(2) states that semiannual reports shall include visible emission evaluation readings from Conditions E3-6, E4-3, E5-1, E6-3, E6-4, and E6-5. However, it is not clear how visible emissions readings are applicable to the pollutants of concern in Conditions E3-6, E5-1, E6-3, E6-4, and E6-5. Further, Conditions E5-3, E5-5, E6-6, E6-7, and E7-2 each include references to visible emissions in the compliance methods. Please clarify why these conditions are not also included in the Section E2-1(b)(2) semiannual report requirements.</p>	<p>Condition E3-6 was corrected to “E3-8”, and conditions E5-1, E6-3, E6-4, and E6-5 were deleted from E2-1(b)(2). Conditions E5-3, E5-5, E6-6, E6-7, and E7-2 were omitted from E2-1(b)(2) semiannual reporting requirements by mistake and have been added to the permit. The corrected language for Condition E2-1(b)(2) reads as follows:</p> <p style="padding-left: 40px;">“The visible emission evaluation readings from Conditions <i>E3-8, E4-3, E5-3, E5-5, E6-3, E6-4, E6-5, E6-6, E6-7, and E7-2</i> of this permit if required. A summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.”</p>
<p>Conditions E6-1 and E7-2 appear to be missing applicable references to EPA or TN regulations. Please include the applicable references or clarify why these references are not included.</p>	<p>Rule citations were added for both conditions.</p>

RESPONSE TO COMMENTS – SIGNIFICANT MODIFICATION #1

General Information

Facility Name:	Tennessee Valley Authority – Kingston Fossil Plant
Emission Source Reference No.:	73-0013
Permit No.:	560775
Date Application Received:	December 15, 2014 (modification application)
Date Application Deemed Complete:	December 15, 2014
Public Notice Date:	March 13, 2015
Public Hearing Date	None Requested

Comment Summary (Draft Permit)

Commenter	Comment	Response
TVA	Condition E3-4: Request to specify PM CEMS RRA satisfies annual stack test requirement. Also, add specification of Method 5B stack testing.	A description of Method 5B and statement on RRA usage as annual stack test were included in the permit.
	Condition E3-4: Avoid specifying units with completed PM control optimization studies, as the list of completed studies is changed every year.	Replaced specific reference with citation of Paragraph 99 of the Consent Decree and requirement for TVA to follow the schedule therein.
	Condition E3-4: Specify that following termination of the Consent Decree and Federal Facilities Compliance Agreement, PM CEMS reports submission to EPA and citizen plaintiffs will cease.	Language added to condition E3-4(e): “Upon termination of the Consent Decree, or the applicable provisions therein, test results shall be submitted to the Technical Secretary; submittal to EPA and the Citizen Plaintiffs will no longer be required by this permit upon termination of the Consent Decree.”
Additional comments were received during the public comment period for this modification. They are included below:		

RESPONSE TO COMMENTS – SM1 (continued)

The following comments were received during the public comment period that began March 13, 2015.

I. Comments submitted by The Southern Alliance for Clean Energy, Southern Environmental Law Center, Environmental Integrity Project, Earthjustice and Sierra Club

Comment #1: The Draft Permit Fails to Include Appropriate Sulfur Dioxide Emissions Limits and Mercury Emissions Limits for Coal Boilers Required by MATS.

As noted above, Title V permits must include all applicable requirements to which the permitted major source is subject. As explained in more detail below, the Kingston Fossil Plant is subject to the federal Mercury and Air Toxics Standards (“MATS”) and therefore the permit must incorporate its applicable requirements, including appropriate sulfur dioxide and mercury emissions limits.

The MATS rule regulates emissions of toxic air pollutants, including mercury, from coal and oil-fired electric generating units. Mercury is a neurotoxin that poses significant hazards to public health. Exposure to mercury is associated with adverse health effects such as impaired neurological development in fetuses, infants and children. According to the EPA, coal and oil-fired electric generating units are “by far the largest anthropogenic source of [mercury] in the U.S.” and emitted 50% of the total domestic anthropogenic mercury emissions for the U.S. in 2005. Much of the mercury emitted into the atmosphere by EGUs is later deposited into waters around the United States. In a 2000 study, EPA found that “up to 28 percent of watersheds were estimated to have [mercury] deposition attributable to U.S. EGUs that contributes to potential exposures above the reference dose for methylmercury”

The MATS rule requires coal- and oil-fired electric generating units to meet national emission standards for hazardous air pollutants (“NESHAPs”). 40 C.F.R. § 63.9980. An electric generating unit (“EGU”) is “a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale.” 40 C.F.R. § 63.10042; see also 42 U.S.C. §7412(a)(8). The U.S. Environmental Protection Agency (“EPA”) expects that compliance with the MATS rule will prevent 370 premature deaths in Tennessee while creating up to \$3 billion in health benefits in 2016 alone.

The MATS rule became effective on April 16, 2012. The standards, including those portions of MATS with future compliance deadlines, are currently applicable to all covered sources. See 40 C.F.R. 70.2 (applicable requirements include those with future compliance deadlines). For example, MATS are applicable to existing sources, even though the compliance deadline for these sources is April 16, 2015. See 40 C.F.R. §§ 63.9981, 63.9982, 63.10042, 63.9984. As an existing coal-fired EGU, Kingston is currently subject to the MATS requirements, and must comply with these requirements by no later than the April 16, 2015 deadline.

For Kingston, the Mercury Air Toxics Standard (“MATS”) requires a hydrogen chloride (“HCl”) limit of 0.002 lb/MMBtu or, if the flue gas desulfurization scrubber is used continuously, an alternative sulfur dioxide limit of 0.2 lb/MMBtu. However, the Draft Permit does not include any limits for hydrogen chloride, and the sulfur dioxide limit of 2.8 lb/MMBtu is 14 times the allowed limit, and violates MATS requirements. Accordingly, the Draft Permit must be revised to include the required limits for either HCl or sulfur dioxide in accordance with MATS requirements.

The Draft Permit also lacks any emission limits for mercury for the 9 coal-fired boilers at Kingston, as required by MATS. The final permit must contain appropriate limits for mercury emissions from all 9 coal-fired boilers – 1.2 lb/TBtu - or else it will be rendered insufficient and improper.

The omission of the applicable MATS requirements is contrary to the purpose and requirements of the Title V program. A Title V permit is supposed to consolidate and clarify the requirements for a particular source. This enables “the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements.” The Title V permit should contain sufficient information to allow a reader to compare the permit and the compliance reports for a facility and determine if there are any violations. This in turn fosters “[i]ncreased source accountability and better enforcement.”

The Title V permit accomplishes this goal by compiling all of a source's obligations, which would otherwise remain "scattered among numerous provisions of the SIP or Federal regulations." In addition, "regulations are often written to cover broad source categories, therefore, it may be unclear which, and how, general regulations apply to a source." A Title V permit must therefore include more than citations to applicable regulations; it must provide the substance of each requirement and serve as an "easy way to establish whether a source is in compliance with regulations under the Act." In addition, the content of the regulations must be included in draft permits in order to provide the public with sufficient notice of a facility's Clean Air Act obligations.

The Draft Permit must be revised to specify and incorporate the specific MATS emissions limits, as well as the requirements for monitoring, recordkeeping and reporting that apply to Kingston.

Response to Comment #1: The Division agrees that MATS is an applicable requirement under the Federal Act, but we reject the addition of specific MATS requirements in this modification as untimely. Our reasoning is outlined below.

Affected sources may use a number of options to comply with MATS requirements, and the permittee has not specified (and is not currently required to specify) which of these options will be used. For example, an affected source may elect to comply with a single emission limit for filterable PM or total non-mercury HAP metals, or the source may comply with emission limits for individual HAPs (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, and selenium). Similarly, a source may elect to comply with an emission limit for hydrogen chloride, or the source may comply with a sulfur dioxide emission limit as a HAP surrogate.

TVA is required to submit a Notification of Compliance Status (NOCS) for Subpart UUUUU pursuant to §63.10030. The NOCS must include, inter alia, the following information:

- A description of the affected source(s) including subcategory, design capacity, description of add-on controls, description of the fuel(s) burned, and justification for the selection of fuel(s) burned during the performance test.
- Summary of all performance test results and fuel analyses and calculations conducted to demonstrate initial compliance.
- Identification of compliance demonstration methods.
- Identification of whether emissions averaging will be used to demonstrate compliance.
- A signed certification that the source has met all applicable emission limits and work practice standards.
- Report deviations from any emission limit, work practice standard, or operating limit.

The MATS compliance date is April 16, 2015, however in this case, the permittee has been granted a 12-month compliance date extension by the Technical Secretary under the provisions of §60.6(i)(9) through (i)(14). This extension shall be incorporated into the permit via a separate modification. Following the extended compliance date of April 16, 2016, the facility has 180 days to conduct the required performance tests and other activities. Pursuant to §63.9(h)(2)(ii), the facility has another 60 days after completion of the performance tests to submit the NOCS. Thus, the final deadline for submittal of the NOCS is December 2016. Tennessee believes that it is more appropriate to add a general requirement in this modification and to reopen the permit after receipt and review of the NOCS.

Prior to NOCS submittals, Tennessee will continue to incorporate MATS into EGU permits as a generally applicable requirement. However, we will consider on a case-by-case basis which specific MATS requirements need to be added to permits.

Comment #2: The Compliance Monitoring Requirements in the Draft Permit Are Impermissibly Lax

As currently written, the Draft Permit establishes compliance methods for opacity and particulate matter ("PM") that are impermissibly infrequent, with no rational relationship to the continuous compliance required by the permit. As noted above, Title V

permits must contain sufficient monitoring, recordkeeping, reporting, and inspection and entry requirements to assure compliance with permit limits.

Accordingly, it is the obligation of the permit writer to incorporate terms directing “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” For PM, the Draft Permit sets a limit of “0.03 pounds per million Btu of heat input,” a limit that must be met at all times, but establishes annual stack testing as the compliance method. For opacity, the Draft Permit contemplates requiring visible pollution to never exceed 20% opacity, aside from short periods of no longer than 6 minutes occurring no more frequently than once per hour where opacity may rise to 40%. The Draft Permit’s compliance method for opacity is a biannual Method 9 test (Method 9 is a visual interpretation of smokestack emissions). Evaluating short-term emission standards for PM and opacity with annual or biannual spot-checks is entirely incompatible with the requirement that the compliance methods be “sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit,” particularly where, as here, the permit requires continuous generation of emissions data. TDEC is obligated to correct this defect by using its Continuous Emissions Monitoring System (“CEMS”) and continuous opacity monitoring system (“COMS”), for both evaluation and compliance with the PM and opacity requirements applicable to Kingston. Additionally, the permit should allow for alternate methods of determining non-compliance based on other credible evidence.

Response to Comment #2: The compliance method specified in this modification incorporates periodic monitoring requirements to assure compliance with the particulate matter emissions limit. The significant modification incorporates the Consent Decree requirements to assure adequate operation of the particulate matter control device. Paragraph 106 of the consent decree states that data from PM CEMS shall be used to monitor progress in reducing PM emissions, but stack testing “shall be used to determine compliance with the PM Emission Rate established by this Consent Decree,”

The compliance method for opacity was established at permit issuance, and has not changed. The existing opacity monitoring is not open to public comment as part of this modification.

Comment #3: The Draft Permit Contains Improper Requirements Related to Startup, Shutdown and Maintenance (“SSM”) Requirements

The current language related to SSM requirements in the Draft Permit is insufficient to comply with SSM provisions of the MATS rule. Although the Section B9 of the permit contains SSM language, that language is outdated and should be replaced with updated MATS SSM requirements.

The Draft Permit provides “due allowance” for visible emissions (opacity) in excess of permit limits when such emissions are “necessary or unavoidable due to routine startup and shutdown conditions.” See Draft Permit at 26, Condition E3-9, and 14, Condition D1. The Draft Permit also requires TVA to take “reasonable measures” to minimize emissions during these periods. See Draft Permit at 10, Condition B9. These provisions are impermissibly lax, and must be replaced with the new startup and shutdown requirements of the MATS rule.

The MATS rule includes compliance monitoring requirements (40 CFR §§ 63.10000 and 63.10020), work practice standards for periods of startup and shutdown (40 CFR Pt. 63, Subpt. UUUUU, Tbl. 3), and requirements for recording certain data during periods of startup and shutdown (40 CFR § 63.10020(e)). All of these are applicable requirements for Kingston, and all of these must be listed as such in Section E of the Title V Permit.

Response to Comment #3: Conditions B9, D1, and E3-9 are not subject to public comment for this modification.

RESPONSE TO COMMENTS – SIGNIFICANT MODIFICATION #2

General Information

Facility Name:	Tennessee Valley Authority – Kingston Fossil Plant
Emission Source Reference No.:	73-0013
Permit No.:	560775
Date Application Received:	December 10, 2015 (modification application)
Date Application Deemed Complete:	December 10, 2015
Public Notice Date:	January 19, 2016
Public Hearing Date	None Requested

Comment Summary (Draft Permit)

Commenter	Comment	Response
EPA	Questioned the removal of E2-1(c)(3) text	Removal of this text was not intended in the manner it was presented in the public notice draft. Text from subcondition E2-1(c)(3) was combined with E2-1(c)(2), as displayed in the table, “Changes to Title V Operating Permit 560775 Since Renewal Issuance,” below, for Significant Modification #2.
No additional comments were received during the public comment period for this modification.		

Statement of Basis for 73-0013 Title V Operating Permit 560775
Attachment A: Modifications to Title V Permit since First Issuance

The purpose of this addendum is to address the changes made to this facility since issuance of Title V Operating Permit 548401. Specific changes are addressed in the following tables:

73-0013: Changes to Title V Operating Permit 548401 since First Issuance

Permit Modification	Issue Date	Condition or Section	Modification
Reopen for Cause	5/10/2004	E3-6	<p>The compliance method for visible emissions was changed from continuous opacity monitoring to Method 9 visible emissions evaluation, and the following language was removed from Condition E3-6:</p> <p><i>Consistent with the provisions of Rule 1200-3-20-.06 of the Tennessee Air Pollution Control Regulations, no notice of violation shall be automatically issued for periods of visible emissions from this fuel burning installation that are in excess of the applicable visible emission standard so long as the total amount of time that the fuel burning installation is exceeding the applicable visible emission standard (excluding periods of permitted startup, permitted shutdown, or malfunction and periods when the fuel burning installation is not operating) is not in excess of two (2) percent of the total amount of time in a calendar quarter. This exemption from automatic issuance of a notice of violation is applicable provided that good operational and maintenance practices are utilized for both the fuel burning equipment and the associated air pollution control equipment, the required ninety-five (95) percent operational availability of the opacity monitoring system is maintained, and that no more than one exceedance of greater than twenty-four (24) hours duration occurs per calendar year.</i></p> <p><i>Written responses to the quarterly reports of excess emissions shall constitute prima facie evidence of compliance with the applicable visible emission standard. For purposes of annual certification of compliance with the applicable visible emissions condition, the acceptance, by the Division, of the quarterly reports of excess emissions shall be the basis of said certification.</i></p>
		Attachment 6	Added NO _x Budget Permit.
Minor Modification #1 (MPM-1)	3/21/2007	E3-1	<p>The following language was amended:</p> <p><i>Illegal drugs confiscated by law enforcement agencies may be disposed of in these units. No more than two tons of such material may be disposed of in any 12 month period. The facility will maintain records showing the amount(s) destroyed by weight and the date(s) of destruction.</i></p>
MPM-2	3/22/2010	E3-4	<p>The following language was added in accordance with the letter from the permittee dated November 20, 2009:</p> <p><i>For Stack 1 (Units 1 – 5), no particulate testing is required for CY 2009 due to operational constraints. The permittee shall perform particulate testing within 60 days of return to electrical generation of any unit(s) served by this stack.</i></p> <p>TVA's letter states that operation of Stack 1 since the Kingston ash spill has been limited to one or two units, that no units on the stack have been operated since September 19, 2009, and that TVA has been unable to conduct a particulate source test for Stack 1. The letter states that it is uncertain when any units on Stack 1 will be operated over the next several months.</p>

73-0013: Changes Made in Title V Renewal Permit 560775

Condition	Change (Title V Renewal Permit)
Cover Page	Updated Responsible Official and technical contact.
A11	Updated permit shield language.
A19, Attachment 8	Added new Acid Rain permit.
B5	Condition B5(d) was revised to add the underlined language: (d) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether <u>compliance during the period was continuous or intermittent</u> . The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
B6, E2-1	Updated address for submittal of semiannual report and annual compliance certification.
C1	Condition C1 was revised to add the underlined language: <u>Operational flexibility changes.</u> The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements: (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-3-30. (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-3. (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition. (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-3-9-.04. (e) <u>Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.</u> (f) The change shall not qualify for a permit shield under the provisions of part 1200-3-9-.02(11)(e)6. (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.
C2	Condition C2(b) was revised to add the underlined language: (b) The written notification must <u>be signed by a facility Title V responsible official and include the following:</u> <ol style="list-style-type: none"> 1. brief description of the change within the permitted facility; 2. specifies the date on which the change will occur; 3. declares <u>and quantifies where possible</u> any change in emissions; 4. declares any permit term or condition that is no longer applicable as a result of the change; and 5. <u>declares the requested change is not a Title I modification and will not exceed allowable emissions under the permit.</u>
E1	Updated standard language. Added actual emission calculation method for 73-0013-17. Updated address for submittal of fees.
E2-1(a) E2-1(b)	Updated quarterly and semiannual reporting requirements.
E2-1(c)	Condition E2-1(c)(4) was revised to add the underlined language:

73-0013: Changes Made in Title V Renewal Permit 560775

Condition	Change (Title V Renewal Permit)																																						
	(4) The status of compliance with the terms and conditions of the permit for the period covered by the certification, <u>including whether compliance during the period was continuous or intermittent</u> . The certification shall be based on the method or means designated in E2-1(b)(2) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an *excursion or **exceedance as defined below occurred; and																																						
E2-1(d)	Added Accidental Release Plan certification requirements.																																						
E2-2	Added new condition to address general requirements for data entry.																																						
E2-3	Added new condition to address general requirements for opacity monitoring. The fugitive dust requirements from Condition E6-1 of the previous Title V permit were deleted, and the compliance method was moved to Condition E2-4. The visible emission limits in Condition E6-1 of the previous permit were deleted because they duplicate the requirements of Condition D7(b).																																						
E2-4	Added updated requirements for ambient SO ₂ monitoring to reflect changes in TAPCR 1200-03-14. This condition replaces Condition E6-2 of the previous permit, which was deleted from the renewal.																																						
E2-5	Added consent decree requirements.																																						
Section E3	Permit conditions were renumbered, added, or deleted as follows: <table border="1"> <thead> <tr> <th>Old Permit Condition</th> <th>New Permit Condition</th> </tr> </thead> <tbody> <tr><td>E3-1</td><td>E3-1</td></tr> <tr><td>E3-2</td><td>E3-2</td></tr> <tr><td>E3-3</td><td>E3-3</td></tr> <tr><td>E3-4</td><td>E3-4</td></tr> <tr><td>E3-5</td><td>E3-5</td></tr> <tr><td>E3-6</td><td>E3-8</td></tr> <tr><td>E3-7</td><td>E3-9</td></tr> <tr><td>E3-8</td><td>E3-10</td></tr> <tr><td>E3-9</td><td>E3-6</td></tr> <tr><td>E3-10</td><td>E3-7</td></tr> <tr><td>E3-11</td><td>E3-11</td></tr> <tr><td>E3-12</td><td>E3-13</td></tr> <tr><td>E3-13</td><td>Condition deleted. Requirements were combined with Condition E3-2 in new permit.</td></tr> <tr><td>E3-14</td><td>E3-12</td></tr> <tr><td>E3-15</td><td>Condition deleted. Requirements were combined with Condition E3-13 in new permit.</td></tr> <tr><td>E3-16</td><td>Condition deleted. Requirements were combined with Condition E3-13 in new permit.</td></tr> <tr><td>N/A</td><td>E3-14 (new condition)</td></tr> <tr><td>N/A</td><td>E3-15 (new condition)</td></tr> </tbody> </table>	Old Permit Condition	New Permit Condition	E3-1	E3-1	E3-2	E3-2	E3-3	E3-3	E3-4	E3-4	E3-5	E3-5	E3-6	E3-8	E3-7	E3-9	E3-8	E3-10	E3-9	E3-6	E3-10	E3-7	E3-11	E3-11	E3-12	E3-13	E3-13	Condition deleted. Requirements were combined with Condition E3-2 in new permit.	E3-14	E3-12	E3-15	Condition deleted. Requirements were combined with Condition E3-13 in new permit.	E3-16	Condition deleted. Requirements were combined with Condition E3-13 in new permit.	N/A	E3-14 (new condition)	N/A	E3-15 (new condition)
Old Permit Condition	New Permit Condition																																						
E3-1	E3-1																																						
E3-2	E3-2																																						
E3-3	E3-3																																						
E3-4	E3-4																																						
E3-5	E3-5																																						
E3-6	E3-8																																						
E3-7	E3-9																																						
E3-8	E3-10																																						
E3-9	E3-6																																						
E3-10	E3-7																																						
E3-11	E3-11																																						
E3-12	E3-13																																						
E3-13	Condition deleted. Requirements were combined with Condition E3-2 in new permit.																																						
E3-14	E3-12																																						
E3-15	Condition deleted. Requirements were combined with Condition E3-13 in new permit.																																						
E3-16	Condition deleted. Requirements were combined with Condition E3-13 in new permit.																																						
N/A	E3-14 (new condition)																																						
N/A	E3-15 (new condition)																																						
E3-1	Deleted Acid Rain Program and NO _x Budget Trading Program requirements from this condition.																																						

73-0013: Changes Made in Title V Renewal Permit 560775

Condition	Change (Title V Renewal Permit)
E3-2	Added recordkeeping requirements for used oil and nonhazardous solvents (these requirements were deleted from Condition E3-13 of the old permit).
E3-4	Updated compliance method language. Added Compliance Assurance Monitoring requirements for opacity monitoring. Updated language addressing exceedances of the de minimis criteria of TAPCR 1200-03-20. Updated test method from Method 17 to Method 5 (Method 17 is the test method that was used for the old stacks, while Method 5 is the test method used for the FGD stacks). Changed opacity monitoring location from “in-stack” to “in-duct”.
E3-6	Updated operational availability requirement for COMS from 90% per month to 95% per quarter (updated condition matches TACPR requirement). Deleted the requirement to use backup monitoring if SO ₂ CEMS is inoperative for more than 7 days.
E3-8	Removed COMS “monitoring method”.
E3-10	Amended as follows: “Each in-stack opacity monitoring system for this fuel burning installation shall be fully operational for at least ninety-five (95) percent of the operational time of the monitored units during each month of the calendar quarter.” Changed opacity monitoring location from “in-stack” to “in-duct”.
E3-13	The reporting requirements from Conditions E3-15 and E3-16 of the old permit were combined into this condition.
E3-14	Added Transport Rule (TR) requirements.
Section E4	Updated the source description to indicate that this source is subject to 40 CFR 60 Subpart Y.
E4-1	Added the requirement to retain records for five years. Added the requirement to maintain a record of operating hours.
E4-3	Deleted the statement that additional monitoring for opacity can be imposed if the magnitude and frequency of excursions is unsatisfactory (this requirement is covered by Condition E2-3 for all sources in the permit).
73-0013-13	Deleted old permit conditions (Section E5 of old permit) for wet fly ash handling.
E5-1 through E5-5	Added conditions for new source 73-0013-17 (limestone handling).
E6-1 through E6-8	Added conditions for new source 73-0013-18 (dry fly ash handling).
E7-1 through E7-3	Added conditions for new source 73-0013-19 (gypsum handling).
Attachment 2	Added Compliance Assurance Monitoring (CAM) plan for particulate emissions from boilers.
Attachment 4	Added emission factors and calculations for dry fly ash handling (73-0013-18), deleted emission factors and calculations for wet fly ash handling (73-0013-13).
Attachment 5	Added emission factors and calculations for limestone handling (73-0013-17).
Attachment 6	Added emission factors and calculations for gypsum handling (73-0013-19).
Attachment 7	Updated table of nonapplicable requirements to add TR applicability and to remove CAIR applicability. Added mandatory GHG reporting requirements.

Changes to Title V Operating Permit 560775 Since Renewal Issuance

Permit Modification	Issue Date	Condition or Section	Modification
Reopen for Cause #1	Canceled 2/19/2013	N/A	<p>On August 9, 2012, the Division sent a written notification to TVA that Title V permit 560775 would be reopened pursuant to TAPCR 1200-03-09-.02(11)(f)6(i) to add the applicable provisions of 40 CFR 63 Subpart UUUUU (National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units). This reopening was canceled on February 19, 2013.</p> <p>The Division has elected to cancel the reopening because TVA is required to submit applications in 2014 to address the requirements of the 2011 settlement agreement, and MACT requirements will be added at that time. The Division also considered the uncertainty surrounding CAIR and Transport Rule issues (CAIR and Transport Rule issues may be settled if we delay the reopening for another year).</p>
Administrative Amendment #1	3/14/2013	E2-1(b)	Removed semiannual reporting requirements (VEE) for Conditions E6-3, E6-4, and E6-5 (these conditions do not reference visible emissions evaluations or the opacity matrix).
Significant Modification #1	6/23/2015	General	Incorporation of Consent Decree requirements, Utility MACT/MATS requirements
		Cover Page, E2-7	Added E2-7, Identification of Responsible Official, Technical Contact, and Billing Contact condition
		B10	Removed condition due to repeal of underlying applicable requirement.
		E1	Updated payment address
		E2-1	Updated APC Central Office contact addresses
			Note to Condition E2-1: the quarterly reporting requirements of E2-1(a) overlap with the semiannual reporting requirements of E2-1(b). For semiannual reports to the EFO, TVA is required to submit a summary of the reporting information for Conditions E3-4(b), E3-4(e), E3-5, E3-6, E3-10 (i. e. sufficient information to show the compliance status of the source). For quarterly reports to the Compliance Validation program, TVA must submit the full report required by Condition E3-13.
		E2-6	Added Utility MACT/MATS requirements under 40 CFR 63 Subpart UUUUU
		E3-4	Changed in-duct testing frequency to annual and report filing deadline to 45 days. Specified requirement for continuous operation of PM control device. Updated CEMS language.
		E3-15	Added Continuous Operation of NOx and SO2 Control Equipment condition
		E3-16	Added Compliance with System-Wide Annual NOx and SO2 Tonnage Limits condition
		Attachment 1	Updated Opacity Matrix and corresponding references to the amended version dated September 11, 2013
		Attachment 4	Various equations and sample calculations added.
Attachment 5	Various equations and sample calculations added.		
Attachment 6	Various equations and sample calculations added.		
Significant Modification #2	2/26/2016	E2-6	Updated to include one-year MATS compliance date extension.
		B5, E2-1(c)	<p>Sub-condition E2-1(c)(3) was removed, and the following language was combined with E2-1(c)(2):</p> <p>(2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;</p> <p>Similarly, Condition B5 was changed to remove sub-condition (c) and combine the text with sub-condition (b).</p> <p>NOTE: The published proposed draft featured complete removal of the E2-1(c)(3) text, without changing E2-1(c)(2). The above change, and the edit to Condition B5, was made following the public participation period, based on internal review.</p>

Changes to Title V Operating Permit 560775 Since Renewal Issuance

Permit Modification	Issue Date	Condition or Section	Modification
Significant Modification #3	DRAFT	E8-1 through 16	Added Conditions E8-1 through 16 for Emergency Communications Diesel Generator Engine, 90hp.
		E2-1(b)(1)	Added Condition E8-14 to semiannual report recordkeeping and reporting requirements

Statement of Basis for 73-0013 Title V Operating Permit 560775

Attachment B: Periodic Monitoring Requirements

General Monitoring Requirements: TAPCR 1200-3-9-.02(11)(e)1.(iii)(I):

- I. The Technical Secretary shall prescribe monitoring and related recordkeeping and reporting requirements in accordance with the powers granted to him at chapter 1200-3-10¹.
- II. Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring shall be required sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as required pursuant to TAPCR 1200-3-9-.02(11)(e)1(iii)(III). Such monitoring requirements shall assure use of such terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirements. Recordkeeping provisions shall be sufficient to meet these requirements if it is the judgment of the Technical Secretary that recordkeeping alone is sufficient to prove compliance; and
- III. As necessary, the Technical Secretary may impose requirements concerning the use, maintenance, and where appropriate, installation of monitoring equipment or methods.

Monitoring and Related Recordkeeping and Reporting Requirements: 40 CFR §70.6(a)(3)(i)

Each permit shall contain the following requirements with respect to monitoring:

- (A) All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including 40 CFR 64 (Compliance Assurance Monitoring) and any other procedures and methods that may be promulgated pursuant to sections 114(a)(3)² or 504(b)³ of the Act. If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining;
- (B) Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as reported pursuant to §70.6(a)(3)(iii). Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements of §70.6(a)(3)(i)(B); and
- (C) As necessary, requirements concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods.

¹ TAPCR 1200-3-10 states that the Technical Secretary has authority to require source testing, monitoring, or recordkeeping to assure compliance with the provisions of the Tennessee Air Pollution Control Regulations.

² Authority of Administrator to require enhanced monitoring.

³ "The Administrator may by rule prescribe procedures and methods for determining compliance and for monitoring and analysis of pollutants regulated under this chapter, but continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance. Nothing in this subsection shall be construed to affect any continuous emissions monitoring requirement of subchapter IV-A of this chapter, or where required elsewhere in this chapter."

Annual Certification of Compliance to Satisfy Monitoring Requirements: TAPCR 1200-3-9-.02(11)(c)3.

Any emission unit or activity which is a subset of a process emission source, fuel burning installation, or incinerator, and which has a potential to emit less than 5 tons per year of a regulated air pollutant, by annual certification of compliance as required in TAPCR 1200-3-9-.02(11)(d)1.(ii)(I), may, at the discretion of the Technical Secretary, be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-3-9-.02(11)(e)1.(iii) and 1200-3-10-.04(2)(b)(1), and the compliance requirements of TAPCR 1200-3-9-.02(11)(e)3.(i) for that regulated air pollutant, except where generally applicable requirements of the state implementation plan specifically impose monitoring and related recordkeeping and reporting requirements, or except where any applicable procedures and methods are required pursuant to TAPCR 1200-3-10-.04. This provision shall not relieve any emissions unit or activity from any applicable standard or requirement under TAPCR 1200-3-11 and 1200-3-31, and TAPCR 1200-3-2-.01(1)(dd).

Mutual Agreement: TAPCR 1200-3-6-.01(7), 1200-3-7-.01(5), 1200-3-14-.01(3), 1200-3-26-.02(6)(b)

Upon mutual agreement of the owner or operator of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified may be established. The emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of the agreed limit is grounds for revocation of the issued permit and/or other enforcement measures provided for in the Tennessee Air Quality Act.

**Specific Monitoring Requirements for Boilers 1 through 9
73-0013**

Condition	Limit	Monitoring Requirement	Basis for Monitoring Requirement
E3-1	Illegal drugs burned in boilers	Maintain records of illegal drugs burned in boilers.	TAPCR 1200-03-10
E3-2	On and off spec oil and nonhazardous solvents burned in boilers.	Maintain records of oil and nonhazardous solvents burned in boilers.	TAPCR 1200-03-10
E3-3	Test burn requirements	Notification	TAPCR 1200-03-10
E3-4, E3-10, E3-11, E3-12, E3-13	Particulate emissions	Source testing, continuous parameter monitoring, continuous opacity monitoring	<p>Periodic source testing is required pursuant to 1200-03-10-.01(3): The Technical Secretary may require the owner or operator of an air contaminant source, as a condition of his operating permit, to conduct or have conducted periodic tests to establish the amount of air contaminants emitted. The nature, extent, and frequency of such required testing shall be specified in the operating permit. Such tests shall be made at the expense of the owner or operator and shall be conducted in a manner approved by the Technical Secretary. The Technical Secretary shall be supplied with such data as stipulated in the operating permit.</p> <p>Continuous parameter monitoring and opacity monitoring requirements are previously-established requirements that are used to satisfy the monitoring requirements of 40 CFR 64.</p> <p>Additional monitoring requirements for particulate matter are established by the Consent Decree.</p>
A19, E3-5, E3-6, E3-7, E3-12, E3-13, E3-14, E3-15, E3-16	SO ₂ emissions	Continuous emissions monitoring system., operational and quality assurance requirements.	<p>TAPCR 1200-3-12-.04 (Monitoring Required for Determining Compliance of Certain Large Sources): Fossil fuel-fired steam generators using solid fuel and subject to subparagraph 1200-3-14-.02(1)(d) (Fuel burning installations containing units > 600 MMBtu/hr heat input and which were commenced before April 3, 1972), the source owner or operator may choose the method of measuring SO₂ in the stack gases depending upon the type of fuel burned.</p> <p>(a) fuel sampling and analysis if only low-sulfur coal (<1% sulfur) is burned; or</p> <p>(b) SO₂ CEMS.</p>

**Specific Monitoring Requirements for Boilers 1 through 9
73-0013**

Condition	Limit	Monitoring Requirement	Basis for Monitoring Requirement
			Continuous SO ₂ monitoring is also specified by Acid Rain and TR requirements.
E3-8, E3-9	Visible emissions	Method 9 readings, opacity matrix	<p>The opacity matrix was developed to address periodic monitoring requirement for Title V. The opacity matrix allows sources with low or no potential for visible emissions to monitor at a reduced frequency, while requiring more frequent monitoring for sources with a higher potential for visible emissions.</p> <p>Condition E2-3 of the permit states that for all emission sources that use the opacity matrix decision trees to comply with any visible emissions requirement, if the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.</p> <p>Compliance with the opacity matrix and the general requirement for visible emissions evaluation satisfies the requirements of TAPCR 1200-3-9-.02(11)(e)1.(iii)(I) and 1200-3-10.</p>
A19, E3-14, E3-15, E3-16	Acid Rain and TR requirements for NO _x emissions	Continuous emission monitoring	Continuous NO _x monitoring is specified by Acid Rain and Transport Rule (TR) requirements.

Statement of Basis for 73-0013 Title V Operating Permit 560775
Attachment C: New Source Review History for Boilers 1 through 9

Emission Source	Log Number	PSD/non-PSD	Issue Date	Description
<p>The permit file and database indicate no construction permits issued to this source. Tennessee and TVA are signatories to a Consent Decree (State of Alabama et. al. v. TVA, Civil Action No. 3:11-cv-00170, filed April 14, 2011, approved June 30, 2011) to resolve past New Source Review issues at this facility. This Consent Decree is enforceable in accordance with its own terms.</p>				