

## Division of Air Quality Permit Application Submittal

Please find attached a permit application for :

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only):
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only):
  
- Type of NSR Application (check all that apply):
  - Construction
  - Modification
  - Class I Administrative Update
  - Class II Administrative Update
  - Relocation
  - Temporary
  - Permit Determination
  
- Type of 45CSR30 (TITLE V) Application:
  - Title V Initial
  - Title V Renewal
  - Administrative Amendment\*\*
  - Minor Modification\*\*
  - Significant Modification\*\*
  - Off Permit Change

**\*\*If the box above is checked, include the Title V revision information as ATTACHMENTS to the combined NSR/Title V application.**
  
- Payment Type:
  - Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - Check (Make checks payable to: WVDEP – Division of Air Quality)  
Mail checks to:  
WVDEP – DAQ – Permitting  
Attn: NSR Permitting Secretary  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304
  
- If the permit writer has any questions, please contact (all that apply):
  - Responsible Official/Authorized Representative
    - Name:
    - Email:
    - Phone Number:
  - Company Contact
    - Name:
    - Email:
    - Phone Number:
  - Consultant
    - Name:
    - Email:
    - Phone Number:

**Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.**



American Electric Power  
John E. Amos Plant  
P.O. Box 4000  
St. Albans, WV 25177-7729  
aep.com

November 17, 2020

Ms. Laura M. Crowder, Director  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 - 57<sup>th</sup> Street  
Charleston, West Virginia 25304

**RE: 45 CSR 30 Permit Renewal Application  
Plant ID# 079-00006**

Dear Director Durham,

In accordance with Condition 2.3 for the subject permit, enclosed via e-mail is a Regulation 30 Permit Renewal Application for Appalachian Power Company's John E. Amos Plant. The subject application is for the Steam Electric Generating Facility located near St. Albans, WV in Putnam County. The existing permit expires on June 29, 2021.

Please contact Christy L. Lawrence at (304) 759-2799 or Greg Wooten at (614) 716-1262 if you have any questions.

Sincerely,

Aaron M. Sink, Plant Manager  
John E. Amos Plant

Electronic Enclosure

BOUNDLESS ENERGY

# John E. Amos Plant Title V Permit Renewal Application



Prepared for: **Appalachian Power Company, John E. Amos Plant**  
**P.O. Box 4000**  
**State Route 817**  
**St. Albans, West Virginia 25177**

Prepared by: **AEP Air Quality Services Section**  
**1 Riverside Plaza**  
**Columbus, Ohio 43215**

Renewal Application Submittal : **November, 2020**

**Appalachian Power Company  
John E. Amos Plant**

**Regulation 30 Permit Renewal Application**

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 numbered sections: 1. Name of Applicant, 2. Facility Name or Location, 3. DAQ Plant ID No., 4. Federal Employer ID No. (FEIN), 5. Permit Application Type, 6. Type of Business Entity, 7. Is the Applicant the..., 8. Number of onsite employees, 9. Governmental Code, 10. Business Confidentiality Claims.

<b>11. Mailing Address</b>		
<b>Street or P.O. Box:</b> P.O. Box 4000		
<b>City:</b> St. Albans	<b>State:</b> WV	<b>Zip:</b> 25177-
<b>Telephone Number:</b> (304) 759-3200	<b>Fax Number:</b> (304) 759-3201	

<b>12. Facility Location</b>		
<b>Street:</b> 1530 Winfield Rd.	<b>City:</b> Winfield	<b>County:</b> Putnam
<b>UTM Easting:</b> 428.16 km	<b>UTM Northing:</b> 4258.42 km	<b>Zone:</b> <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
<b>Directions:</b> From Charleston, take Interstate 64 West (towards Huntington). Turn right onto Exit 44 ramp and proceed to Route 817. Turn left onto Route 817 (North). The facility is located approximately 1.5 miles on the right.		
<b>Portable Source?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Is facility located within a nonattainment area?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>If yes, for what air pollutants?</b>	
<b>Is facility located within 50 miles of another state?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, name the affected state(s).</b> Ohio	
<b>Is facility located within 100 km of a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>If yes, name the area(s).</b>	
<b>If no, do emissions impact a Class I Area<sup>1</sup>?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Source meets BART for SO <sub>2</sub> and NO <sub>x</sub> by implementing CSAPR and BART. modeling indicated source was insignificant from a PM standpoint.		
<sup>1</sup> Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

<b>13. Contact Information</b>		
<b>Responsible Official:</b> Mr. Aaron M. Sink		<b>Title:</b> Plant Manager
<b>Street or P.O. Box:</b> P.O. Box 4000		
<b>City:</b> St. Albans	<b>State:</b> WV	<b>Zip:</b> 25177-
<b>Telephone Number:</b> (304) 759-3200	<b>Fax Number:</b> (304) 759-3201	
<b>E-mail address:</b> amsink@aep.com		
<b>Environmental Contact:</b> Christy L. Lawrence		<b>Title:</b> Env. & Lab. Supervisor
<b>Street or P.O. Box:</b> P.O. Box 4000		
<b>City:</b> St. Albans	<b>State:</b> WV	<b>Zip:</b> 25177-
<b>Telephone Number:</b> (304) 759-2799	<b>Fax Number:</b> (304) 759-3201	
<b>E-mail address:</b> cllawrence@aep.com		
<b>Application Preparer:</b> G. J. Wooten		<b>Title:</b> Engineer
<b>Company:</b> AEP Service Corporation		
<b>Street or P.O. Box:</b> 1 Riverside Plaza, 17 <sup>nd</sup> Floor		
<b>City:</b> Columbus	<b>State:</b> OH	<b>Zip:</b> 43215-
<b>Telephone Number:</b> (614) 716-1262	<b>Fax Number:</b> (614) 716-1252	
<b>E-mail address:</b> gjwooten@aep.com		

<b>14. Facility Description</b>			
List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.			
Process	Products	NAICS	SIC
Coal Fired Electric Generating Unit	Electricity	221112	4911
<p><b>Provide a general description of operations.</b></p> <p>The Amos Plant is a fossil fuel fired electric generation facility and operates under Standard Industrial Code (SIC) 4911. The facility consists of three coal-fired steam generators that provide a steam supply to turbine driven electrical generators. The facility also includes various supporting operations including but not limited to coal handling, ash handling, limestone handling, and various tanks with insignificant emissions. The facility has the potential to operate seven days per week, twenty-four hours per day, and 52 weeks per year.</p>			
<p>15. Provide an <b>Area Map</b> showing plant location as <b>ATTACHMENT A</b>.</p>			
<p>16. Provide a <b>Plot Plan(s)</b>, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as <b>ATTACHMENT B</b>. For instructions, refer to "Plot Plan - Guidelines."</p>			
<p>17. Provide a detailed <b>Process Flow Diagram(s)</b> showing each process or emissions unit as <b>ATTACHMENT C</b>. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.</p>			

**Section 2: Applicable Requirements**

<b>18. Applicable Requirements Summary</b>	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS	<input type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input checked="" type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input checked="" type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO <sub>x</sub> Annual Trading Program (45CSR39)	<input checked="" type="checkbox"/> CAIR NO <sub>x</sub> Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO <sub>2</sub> Trading Program (45CSR41)	

<b>19. Non Applicability Determinations</b>
<p><b>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</b></p> <ul style="list-style-type: none"> <li>▪ <b>45 CSR 5:</b> Pursuant to 45CSR5, if 45CSR2 is applicable to the facility, then the facility is exempt from 45CSR5. 45CSR2 is applicable to the facility.</li> <li>▪ <b>45 CSR 17:</b> Pursuant to 45CSR17, if 45CSR2 is applicable to the facility, then the facility is exempt from 45CSR17. 45CSR2 is applicable to the facility.</li> <li>▪ <b>40 CFR 60 Subpart D:</b> The fossil fuel fired steam generators potentially affected by this rule have not commenced construction or modification after August 17, 1971.</li> <li>▪ <b>40 CFR 60 Subpart Da:</b> The electric utility steam generating units potentially affected by this rule have not commenced construction or modification after September 18, 1978.</li> <li>▪ <b>40 CFR 60 Subpart K:</b> The facility does not include storage vessels that are used to store petroleum liquids (as defined in 40 CFR 60.111(b)) and that have a storage capacity greater than 40,000 gallons for which construction, reconstruction or modification was commenced after June 11, 1973 and prior to May 19, 1978.</li> </ul>
<input checked="" type="checkbox"/> Permit Shield

**19. Non Applicability Determinations (Continued)** - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

- **40 CFR 60 Subpart Ka:** The facility does not include storage vessels that are used to store petroleum liquids (as defined in 40 CFR 60.111a(b)) and that have a storage capacity greater than 40,000 gallons for which construction, reconstruction or modification was commenced after May 18, 1978 and prior to July 23, 1984.
- **40 CFR 60 Subpart Kb:** Storage vessels potentially affected by this rule are exempted because they contain liquids with a maximum true vapor pressure of less than 3.5 kPa, have a storage capacity of less than 40 cubic meters, or have not commenced construction, reconstruction or modification after July 23, 1984
- **40 CFR 60 Subpart Y:** The coal handling equipment potentially affected by this rule, except for the two crushers "CR-70E" and "CR-70W," has not been constructed or modified after October 24, 1974. The Putman Terminal coal handling equipment was constructed after October 24, 1974 but does not prepare coal by any of the processes listed in 40 CFR §60.251(a) and therefore is not defined as a "coal preparation plant."
- **40 CFR 63 Subpart Q:** This facility does not include industrial process cooling towers that have operated with chromium-based water treatment chemicals on or after September 8, 1994.

Permit Shield

## 20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

- 45CSR6, R30-07900006-2016 Section 3.1.1 and 3.1.2 (Open Burning)
- 40CFR61, R30-07900006-2016 Section 3.1.3 (Asbestos)
- 45CSR4, R30-07900006-2016 Section 3.1.4 (Odor)
- 45CSR11-5.2, R30-07900006-2016 Section 3.1.5 (Standby Plan)
- WV Code 22-5-4(a)(14), R30-07900006-2016 Section 3.1.6 (Emission Inventory)
- 40CFR82, R30-07900006-2016 Section 3.1.7 (Ozone-depleting Substances)
- 40CFR68, R30-07900006-2016 Section 3.1.8 (Risk Management Plan)
- 45CSR2, R30-07900006-2016 MM01 Section 3.1.9 (Fugitive Particulate Matter Control)
- 45CSR39, R30-07900006-2016 Section 3.1.12 Annual NOx TR Program (Replaced by CSAPR)
- 45CSR40, R30-07900006-2016 Section 3.1.13 Ozone Season NOx TR Program (Replaced by CSAPR)
- 45CSR41, R30-07900006-2016 Section 3.1.14 Annual SO2 TR Program (Replaced by CSAPR)

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR2, 45CSR10, and WV Code 22-5-4(a), R30-07900006-2016 Section 3.3.1 (Stack Testing)
- 45CSR§2-5.1, 45CSR13, R13-2663, 4.1.9 Section 3.1.10 (Fugitive Particulate Matter Control)
- 45CSR13, R13-2663, 4.1.11., Consent Order CO-R2-E-2005-2 §III.2. State-Enforceable only, R30-07900006-2016 Section 3.1.10 (Fugitive Particulate Matter Control)
- 45CSR13, R13-2663, 4.1.12., Consent Order CO-R2-E-2005-2 §III.3. State-Enforceable only, R30-07900006-2016 Section 3.1.11 (Fugitive Matter Particulate Matter Control)
- 45CSR30-5.1.c.2.A, R30-07900006-2016 Section 3.4.1 (Monitoring Information)
- 45CSR30-5.1.c.2.B, R30-07900006-2016 Section 3.4.2 (Retention of Records)
- 45CSR30-5.1.c, R30-07900006-2016 Section 3.4.3 (Odors)
- 45CSR30-5.1.c, Consent Order CO-R2-E-2005-2 §III.4, R30-07900006-2016 Section 3.4.4- 3.4.5 (Fugitive Particulate Matter Control)
- 45CSR30-5.1.c.3, R30-07900006-2016 Sections 3.5.1-3.5.3 (Reporting Requirements)
- 45CSR30-8, R30-07900006-2016 Section 3.5.4 (Certified Emissions Statement)
- 45CSR30-5.3.e, R30-07900006-2016 Section 3.5.5 (Compliance Certification)
- 45CSR30-5.1.c.3.A, R30-07900006-2016 Section 3.5.6 (Semi-Annual Monitoring Reports)
- R30-07900006-2016 Section 3.5.7 (Emergencies)
- 45CSR30-5.1.c.3, R30-07900006-2016 Section 3.5.8 (Deviation Reports)
- 45CSR30-4.3.f.1.B, R30-07900006-2016 Section 3.5.9 (New Applicable Requirements)

Are you in compliance with all facility-wide applicable requirements?  Yes  No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

**20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.**

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.



<b>21. Active Permits/Consent Orders</b>		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit <i>(if any)</i>
R13-480	03/08/1979	Putnam Coal Terminal
R13-2663E	09/01/2015	
CO-E-2009-12	07/09/2009	Dry Sorbent Injection Consent Decree
CO-R2-E-2005-2	01/14/2005	Fugitive Dust Consent Decree
U.S. District Court Consent Decree regarding Civil Actions C2-99-1182, C2-05-360, and C2-04-1098	12/13/2007	Consent Decree for NSR Lawsuits
R33-3935-2022-5A	03/12/2019	Title IV Acid Rain Permit
G60-C063	08/05/2014	Emergency Generator General Permit
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## Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	10,177.94
Nitrogen Oxides (NO <sub>x</sub> )	72,025.3
Lead (Pb)	6.49
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	1,648.77
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	4,180.62
Total Particulate Matter (TSP)	7,057.29
Sulfur Dioxide (SO <sub>2</sub> )	122,478.98
Volatile Organic Compounds (VOC)	1,001.7
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Hydrogen Chloride	21,580
Hydrogen Fluoride	1,874
Selenium	84.88
Manganese	6.63
Nickel	3.02
Arsenic	9.82
Mercury Compounds	2.72
Beryllium	23.42
Chromium	3.52
Cobalt	1.30
Lead	6.49
Regulated Pollutants other than Criteria and HAP	Potential Emissions

<sup>1</sup>PM<sub>2.5</sub> and PM<sub>10</sub> are components of TSP.  
<sup>2</sup>For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

**Section 4: Insignificant Activities**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input checked="" type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input checked="" type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input checked="" type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input checked="" type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	<p>19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO<sub>x</sub>, SO<sub>2</sub>, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>


<b>24. Insignificant Activities (Check all that apply)</b>	
<input type="checkbox"/>	20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.  Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:  _____ _____ _____ _____ _____
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input checked="" type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input checked="" type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input checked="" type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input checked="" type="checkbox"/>	40. Ozone generators.

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input checked="" type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input checked="" type="checkbox"/>	54. Steam vents and safety relief valves.
<input checked="" type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input checked="" type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input checked="" type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input checked="" type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

**Section 5: Emission Units, Control Devices, and Emission Points**

<p><b>25. Equipment Table</b></p>
<p>Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b>.</p>
<p><b>26. Emission Units</b></p>
<p>For each emission unit listed in the <b>Title V Equipment Table</b>, fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b>.</p>
<p>For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b>.</p>
<p><b>27. Control Devices</b></p>
<p>For each control device listed in the <b>Title V Equipment Table</b>, fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b>.</p>
<p>For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b>.</p>

**Section 6: Certification of Information**

<p><b>28. Certification of Truth, Accuracy and Completeness and Certification of Compliance</b></p> <p><i>Note: This Certification must be signed by a responsible official. The original, signed in blue ink, must be submitted with the application. Applications without an original signed certification will be considered as incomplete.</i></p>	
<p><b>a. Certification of Truth, Accuracy and Completeness</b></p> <p>I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. 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 and/or imprisonment.</p>	
<p><b>b. Compliance Certification</b></p> <p>Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.</p>	
<p><b>Responsible official (type or print)</b></p>	
<p>Name: Aaron M. Sink</p>	<p>Title: Plant Manager</p>
<p><b>Responsible official's signature:</b></p> <p>Signature: <u></u> Signature Date: <u>11/18/2020</u></p> <p style="text-align: center; font-size: small;">(Must be signed and dated in blue ink)</p>	

<p><b>Note: Please check all applicable attachments included with this permit application:</b></p>	
<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at [www.dep.wv.gov/dag](http://www.dep.wv.gov/dag), requested by phone (304) 926-0475, and/or obtained through the mail.

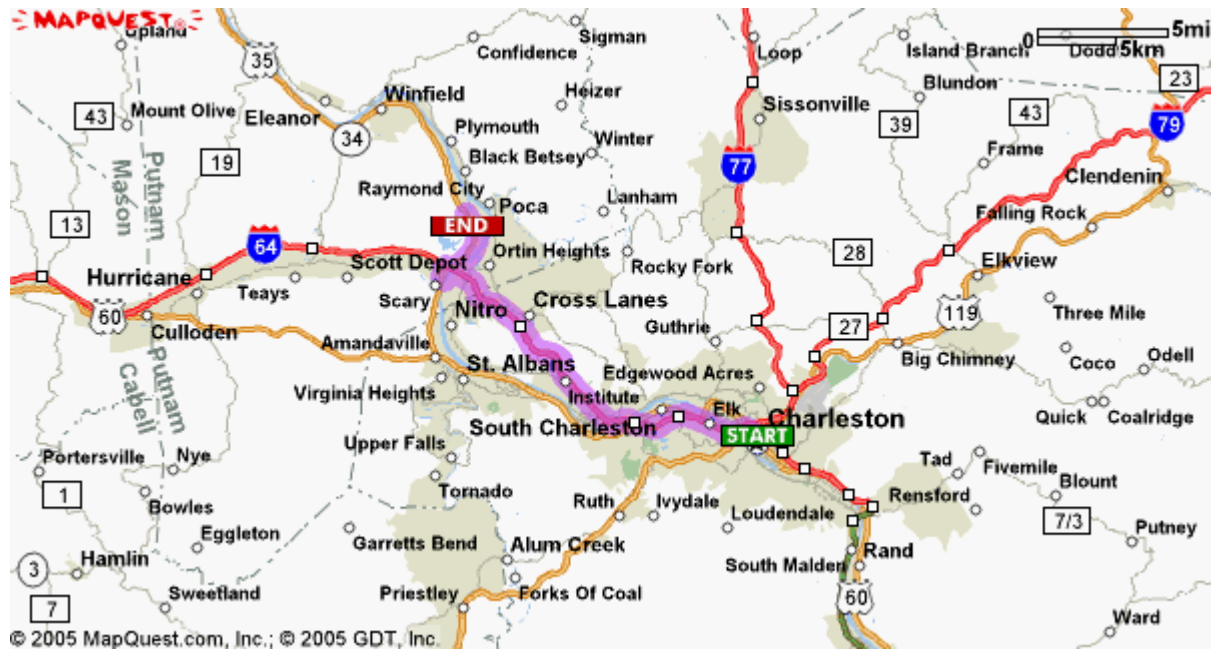


# Attachment A

## Area Map

## Attachment A

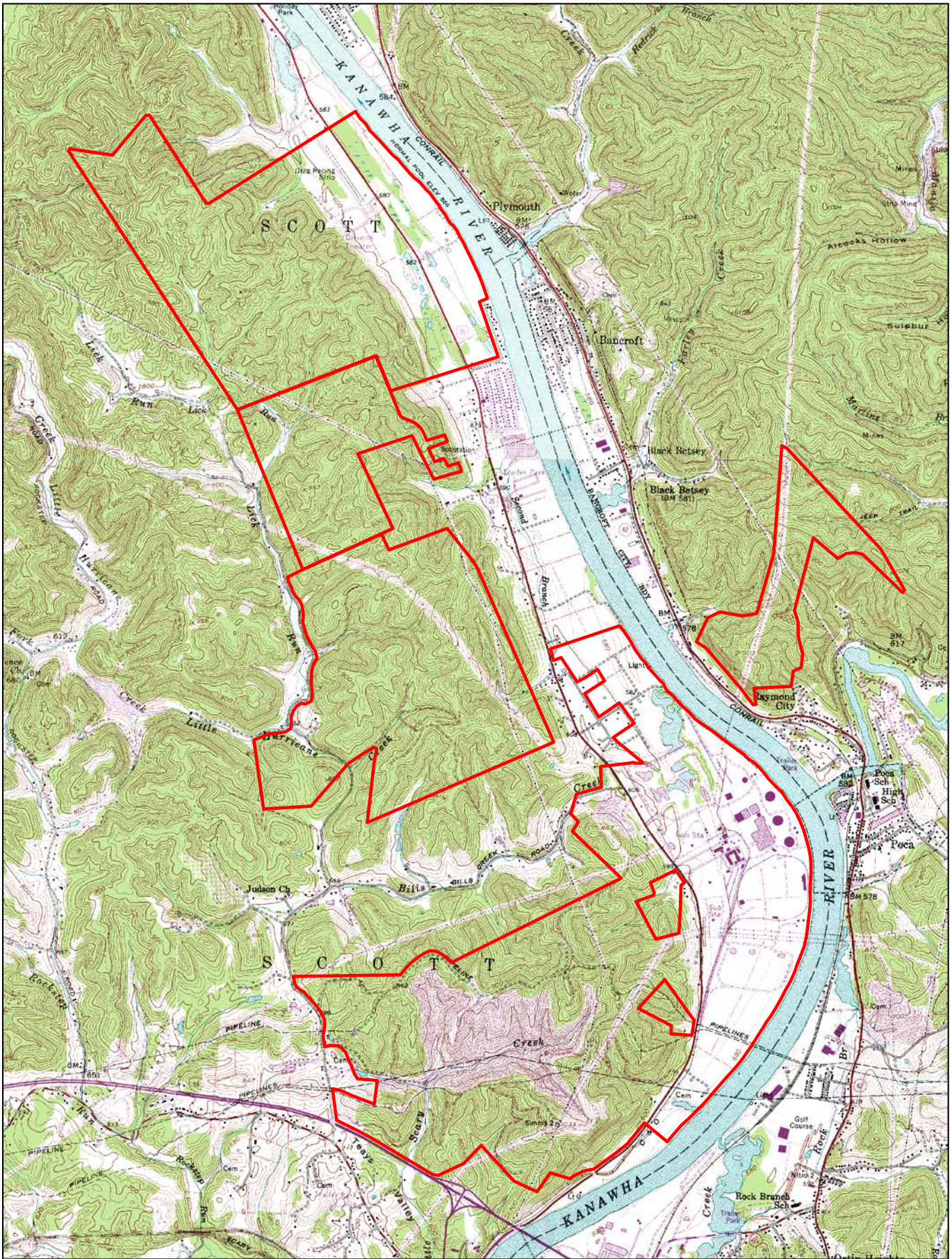
**Driving Directions to John E. Amos Plant:** From Charleston, take Interstate 64 West (towards Huntington). Turn right onto Exit 44 ramp and proceed to Route 817. Turn left onto Route 817 (North). The facility is located approximately 1.5 miles on the right.

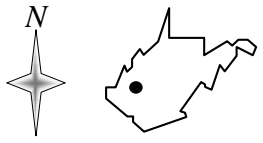



## Attachment B

### Plot Plans

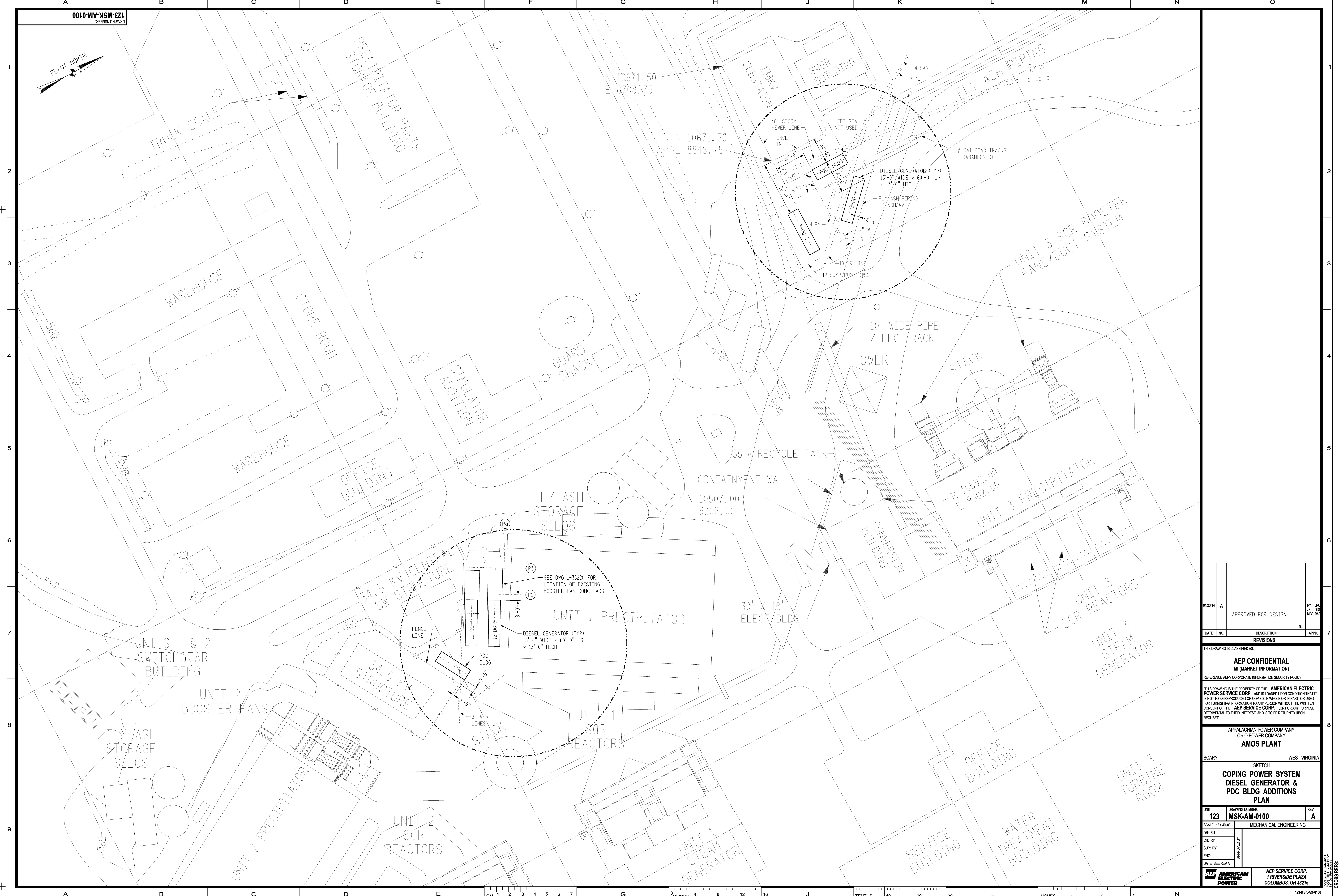
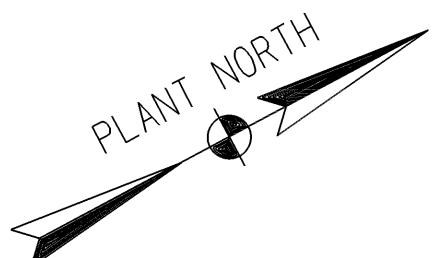




 <p>0 1/4 1/2 1mi</p>	<p>Saint Albans &amp; Bancroft, WV          Quadrangles          USGS Topographic Map</p> <p style="text-align: center;">3.17.05</p>	<p>Appalachian Power Company  <b>John E. Amos Plant</b>          Property Boundary</p> <p style="text-align: right;"><b>Air Quality Services</b> </p>
--	--	--



123-MSK-AM-0100  
DRAWING NUMBER  
33220 (NEW)



012314	A	APPROVED FOR DESIGN	RY	JRC
DATE	NO.	DESCRIPTION	APP'D	REV.
REVISIONS				

THIS DRAWING IS CLASSIFIED AS:  
**AEP CONFIDENTIAL**  
 MI (MARKET INFORMATION)  
 REFERENCE AEP'S CORPORATE INFORMATION SECURITY POLICY  
 THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP. FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.

APPALACHIAN POWER COMPANY  
 OHIO POWER COMPANY  
**AMOS PLANT**  
 SCARY WEST VIRGINIA

SKETCH  
**COPING POWER SYSTEM**  
**DIESEL GENERATOR & PDC BLDG ADDITIONS**  
**PLAN**

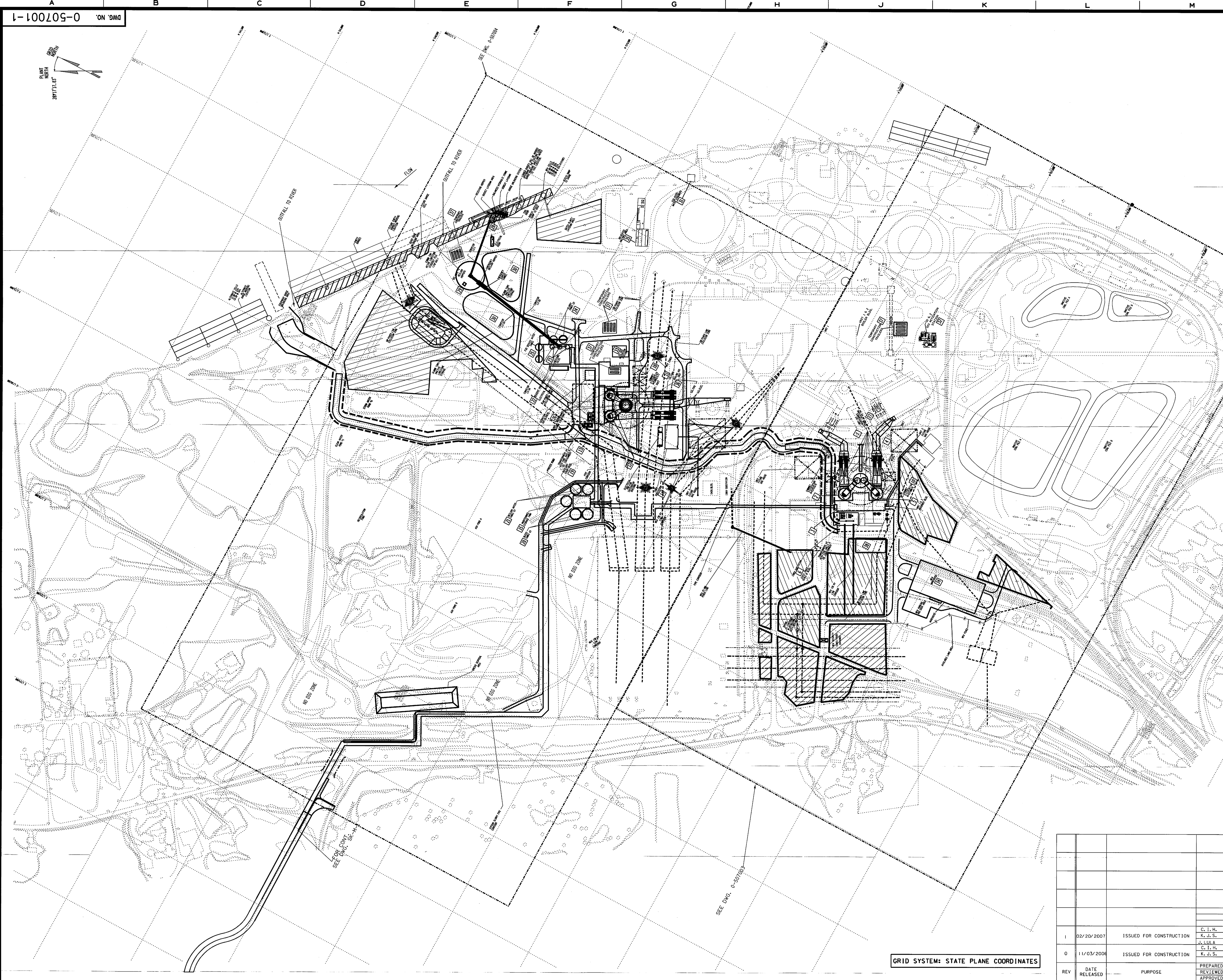
UNIT: 123	DRAWING NUMBER: MSK-AM-0100	REV: A
SCALE: 1" = 40'-0"	MECHANICAL ENGINEERING	
DR: RAL	APPROVED BY:	
CH: RY		
SUP: RY		
ENG:		
DATE: SEE REV A		

**AMERICAN ELECTRIC POWER**  
 AEP SERVICE CORP.  
 1 RIVERSIDE PLAZA  
 COLUMBUS, OH 43215



1-100705-0  
DWG. NO.

BUILDING NUMBER	BUILDING DESCRIPTION	BUILDING ARCHITECTURAL LOCATION
01	UNIT 1 INDUCED DRAFT FANS	J4
02	UNIT 1 ABSORBER	K4
03	UNIT 1 & 2 ABSORBER BLDG	K4
04	UNIT 2 INDUCED DRAFT FANS	K4
05	UNIT 2 ABSORBER	K4
06	UNIT 1 & 2 138 KV SWITCHYARD	K5
07		
10	UNIT 1 & 2 CHIMNEY	K4
11	UNIT 3 INDUCED DRAFT FANS	H4
12	UNIT 3 ABSORBERS-3A (WEST), 3B (EAST)	G5
13	UNIT 3 ABSORBER BLDG	G5
14	UNIT 3 138 KV SWITCHYARD	H5
15	UNIT 3 MAINTENANCE STORAGE TANK	G6
18	UNIT 3 CHIMNEY	G4
19	AUXILIARY EQUIP BUILDING	G6
20	BLEED TANKS	G6
21	RECLAIM WATER TANKS	G6
22	REAGENT PREP BLDG	F4
23	LIMESTONE SILOS	F4
24	LIMESTONE SLURRY TANKS	F4
25	FGD SERVICE WATER TANKS	F5
26	UNIT 3 MAINTENANCE CRANE LOCATIONS	F4, G4
27	UNIT 1&2 MAINTENANCE CRANE LOCATIONS	J5, J6
28	LIMESTONE UNLOADING DOCK	E4
29	LIMESTONE ACTIVE PILE	E4
30	LIMESTONE INACTIVE PILES	F4
31	FGD RIVER WATER STRAINERS	G2
32	UNIT 1 & 2 SO3 MITIGATION SYSTEM	K3
33	UNIT 3 SO3 MITIGATION SYSTEM	G4
34	NEW WAREHOUSE 200' WIDE X 420' LONG	L5
35	NEW/RELOCATED HAZ-MAT AREA	G3
36	I. O. FAN SEAL AIR UNIT	H4
37	TEMPORARY CONSTRUCTION TRAILERS	E4, J3 & G4
38	CONST. GATE & TEMP. TRUCK SCALE AREA	



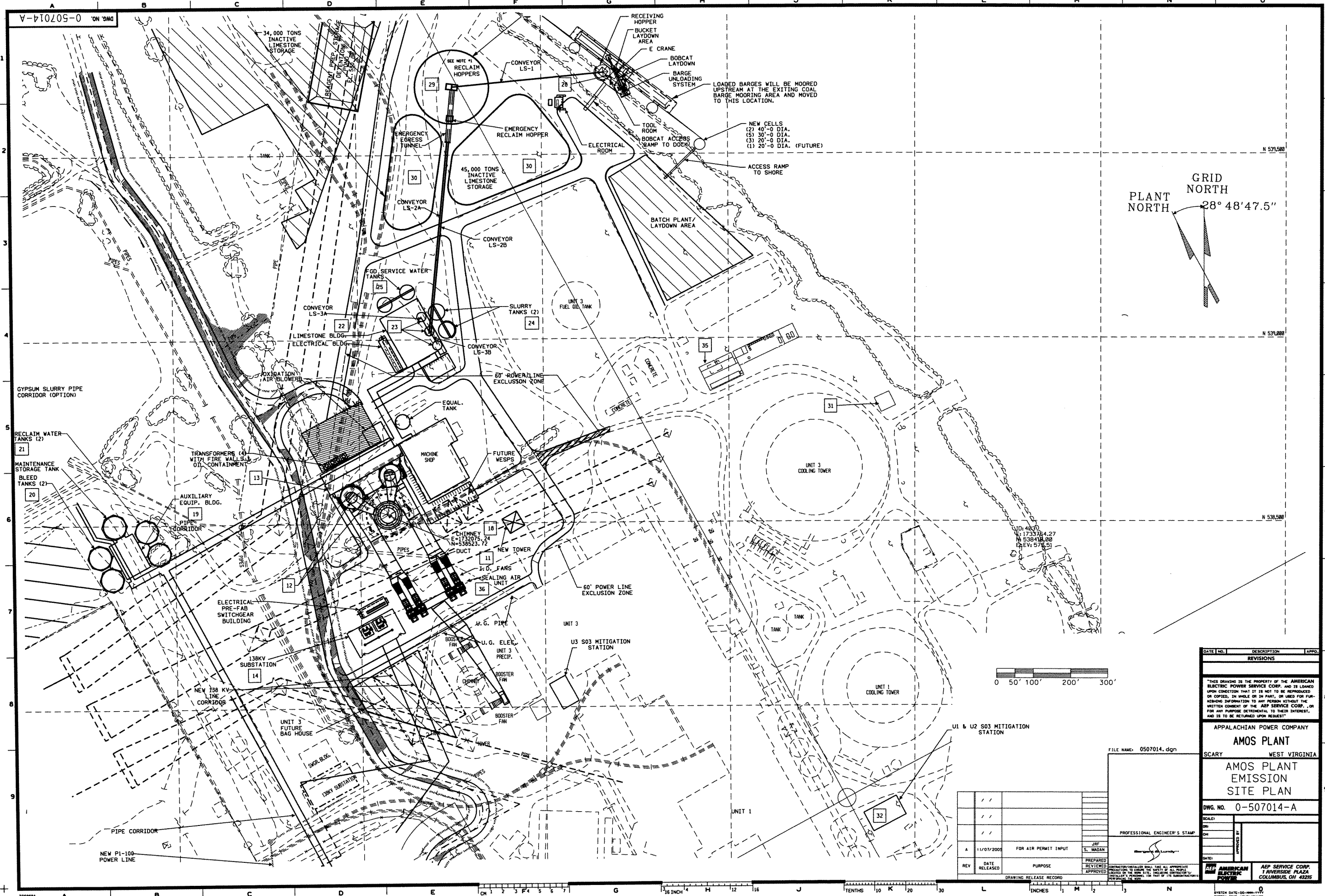
- NEW FGD EQUIP.
- NEW ELEC.
- EXISTING ELEC.
- NEW ROADS.
- WAREHOUSE LOC.
- MATERIAL HANDLING LAYDOWN AREAS
- CONSTR. PARKING

DATE	NO.	DESCRIPTION	APPD.
REVISIONS			
<p>THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.</p>			
APPALACHIAN POWER COMPANY			
<b>AMOS PLANT</b>			
SCARY WEST VIRGINIA			
<b>AMOS FGD RETROFIT PROJECT</b>			
<b>PLOT PLAN</b>			
<b>UNITS 1, 2 &amp; 3</b>			
DWG. NO.		0-507001-1	
SCALE:		AS SHOWN	
DATE:		11/20/07	
DRAWING RELEASE RECORD		<p>PREPARED: J. L. H. / 11/13/07</p> <p>REVIEWED: J. L. H. / 11/13/07</p> <p>APPROVED: J. L. H. / 11/13/07</p>	
<p>AMERICAN ELECTRIC POWER</p>		<p>AMERICAN ELECTRIC POWER</p>	

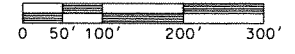
REV	DATE RELEASED	PURPOSE	PREPARED	REVIEWED	APPROVED
1	02/20/2007	ISSUED FOR CONSTRUCTION	C. L. H.	J. L. H.	J. L. H.
0	11/03/2006	ISSUED FOR CONSTRUCTION	C. L. H.	J. L. H.	J. L. H.

GRID SYSTEM: STATE PLANE COORDINATES





GRID NORTH  
PLANT NORTH  
28° 48' 47.5"



DATE	NO.	DESCRIPTION	APPROVED
REVISIONS			

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APPALACHIAN POWER COMPANY  
**AMOS PLANT**  
SCARY WEST VIRGINIA

**AMOS PLANT EMISSION SITE PLAN**

DWG. NO. 0-507014-A

FILE NAME: 0507014.dgn

PROFESSIONAL ENGINEER'S STAMP  
DATE: 11/07/2005  
S. MADAN

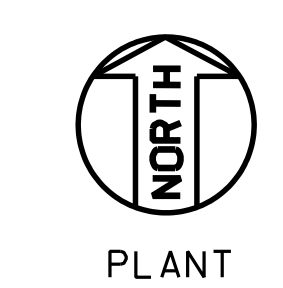
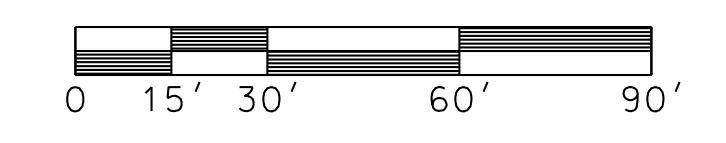
REV	DATE	RELEASED	PURPOSE	PREPARED	APPROVED
A	11/07/2005		FOR AIR PERMIT INPUT	JRF	S. MADAN

AMERICAN ELECTRIC POWER  
AEP SERVICE CORP.  
1 RIVERSIDE PLAZA  
COLUMBUS, OH 43215

LEGEND		
1	SILLO A (ROOF PLAN)	
2	SILLO B (GRADE PLAN)	
3	FILTER SEPARATORS	
4	MECHANICAL EXHAUSTERS FOR FILTER SEPERATORS	
5	SPACE RESERVED FOR FUTURE	
6	PIPE CORRIDOR	
7	EXISTING EQUIPMENT	
8	ELEVATOR/STAIR TOWER	
9	TRUCK LOADING BUILDING	
10	MIX TANK	
11	RECIRC. PUMP FOR MIX TANK	
12	BOOSTER PUMP FOR DENSE SLURRY	
13	GEHO PUMPS	
14	ELECTRICAL FLUSH WATER PUMP	
15	DIESEL FLUSH WATER PUMP	
16	SUMP A	
17	SUMP B	
18	SUMP C	
19	ACCESS DOOR	
20	PDC ELECTRICAL BUILDING	
21	TRANSFORMERS	

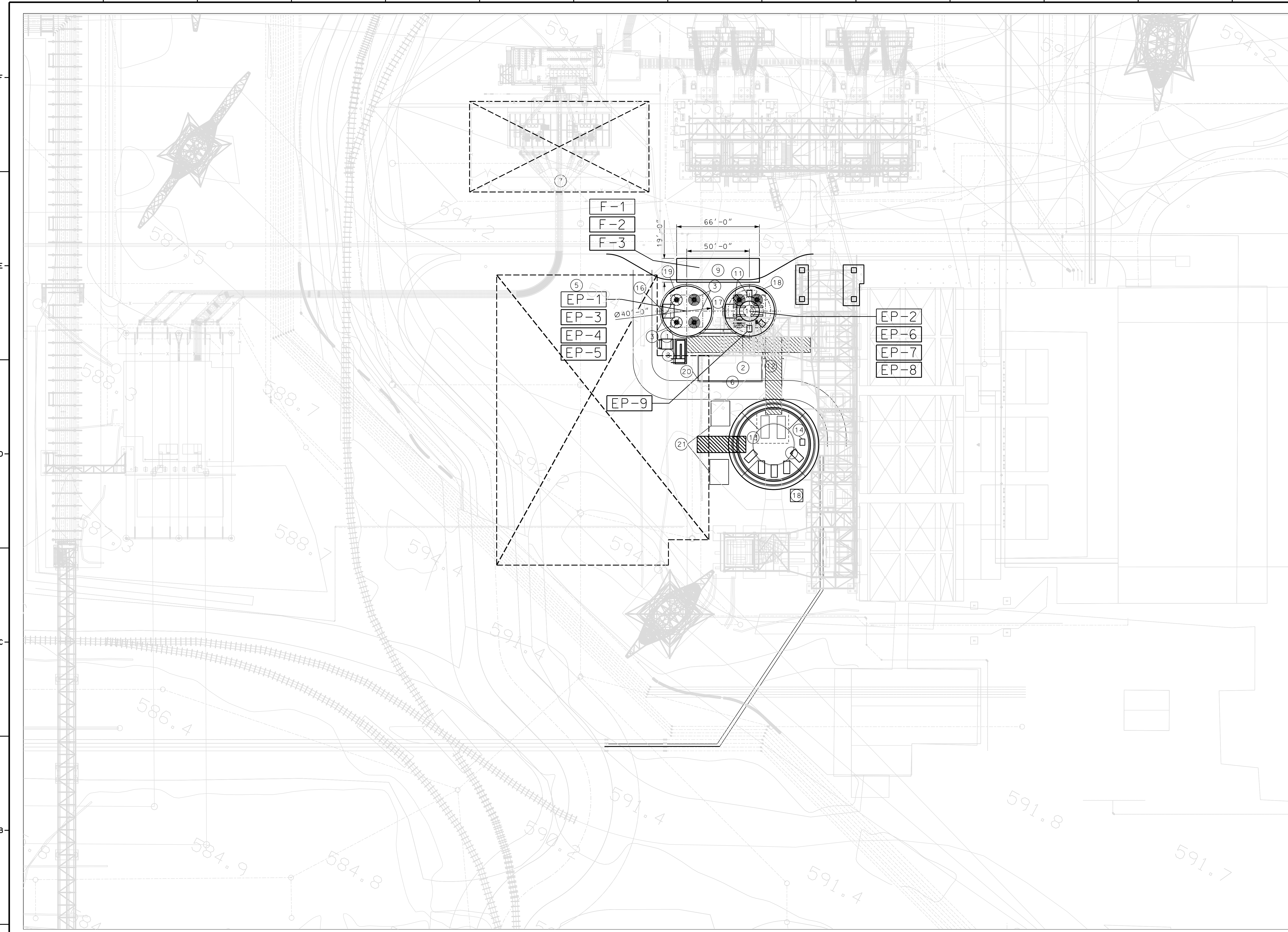
24		
SILLO A	9182.583	10876.500
SILLO B	9132.583	10876.500
EXIST. STACK	9251.875	10770.250

LEGEND:	
	TRANSFER POINT
	EMISSION POINT
	FUGITIVE EMISSION POINT



CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.

FILENAME: AMOS-EM-2.DGN



DRAWING RELEASE RECORD					
REV.	DATE REL'D.	PREPARED	REVIEWED	APPROVED	PURPOSE
0	09-24-2008	D. AMIN	S. MADAN		FOR REVIEW AND COMMENTS

DRAWING RELEASE RECORD					
REV.	DATE REL'D.	PREPARED	REVIEWED	APPROVED	PURPOSE
0	09-24-2008	D. AMIN	S. MADAN		FOR REVIEW AND COMMENTS

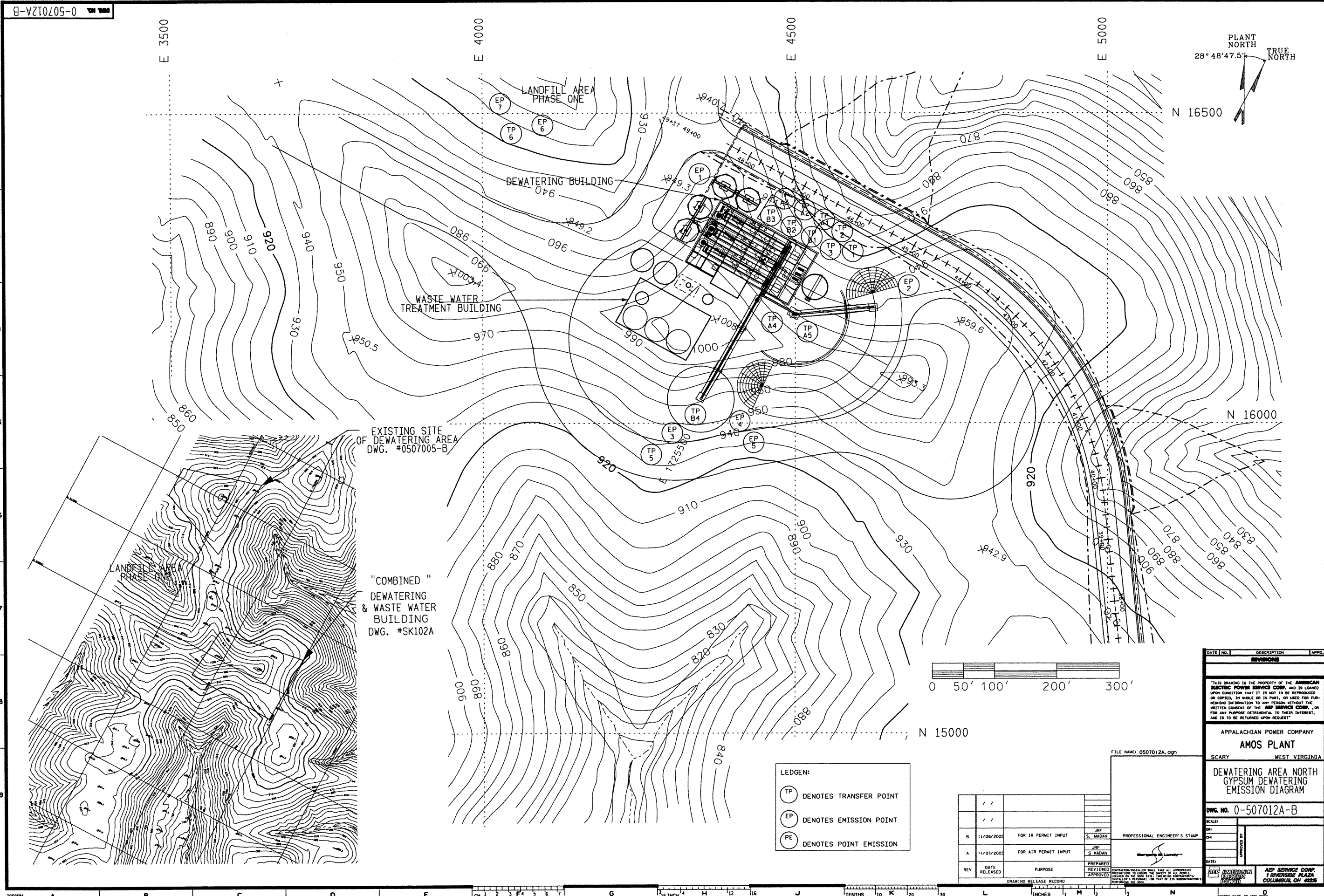
SCALE  
1"=30'  
PROJECT NUMBER  
12266-001

**EMISSION SITE PLAN FOR FLY ASH HANDLING SYSTEM UNIT 3**  
**AMOS PLANT AMERICAN ELECTRIC POWER**

DRAWING NO.	REV.
EM-2	0
SHEET OF	

Z:\14139\09\0920\01\4\DRN\AMOS\EM-2.dgn 9/30/2008 1:55:05 PM

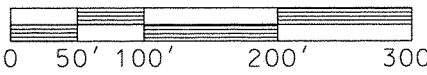




EXISTING SITE OF DEWATERING AREA DWG. #0507005-B

"COMBINED" DEWATERING & WASTE WATER BUILDING DWG. #SK102A

- LEDGEN:
- (TP) DENOTES TRANSFER POINT
  - (EP) DENOTES EMISSION POINT
  - (PE) DENOTES POINT EMISSION

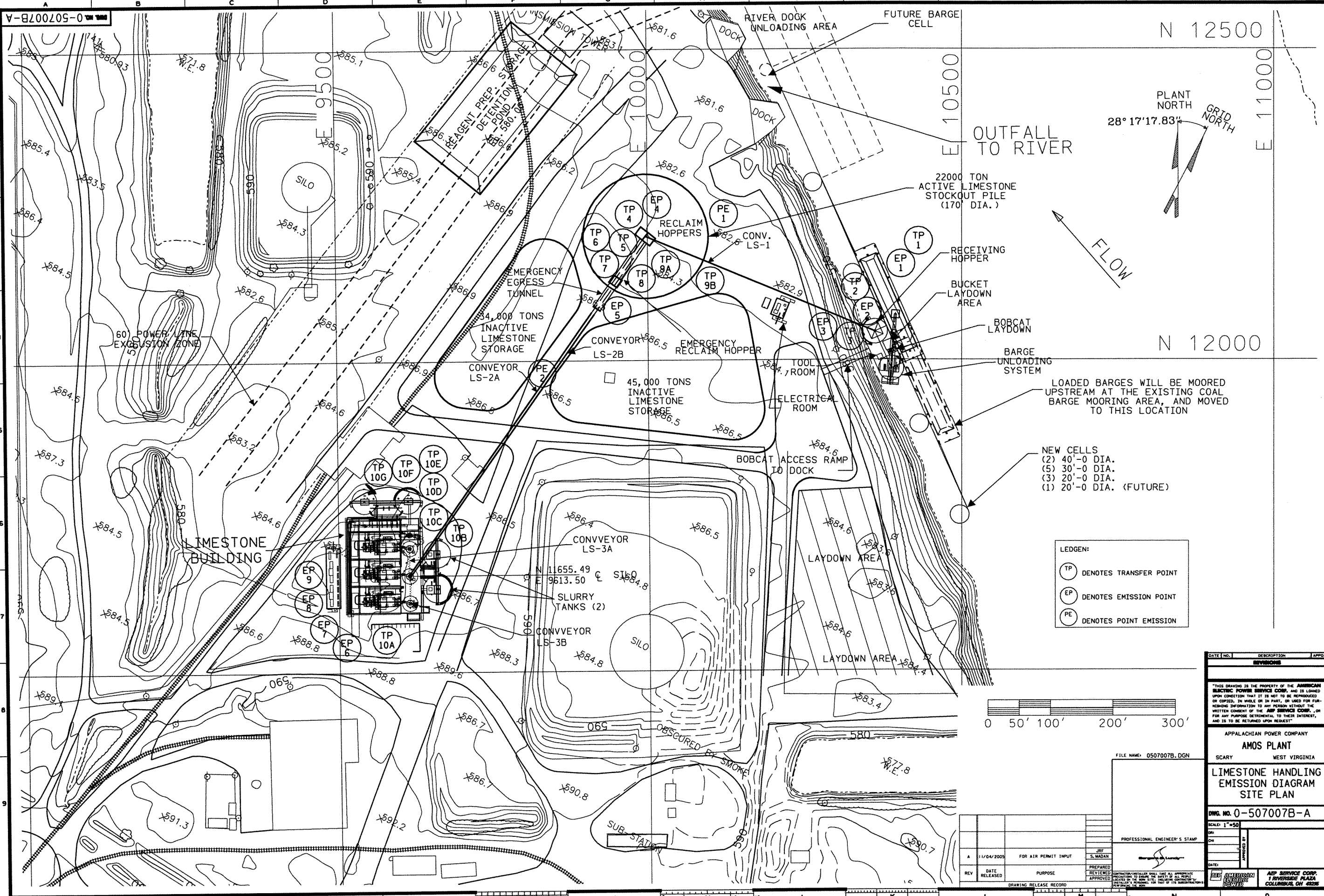


REV	DATE RELEASED	PURPOSE	APPROVED
B	11/08/2005	FOR IR PERMIT INPUT	JRF S. MADAN
A	11/07/2005	FOR AIR PERMIT INPUT	JRF S. MADAN
		PREPARED	
		REVIEWED	
		APPROVED	

FILE NAME: 0507012A.dgn

PROFESSIONAL ENGINEER'S STAMP

DATE	NO.	DESCRIPTION	APPROVED
		REVISIONS	
<p>THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.</p>			
<p>APPALACHIAN POWER COMPANY <b>AMOS PLANT</b> SCARY WEST VIRGINIA</p>			
<p>DEWATERING AREA NORTH GYPSUM DEWATERING EMISSION DIAGRAM</p>			
<p>DWG. NO. 0-507012A-B</p>			
<p>SCALE:</p>			
<p>DATE:</p>			
<p>APPROVED BY:</p>			
<p>CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL WORKERS. INSTALLER'S PERSONNEL FOR THAT OF THE SUBCONTRACTOR'S PERSONNEL.</p>			
<p>ASAP SERVICE CORP. 7 FREDERICK PLAZA COLUMBUS, OH 43226</p>			
<p>SYSTEM DATE: 00-000-1111 SYSTEM TIME: 00:00:00</p>			



11/04/05 0-507007B-A

N 12500

E 11000

PLANT NORTH  
GRID NORTH  
28° 17' 17.83"

OUTFALL TO RIVER

22000 TON ACTIVE LIMESTONE STOCKOUT PILE (170' DIA.)

FLOW

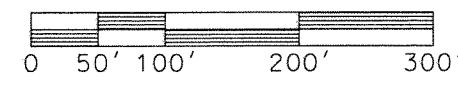
N 12000

LOADED BARGES WILL BE MOORED UPSTREAM AT THE EXISTING COAL BARGE MOORING AREA, AND MOVED TO THIS LOCATION

NEW CELLS  
(2) 40'-0 DIA.  
(5) 30'-0 DIA.  
(3) 20'-0 DIA.  
(1) 20'-0 DIA. (FUTURE)

LEDGEN:

- TP DENOTES TRANSFER POINT
- EP DENOTES EMISSION POINT
- PE DENOTES POINT EMISSION



DATE	NO.	DESCRIPTION	APPRO.
		REVISIONS	

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APPALACHIAN POWER COMPANY  
**AMOS PLANT**  
SCARY WEST VIRGINIA

**LIMESTONE HANDLING EMISSION DIAGRAM SITE PLAN**

DWG. NO. 0-507007B-A

SCALE: 1"=50'

PROFESSIONAL ENGINEER'S STAMP

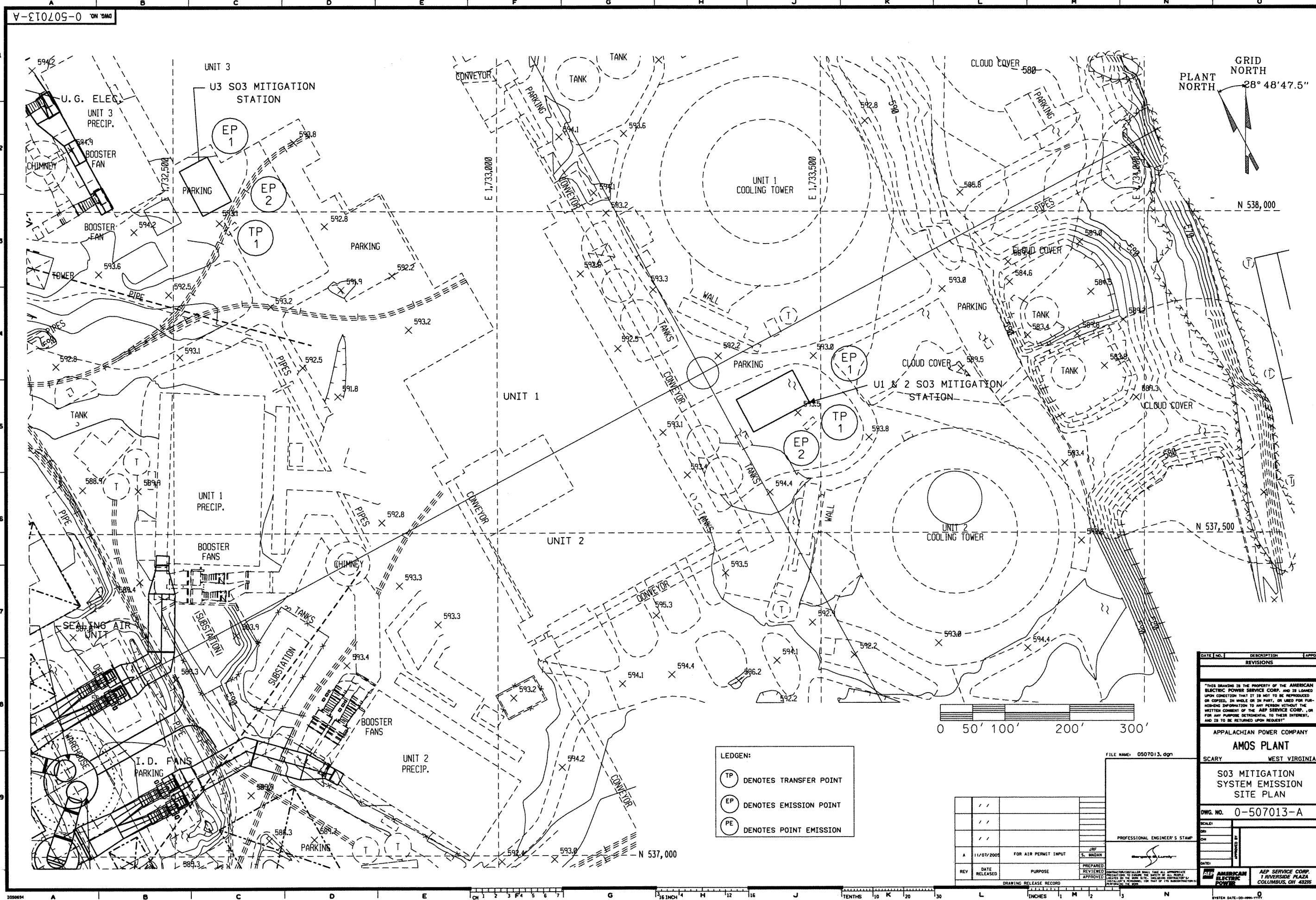
DATE	11/04/2005	PURPOSE	FOR AIR PERMIT INPUT	REVIEWED	JRF S. MADAN
REV		DATE RELEASED		APPROVED	

DRAWING RELEASE RECORD

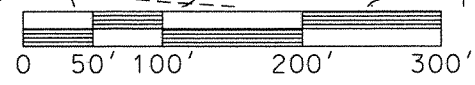
CONTRACTOR/INSTALLER SHALL MAINTAIN ALL APPROPRIATE RECORDS TO BE MADE THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. LOCATED ON THE JOB SITE, INCLUDING CONTRACTOR'S INSTALLATION REPORTS, AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE SAME.

ASP SERVICE CORP.  
1 RIVERSIDE PLAZA  
COLUMBUS, OH 43260

SYSTEM DATE: 05-08-2006  
SYSTEM TIME: 10:41:40 AM



GRID NORTH  
PLANT NORTH  
28° 48' 47.5"



- LEDGEN:
- TP DENOTES TRANSFER POINT
  - EP DENOTES EMISSION POINT
  - PE DENOTES POINT EMISSION

DATE	NO.	DESCRIPTION	APPROV.
REVISIONS			

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APPALACHIAN POWER COMPANY  
**AMOS PLANT**  
SCARY WEST VIRGINIA

S03 MITIGATION SYSTEM EMISSION SITE PLAN

DWG. NO. 0-507013-A

SCALE:  
DATE: \_\_\_\_\_

PROFESSIONAL ENGINEER'S STAMP  
DATE: \_\_\_\_\_

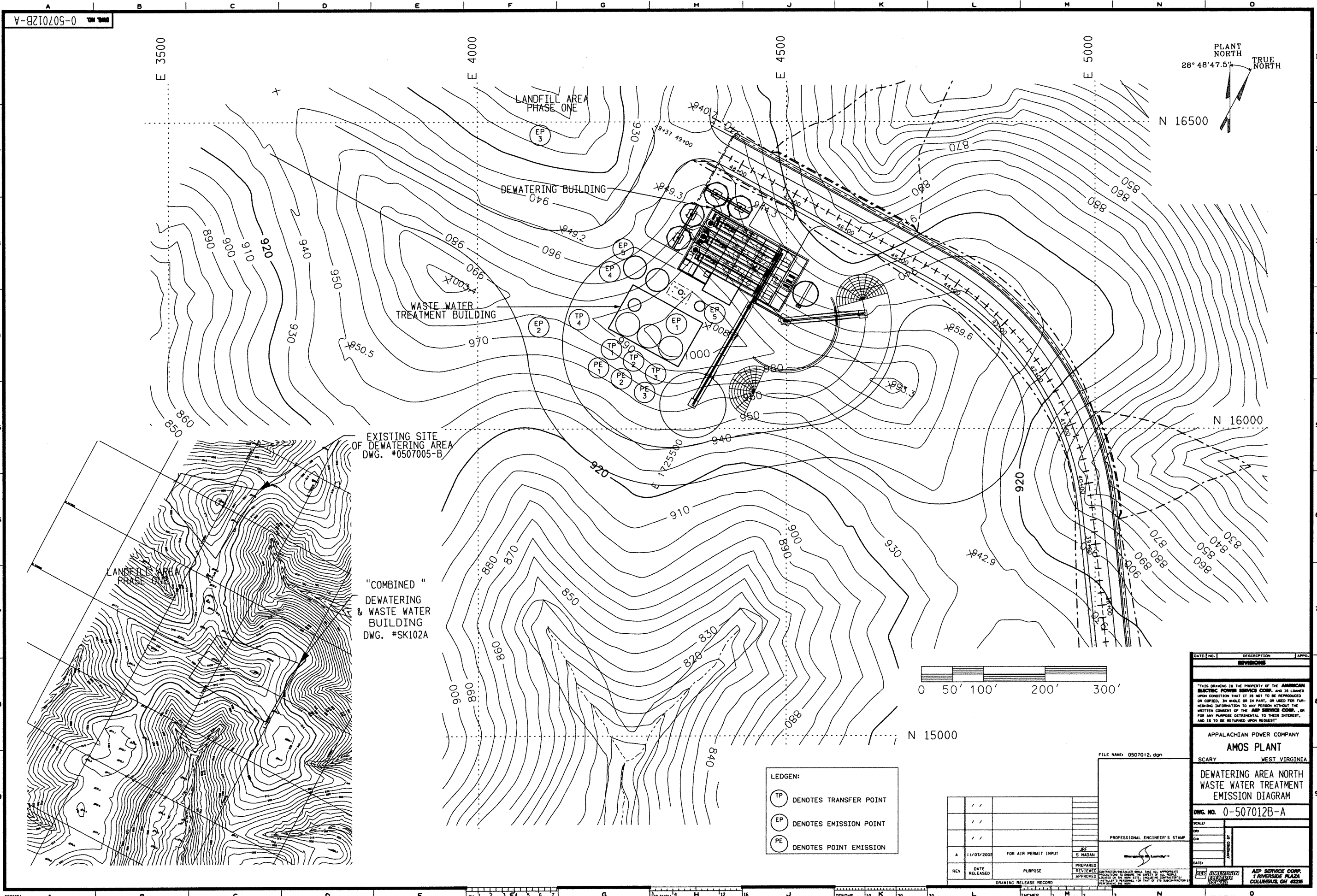
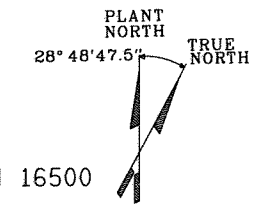
AEP SERVICE CORP.  
1 RIVERSIDE PLAZA  
COLUMBUS, OH 43215

REV	DATE RELEASED	PURPOSE	PREPARED	APPROVED
A	11/07/2005	FOR AIR PERMIT INPUT	JRP	S. MADAN

FILE NAME: 0507013.dgn  
DRAWING RELEASE RECORD

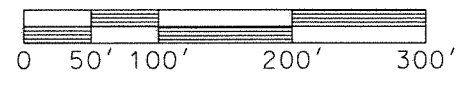


V-8210205-0 0-507012B-A



EXISTING SITE OF DEWATERING AREA  
DWG. #0507005-B

"COMBINED"  
DEWATERING & WASTE WATER  
BUILDING DWG. #SK102A



LEDGEN:

TP	DENOTES TRANSFER POINT
EP	DENOTES EMISSION POINT
PE	DENOTES POINT EMISSION

REV	DATE RELEASED	PURPOSE	APPROVED
A	11/07/2005	FOR AIR PERMIT INPUT	JRF S MADAN

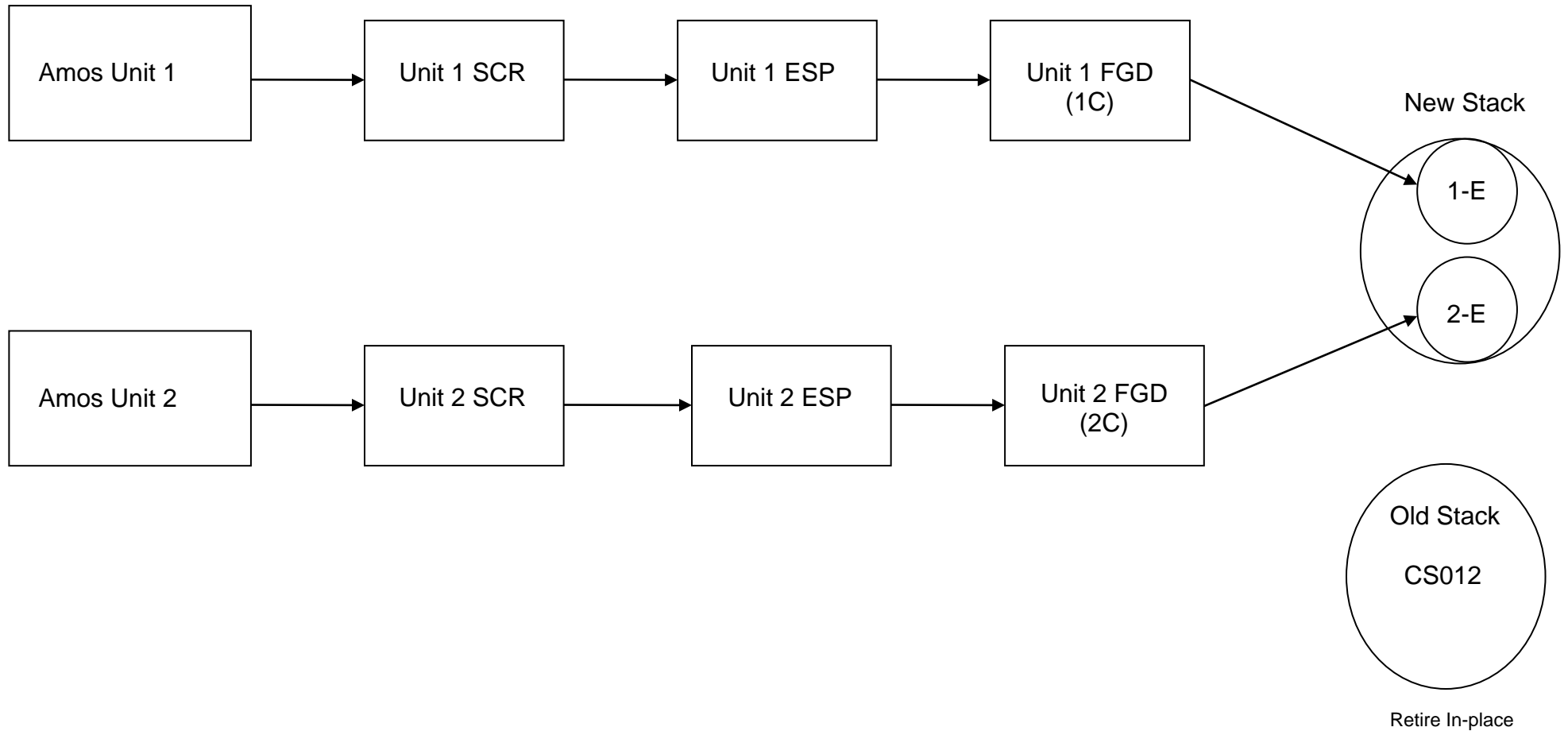
FILE NAME: 0507012.dgn

PROFESSIONAL ENGINEER'S STAMP

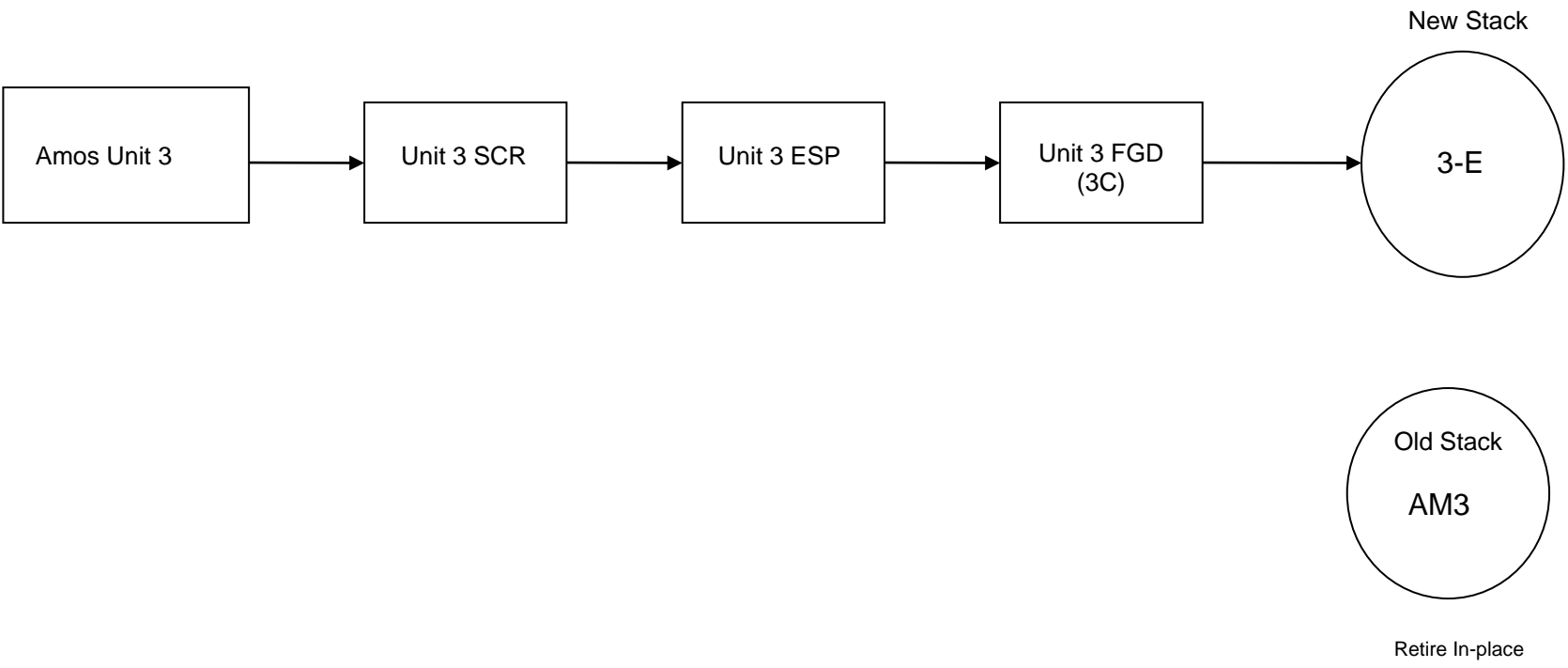
DATE	NO.	DESCRIPTION	APPROVED
<b>REVISIONS</b>			
<small>THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP. OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.</small>			
<b>APPALACHIAN POWER COMPANY</b> <b>AMOS PLANT</b> SCARY WEST VIRGINIA			
<b>DEWATERING AREA NORTH</b> <b>WASTE WATER TREATMENT</b> <b>EMISSION DIAGRAM</b>			
<b>DWG. NO. 0-507012B-A</b>			
SCALE:			
DATE:			
<small>CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO GUARANTEE THE SAFETY OF ALL PERSONS LOCATED BY THE WORK. THIS INCLUDES CONSTRUCTION OF SAFETY BARRIERS, OR THAT OF ITS EQUIPMENT, IN THE WORK AREA.</small>			
<small>ASP SERVICE CORP.          1 RIVERSIDE PLAZA          COLUMBUS, OH 43228</small>			

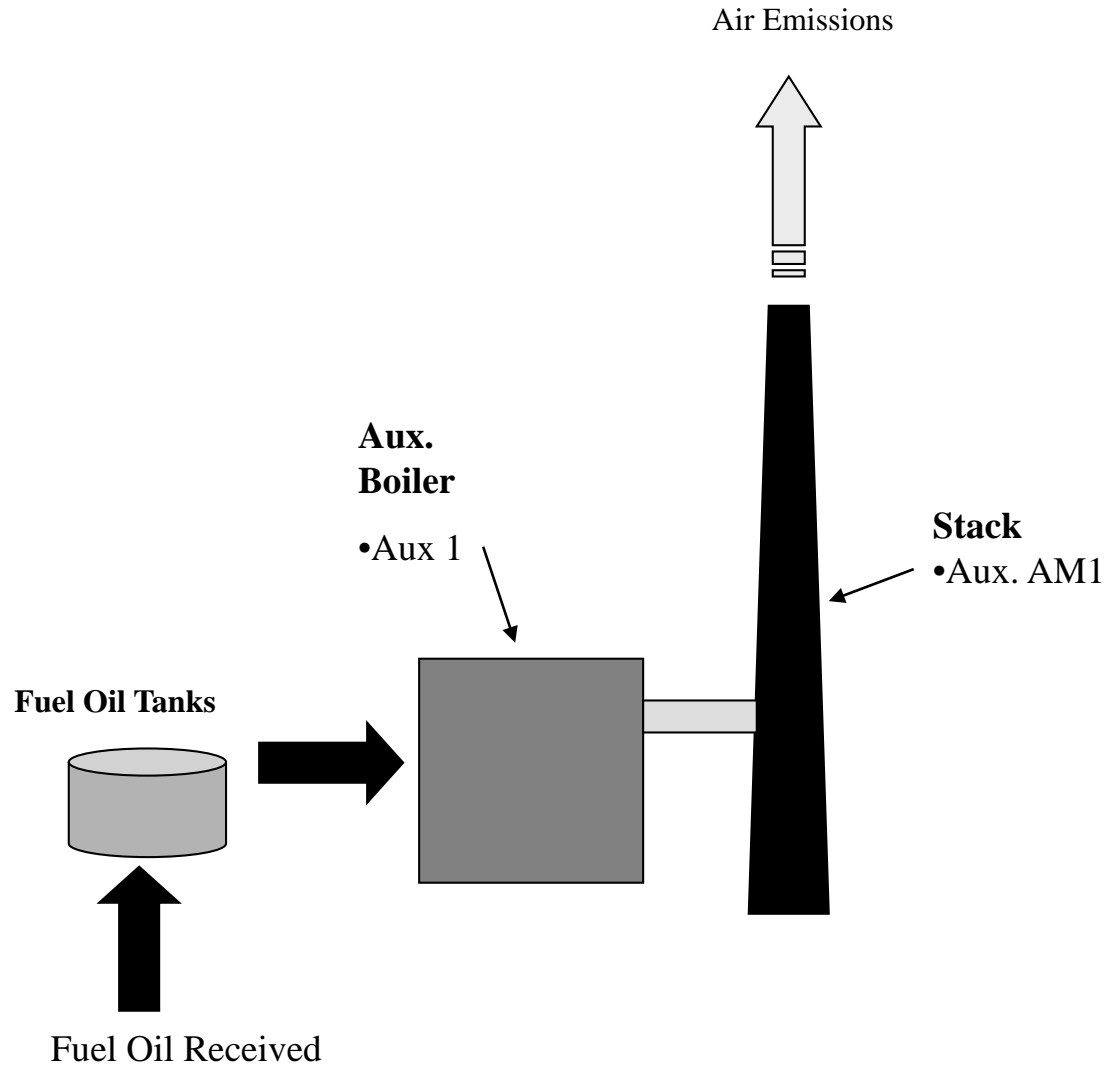
Attachment C  
Process Flow Diagrams

## Flow Diagram: John E. Amos Plant Units 1&2 FGD and Stack Addition



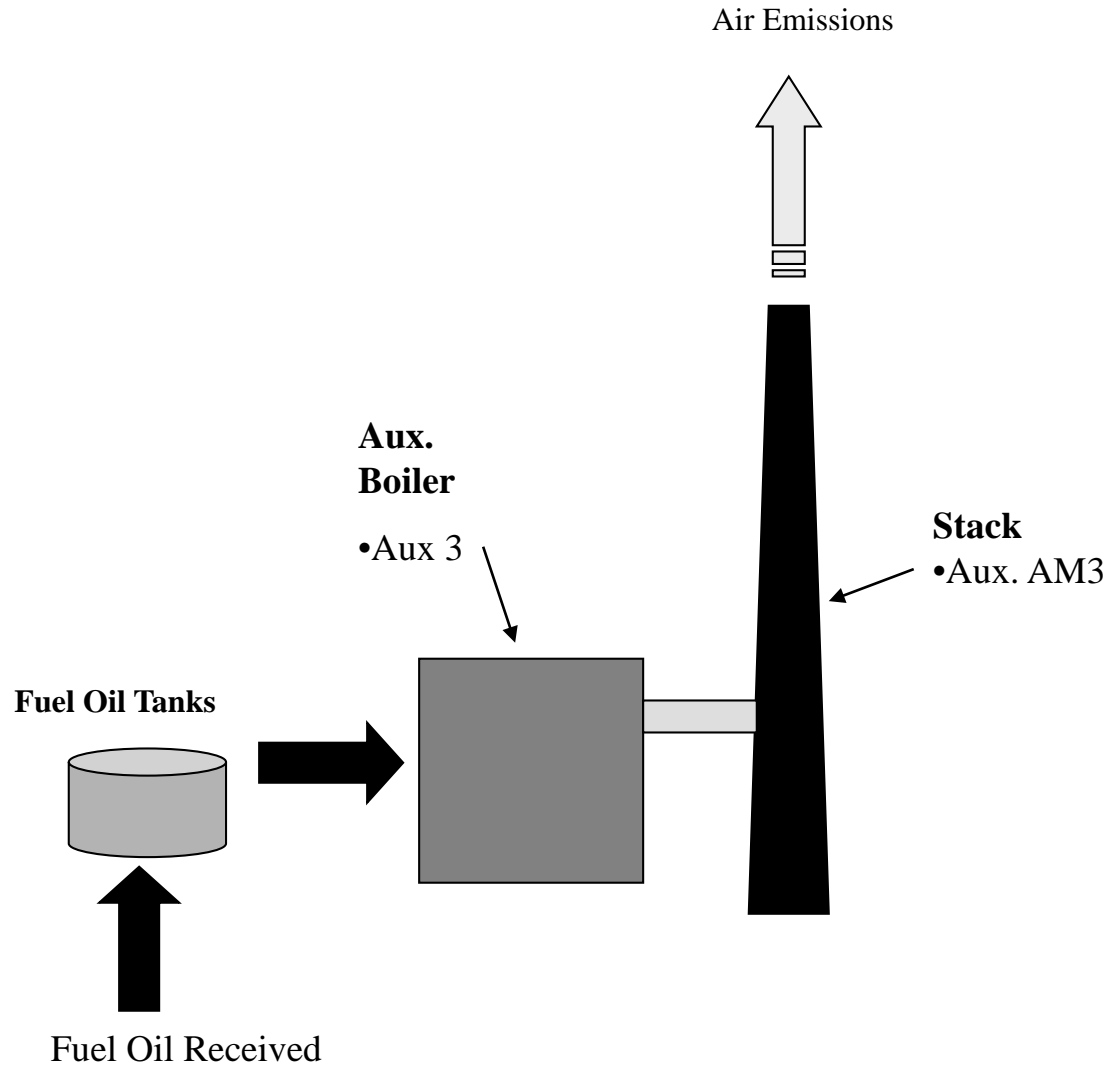
# Flow Diagram: John E. Amos Plant Unit 3 FGD and Stack Addition





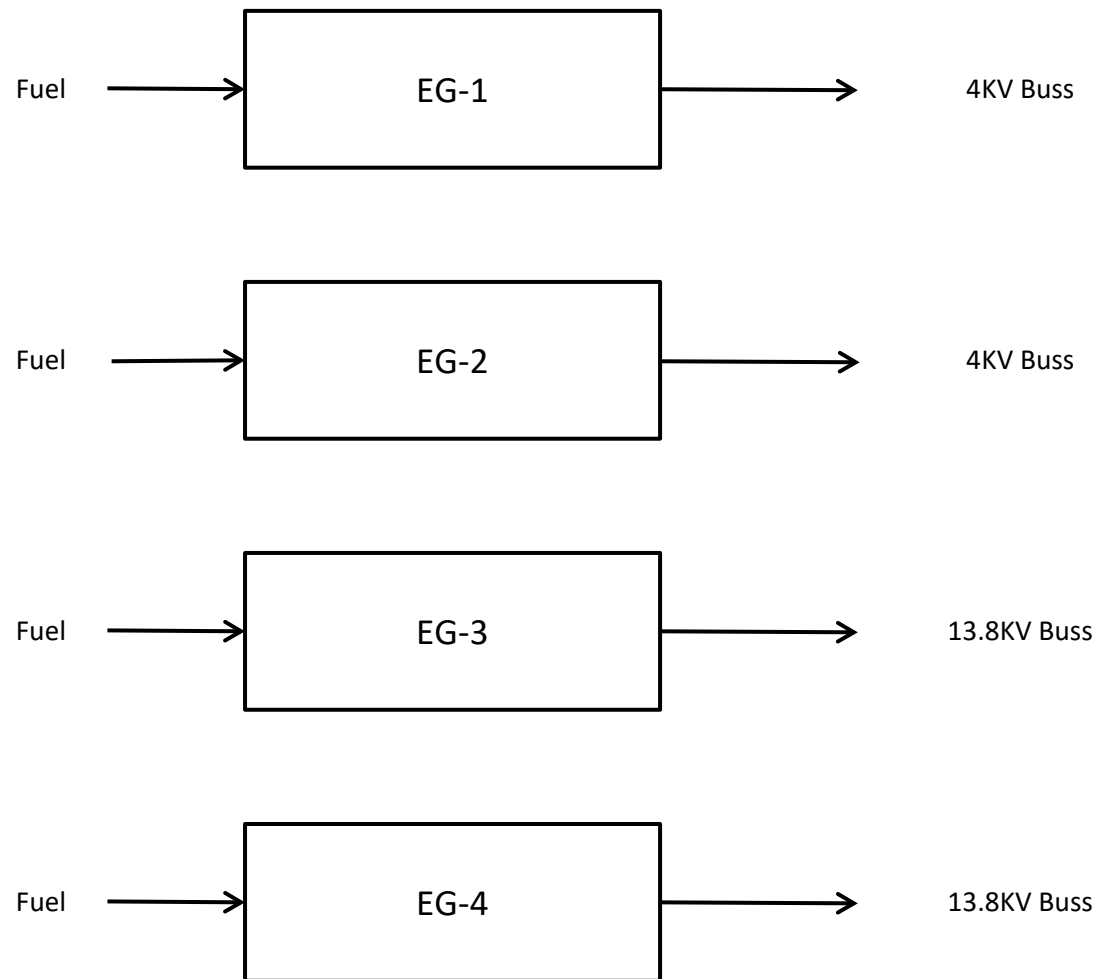
**Amos Plant Aux Boiler 1**  
Process Flow Diagram  
3/9/2005

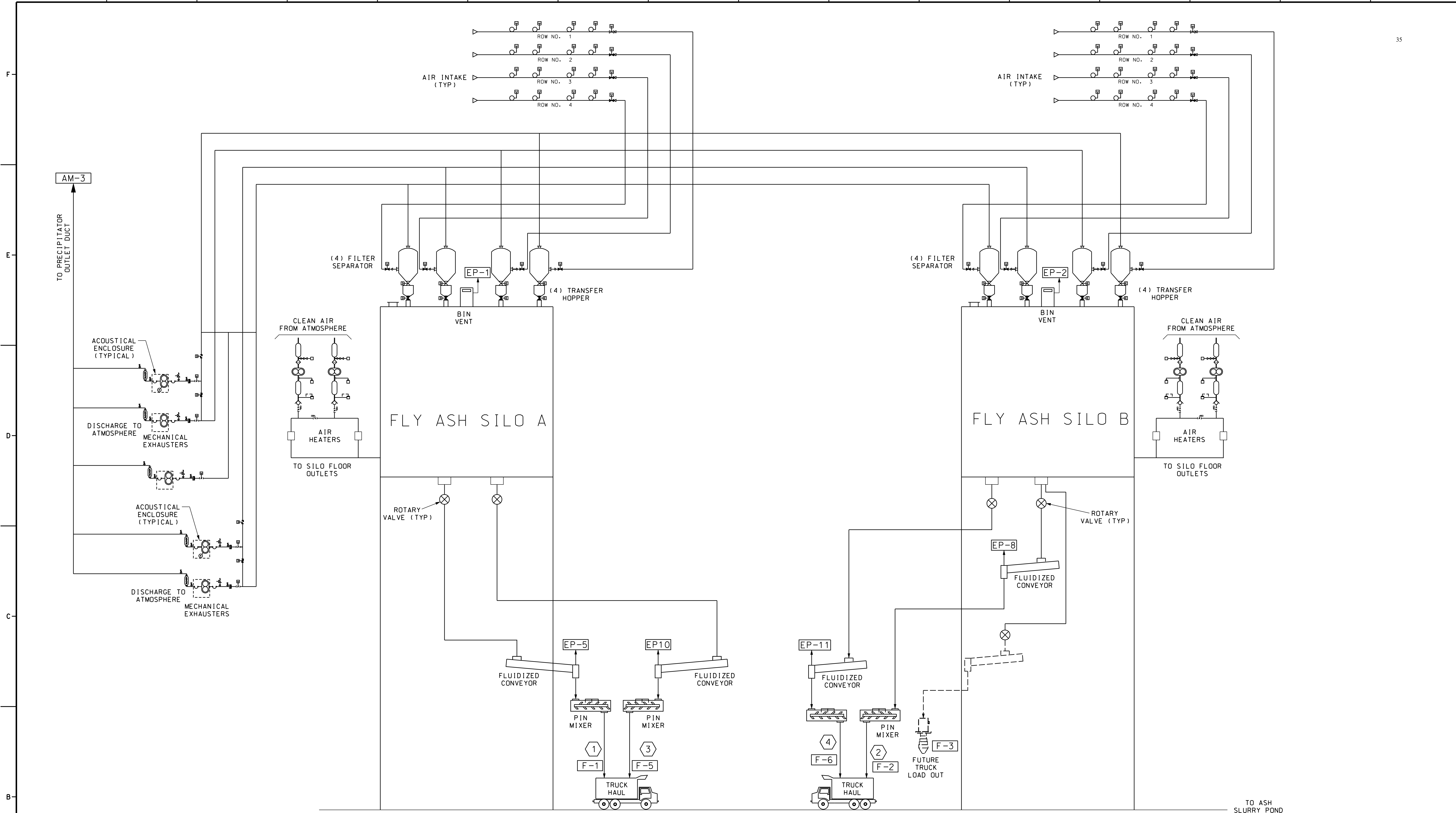




**Amos Plant Aux Boiler 3**  
Process Flow Diagram  
3/9/2005

John E. Amos Plant  
Emergency Generator Flow Diagram





**LEGEND:**

- VENTILATION FAN
- TRANSFER POINT
- EMISSION POINT
- FUGITIVE EMISSION POINT

CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.

FILENAME: AMOS-EM-1.DGN

DRAWING RELEASE RECORD					
REV.	DATE REL'D.	PREPARED	REVIEWED	APPROVED	PURPOSE
0	09-24-2008	D. AMIN	S. MADAN		FOR REVIEW AND COMMENTS
1	04-08-2009	D. AMIN	S. MADAN		UPDATED FOR NEW ARRANGEMENT

DRAWING RELEASE RECORD					
REV.	DATE REL'D.	PREPARED	REVIEWED	APPROVED	PURPOSE
0	09-24-2008	D. AMIN	S. MADAN		FOR REVIEW AND COMMENTS
1	04-08-2009	D. AMIN	S. MADAN		UPDATED FOR NEW ARRANGEMENT

SCALE  
NONE  
PROJECT NUMBER  
12266-001

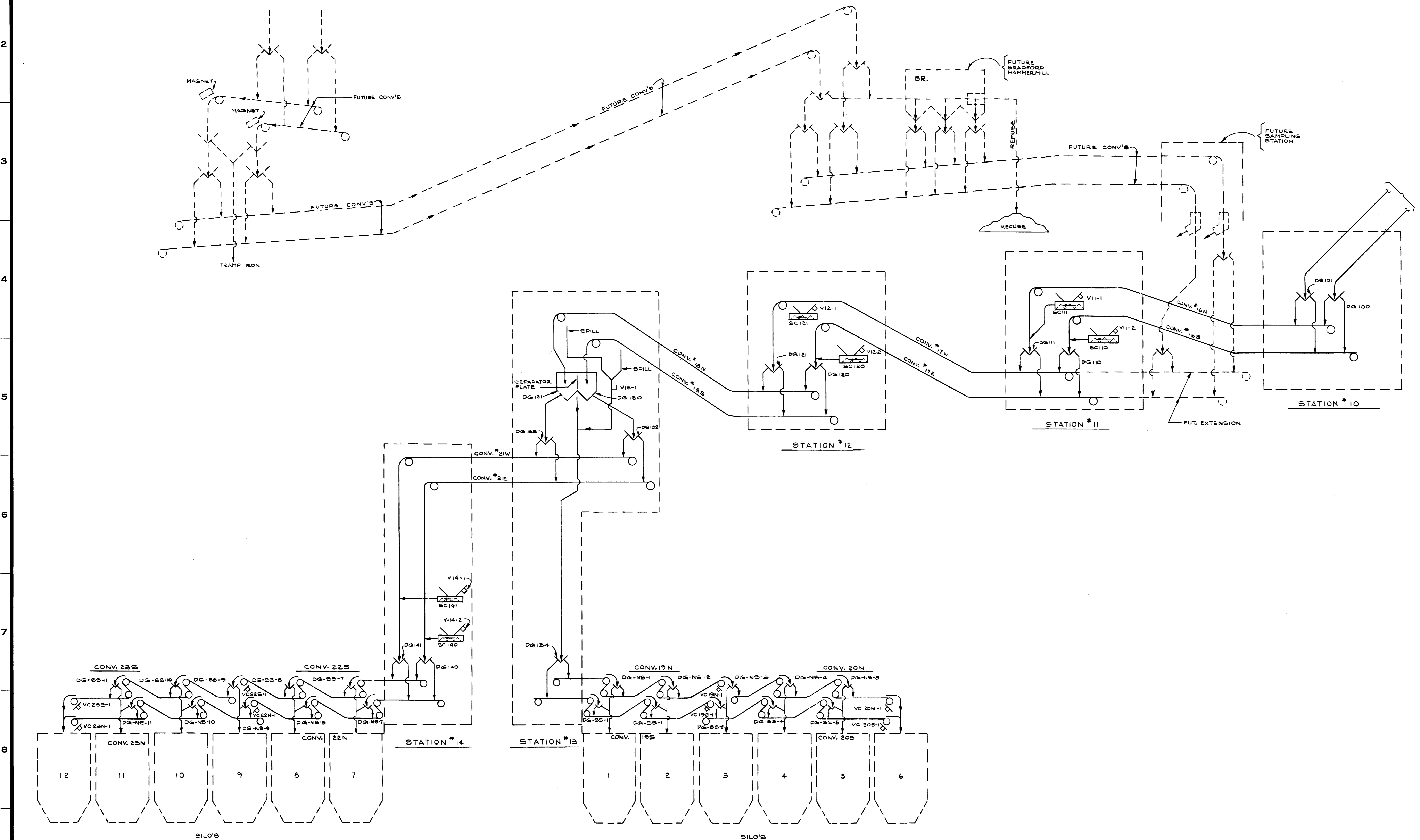
**EMISSION FLOW DIAGRAM  
FLY ASH HANDLING SYSTEM  
UNIT 3**



**JOHN AMOS PLANT  
AMERICAN ELECTRIC POWER**

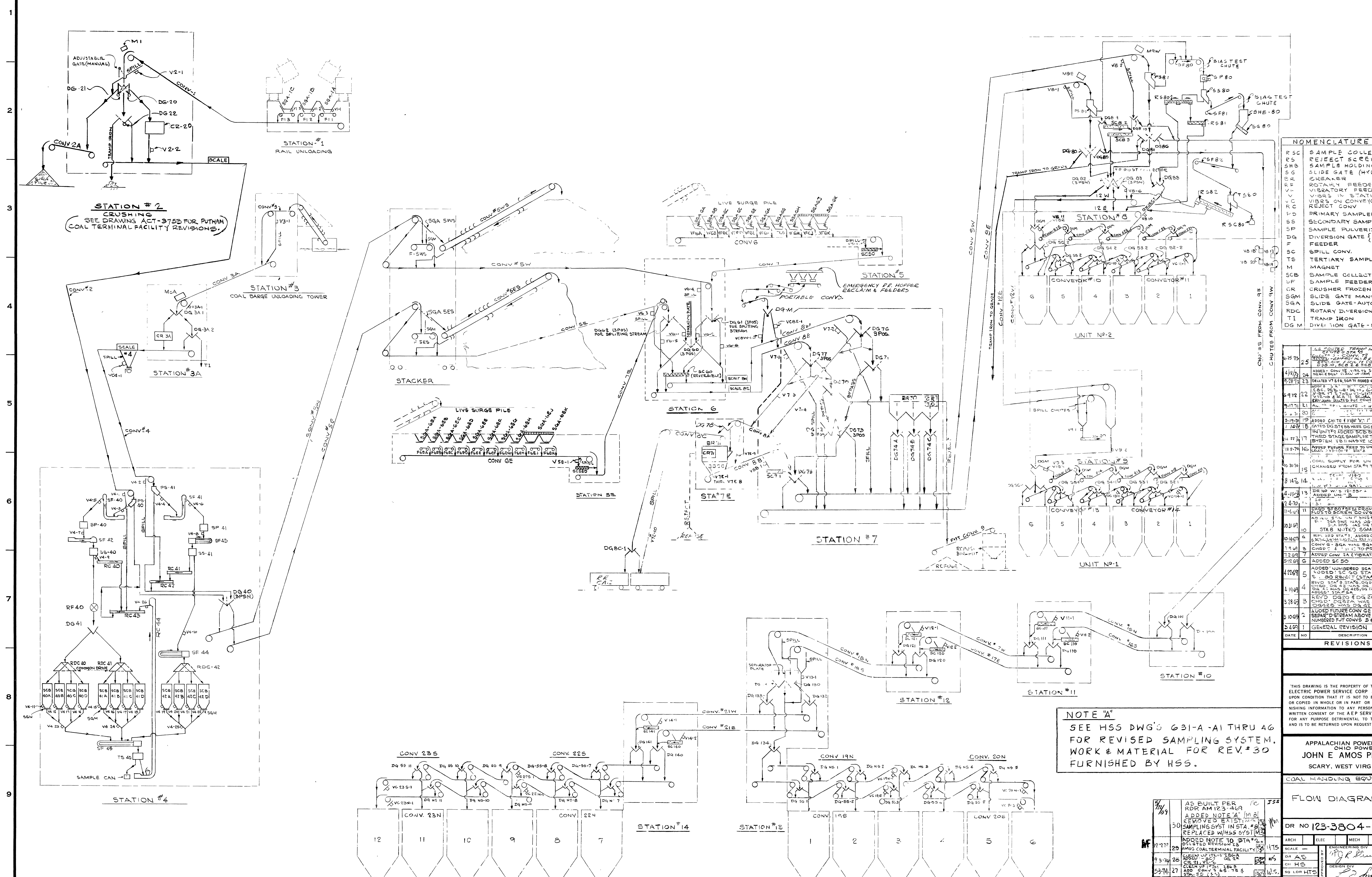
DRAWING NO. **EM-1** REV. **1**  
SHEET OF

Z:\41339\040920\01-INDRY-AMOS-FLY ASH HANDLING\ING-AMOS-EM-1.dgn 8/10/2009 8:07:26 AM



DATE	NO.	DESCRIPTION	APPRO.
<b>REVISIONS</b>			
<p>NOTE: GRADE ELEVATION HAS BEEN ESTABLISHED AS ELEVATION 100'-0" TO CONVERT TO PLANT DATUM ADD. 432'-0" TO ELEVATIONS SHOWN.</p> <p>"THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE A.E.P. SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST."</p>			
OHIO POWER CO. <b>JOHN E. AMOS PLANT</b> UNIT NO. 3 SCARY, WEST VIRGINIA			
<b>COAL HANDLING EQUIPMENT</b> <b>FLOW DIAGRAM</b> CIA-70704			
DR. NO. 3-99003			
ARCH	ELEC	MECH	STR.
SCALE: 1/4" = 1'-0"	ENGINEER: <i>[Signature]</i> DR. (A.E.S.): <i>[Signature]</i> CH. J.R. SQ. LOR. F.H. DATE: 1/11/73		
APPROVED BY: <i>[Signature]</i> DESIGN DIV. DATE: 1/11/73			
AMERICAN ELECTRIC POWER SERVICE CORP. 2 BROADWAY NEW YORK			





**NOMENCLATURE**

R SC	SAMPLE COLLECTOR
RS	REJECT SCREW CONVEYOR
SHB	SAMPLE HOLDING BIN
SG	SLIDE GATE (HYD.)
SGM	SLIDE GATE (MANUAL)
SGA	SLIDE GATE (AUTOMATIC)
RDC	ROTARY DIVISION CHUTE
TI	TRAMP IRON
DGM	DIVISION GATE-MANUAL
SCB	SAMPLE COLLECTING BIN
UF	SAMPLE FEEDER
CR	CRUSHER FROZEN COAL
SGM	SLIDE GATE MANUAL
SGA	SLIDE GATE-AUTOMATIC
RDC	ROTARY DIVISION CHUTE
TI	TRAMP IRON
DGM	DIVISION GATE-MANUAL

**REVISIONS**

DATE	NO.	DESCRIPTION	APPD.
12-15-73	25	AS BUILT PER RDR AM 123-418A	JSS
4/12/74	24	ADDED CONV. 12W, 12E, 12S, 12N, 12O, 12P, 12Q, 12R, 12S, 12T, 12U, 12V, 12W, 12X, 12Y, 12Z	W.S.
4/28/74	23	DELETED V716, SGA71, RDC71, DGM71	W.S.
4/29/74	22	ADDED V717, SGA71, RDC71, DGM71	W.S.
4/29/74	21	ADDED V718, SGA71, RDC71, DGM71	W.S.
2-19-74	19	ADDED CHUTE (VIB) V71 (STA 3)	W.S.
1/24/74	18	GATED DGM71, RDC71, SGA71, DGM71	W.S.
11/27/73	17	ADDED VIB FEED UNIT'S (VIB) V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100	W.S.
11/27/73	16	ADDED VIB FEED UNIT'S (VIB) V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100	W.S.
10/20/73	15	COAL SUPPLY FEED UNIT'S (VIB) V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100	W.S.
8/14/73	14	ADDED VIB FEED UNIT'S (VIB) V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100	W.S.
4/12/73	13	DR NO W-12-28-73	W.S.
4/12/73	12	ADDED UNIT'S	W.S.
7/4/70	11	ADDED UNIT'S	W.S.
11/2/69	10	ADDED UNIT'S	W.S.
10/21/69	9	ADDED UNIT'S	W.S.
10/14/69	8	ADDED UNIT'S	W.S.
12/29/69	7	ADDED UNIT'S	W.S.
5/12/69	6	ADDED UNIT'S	W.S.
4/22/69	5	ADDED UNIT'S	W.S.
4/14/69	4	ADDED UNIT'S	W.S.
3/28/69	3	ADDED UNIT'S	W.S.
3/10/69	2	ADDED UNIT'S	W.S.
2/4/69	1	ADDED UNIT'S	W.S.

**NOTE "A"**  
SEE HSS DWG'S 031-A-A1 THRU 40 FOR REVISED SAMPLING SYSTEM. WORK & MATERIAL FOR REV.#30 FURNISHED BY HSS.

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APPALACHIAN POWER CO.  
OHIO POWER CO.  
JOHN E. AMOS PLANT  
SCARY, WEST VIRGINIA

COAL HANDLING EQUIPMENT

FLOW DIAGRAM

DR NO 123-3804-30

ARCH	ELEC	MECH	STR
AS BUILT PER RDR AM 123-418A			
ADDED NOTE "A" (M.B.)			
REMOVED EXISTING SAMPLING SYST IN STA #12			
REPLACED WITH HSS SYST (M.B.)			
DELETED REVISIONS 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40			
DATE	NO.	DESCRIPTION	APPD.

NOTES

- 1. FOR STANDARD SYMBOLS SEE DWG. NO. 123-5520
- 2. ALL DUCT TO BE ROUND UNLESS NOTED

REFERENCE DRAWINGS

- 123-5353 DUST COLLECTION & VENTILATION
- 123-5353A DUST COLLECTION & VENTILATION

DATE	NO.	DESCRIPTION	APPROV.
7/27/93	1	PER PTS 59534 AS-BUILT CONDITION ADDED DUST BIN (LB) REVISED DUCT (K7) DELETED DUCT & CART (L9) JB/DWM	MKG JOB
9/18/92	0	PER COR: AM-00-65155 RELEASED FOR CONSTRUCTION	JOB DES TPO

REVISIONS

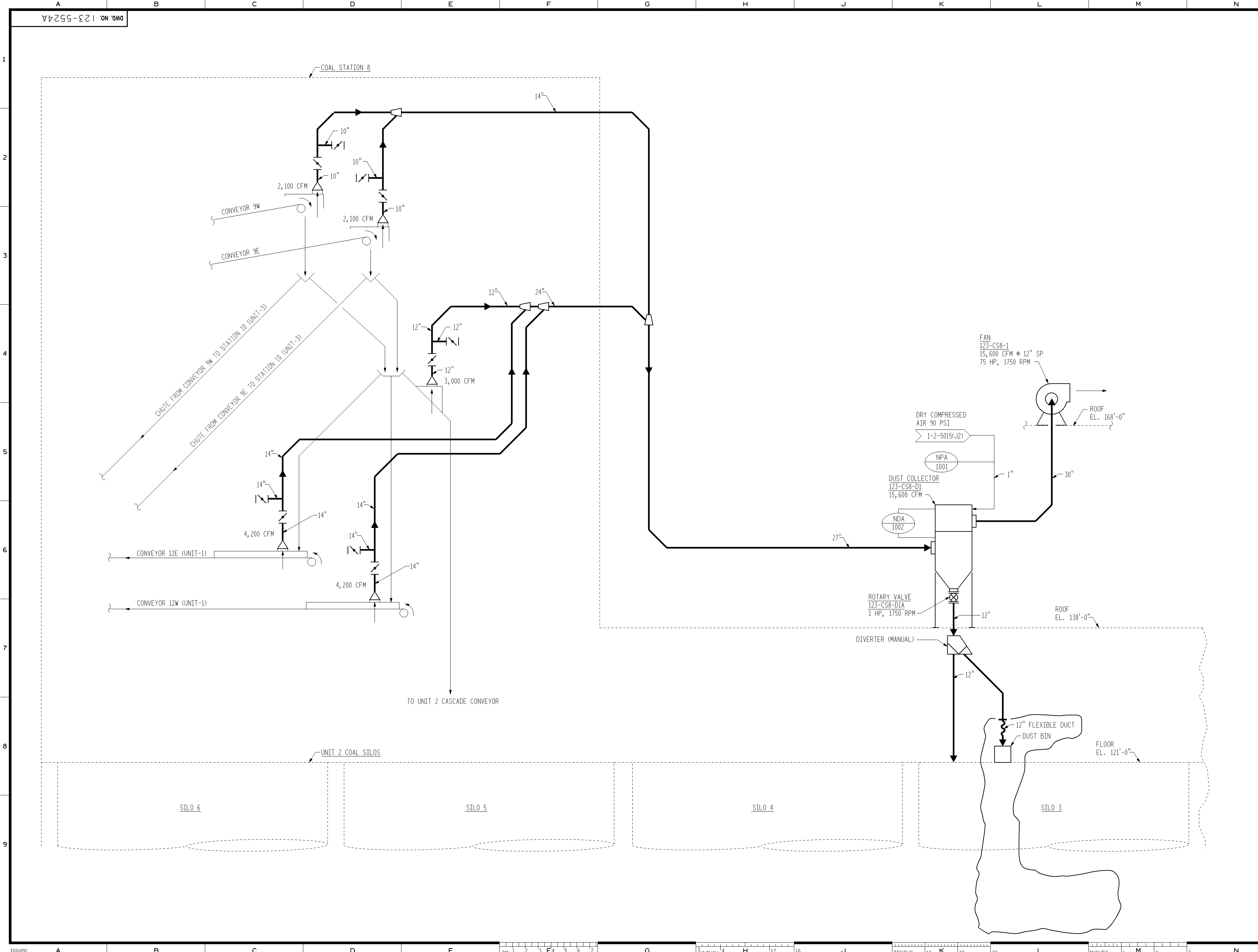
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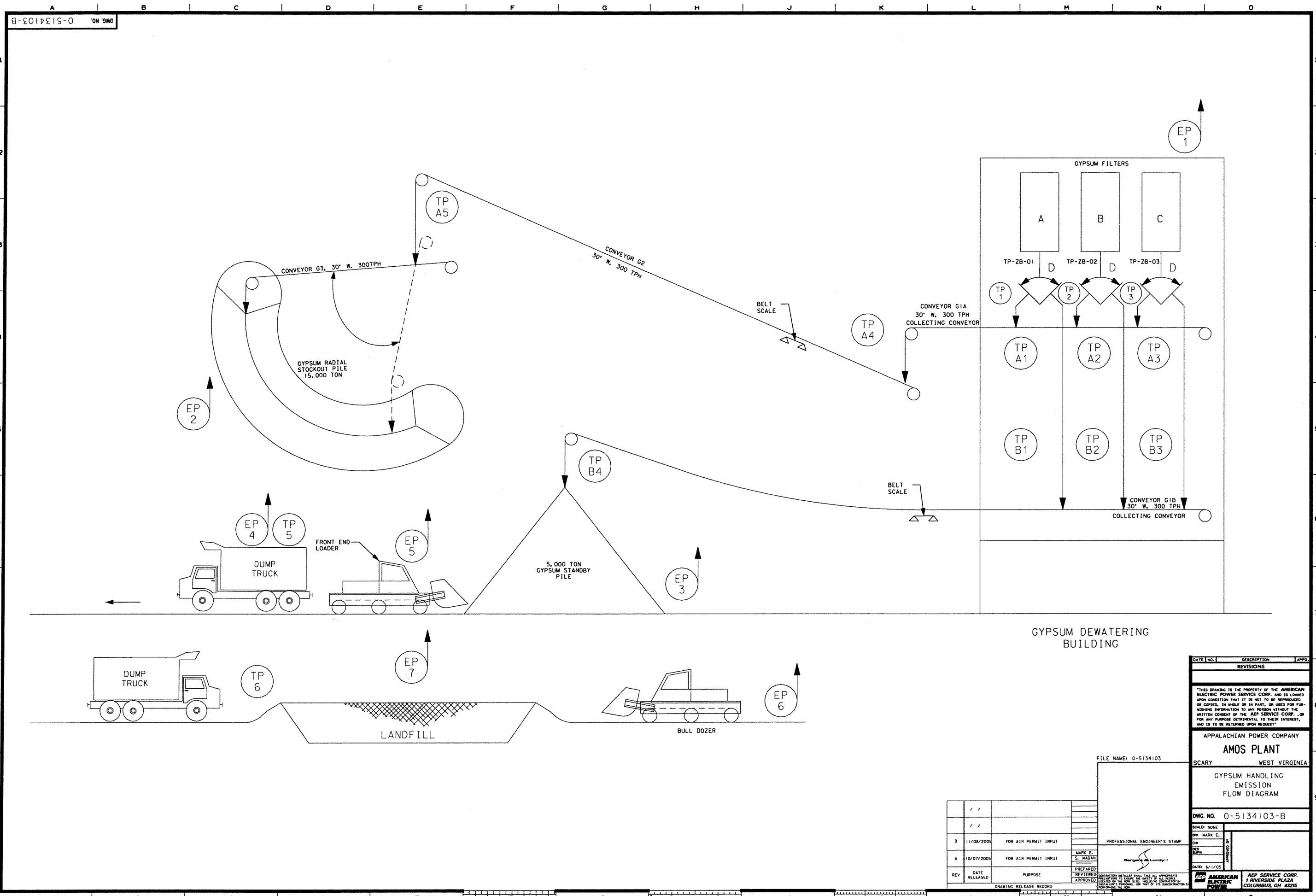
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APPALACHIAN POWER CO.  
**JOHN E. AMOS PLANT**  
 SCARY, WEST VIRGINIA  
**FLOW DIAGRAM**  
 COAL HANDLING STATION 8  
 DUST COLLECTION

DWG. NO. 123-5524A-1

ARCH	ELEC	AY	MECH	RY	STR
SCALE: NONE	ENGINEERING DIVISION 04/AMT				
DR: DWM	G. R. BURRIS, JR. TPO				
CH: TN	DESIGN DEPARTMENT				
APP: DWM	F. S. VANPELT, JR/V. A. LEPORE JOB				
DATE: 9/18/92					





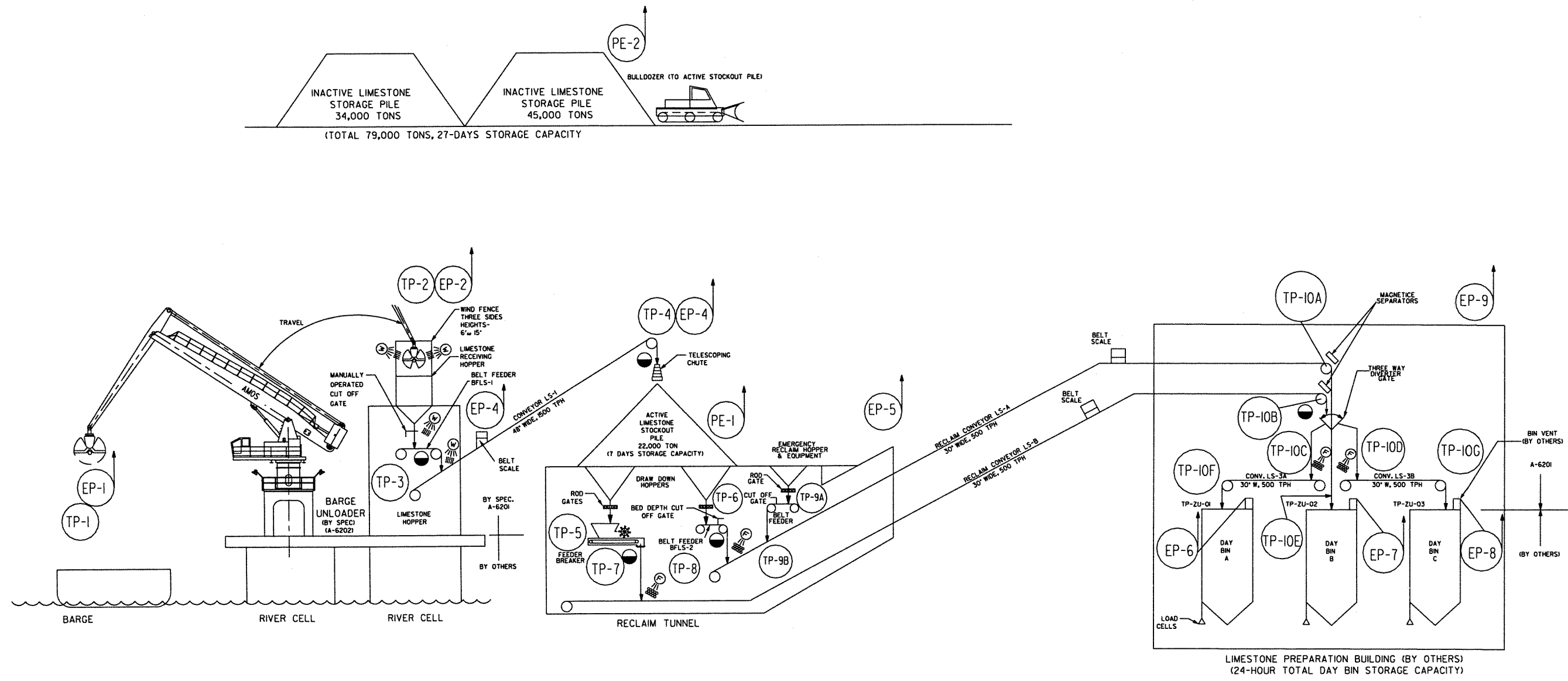
**GYPSUM DEWATERING BUILDING**

DATE	NO.	DESCRIPTION	APPROVED												
REVISIONS															
<p>"THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST."</p>															
APPALACHIAN POWER COMPANY															
<b>AMOS PLANT</b>															
SCARY		WEST VIRGINIA													
GYPSUM HANDLING EMISSION FLOW DIAGRAM															
DWG. NO. 0-5134103-B															
SCALE: NONE															
<table border="1"> <tr> <td>DATE</td> <td>NO.</td> <td>DESCRIPTION</td> <td>APPROVED</td> </tr> <tr> <td>11/08/2005</td> <td>B</td> <td>FOR AIR PERMIT INPUT</td> <td>MARK E.</td> </tr> <tr> <td>10/07/2005</td> <td>A</td> <td>FOR AIR PERMIT INPUT</td> <td>S. MADAN</td> </tr> </table>				DATE	NO.	DESCRIPTION	APPROVED	11/08/2005	B	FOR AIR PERMIT INPUT	MARK E.	10/07/2005	A	FOR AIR PERMIT INPUT	S. MADAN
DATE	NO.	DESCRIPTION	APPROVED												
11/08/2005	B	FOR AIR PERMIT INPUT	MARK E.												
10/07/2005	A	FOR AIR PERMIT INPUT	S. MADAN												
<table border="1"> <tr> <td>REV</td> <td>DATE</td> <td>PURPOSE</td> <td>APPROVED</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>				REV	DATE	PURPOSE	APPROVED								
REV	DATE	PURPOSE	APPROVED												
<p>CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO BEAR THE WEIGHT OF ALL WORKS IN THE WORK AREA. HELMETS MUST BE WORN AT ALL TIMES BY ALL PERSONNEL ON THE JOB.</p>															
<p>PROFESSIONAL ENGINEER'S STAMP</p> <p>MARK E. MADAN</p>		<p>DATE: 6/17/05</p>													
<p>FILE NAME: 0-5134103</p>		<p>AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215</p>													

DATE	NO.	PURPOSE	APPROVED
11/08/2005	B	FOR AIR PERMIT INPUT	MARK E.
10/07/2005	A	FOR AIR PERMIT INPUT	S. MADAN



8-70501G-0 '0M '000



**LEGEND**

- TP TRANSFER POINT
- EP EMISSION POINT
- PE POINT EMISSION

TIE-POINT NUMBER	SYSTEM	COMMENTS
TP-ZU-01	ZU	LIMESTONE CONVEYOR TO BIN A
TP-ZU-02	ZU	LIMESTONE CONVEYOR TO BIN B
TP-ZU-03	ZU	LIMESTONE CONVEYOR TO BIN C

- DENOTES WATER DUST SUPPRESSION
- DENOTES FOG DUST SUPPRESSION
- DENOTES PLUGGED CHUTE DETECTOR

REV	DATE RELEASED	PURPOSE	PREPARED	REVIEWED	APPROVED
B	8/3/05	FOR AIR PERMIT INPUT	T. COTTON	S. MADAM	
A	12/17/05	FOR AIR PERMIT INPUT	J.P.	S. MADAM	

**REVISIONS**

DATE | NO. | DESCRIPTION | APPD.

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APPALACHIAN POWER COMPANY  
**AMOS PLANT**  
 SCARY WEST VIRGINIA

**LIMESTONE HANDLING EMISSION DIAGRAM UNITS 1, 2 & 3**

DWG. NO. 0-517050A-B

SCALE: NONE

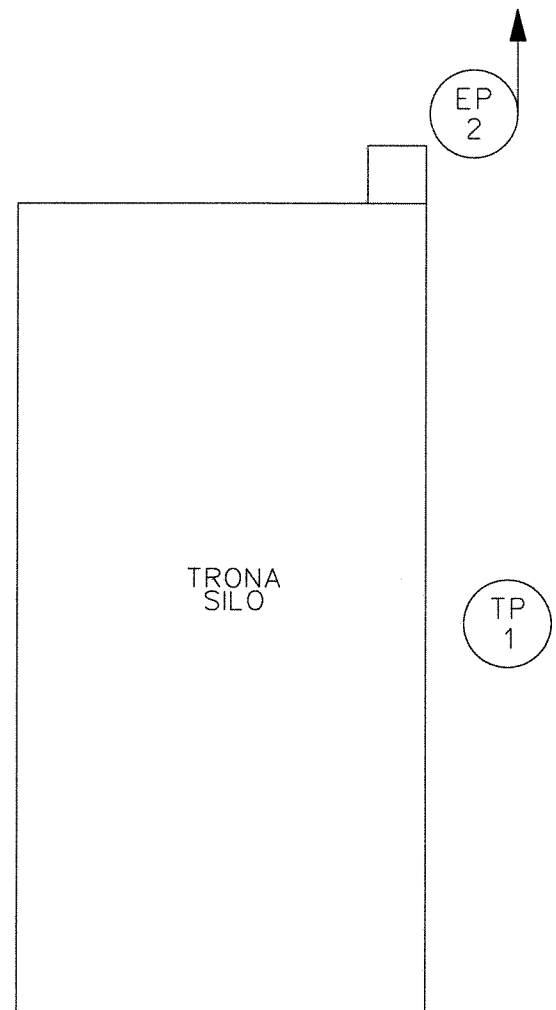
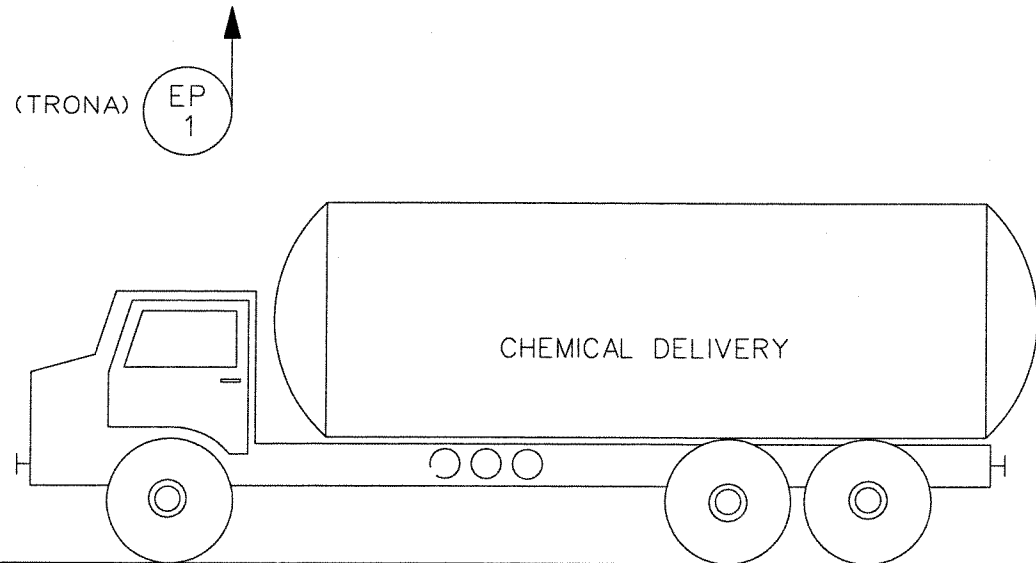
DATE: \_\_\_\_\_

PROFESSIONAL ENGINEER'S STAMP

AEP SERVICE CORP.  
 1 RIVERSIDE PLAZA  
 COLUMBUS, OH 43216



DWG. NO. 0-5134106-B



REV	DATE	PURPOSE	PREPARED BY	APPROVED BY
B	11/3/2005	FOR AIR PERMIT INPUT	T. COTTON S. MADAN	
A	10/07/2005	FOR AIR PERMIT INPUT	MARK E. S. MADAN	

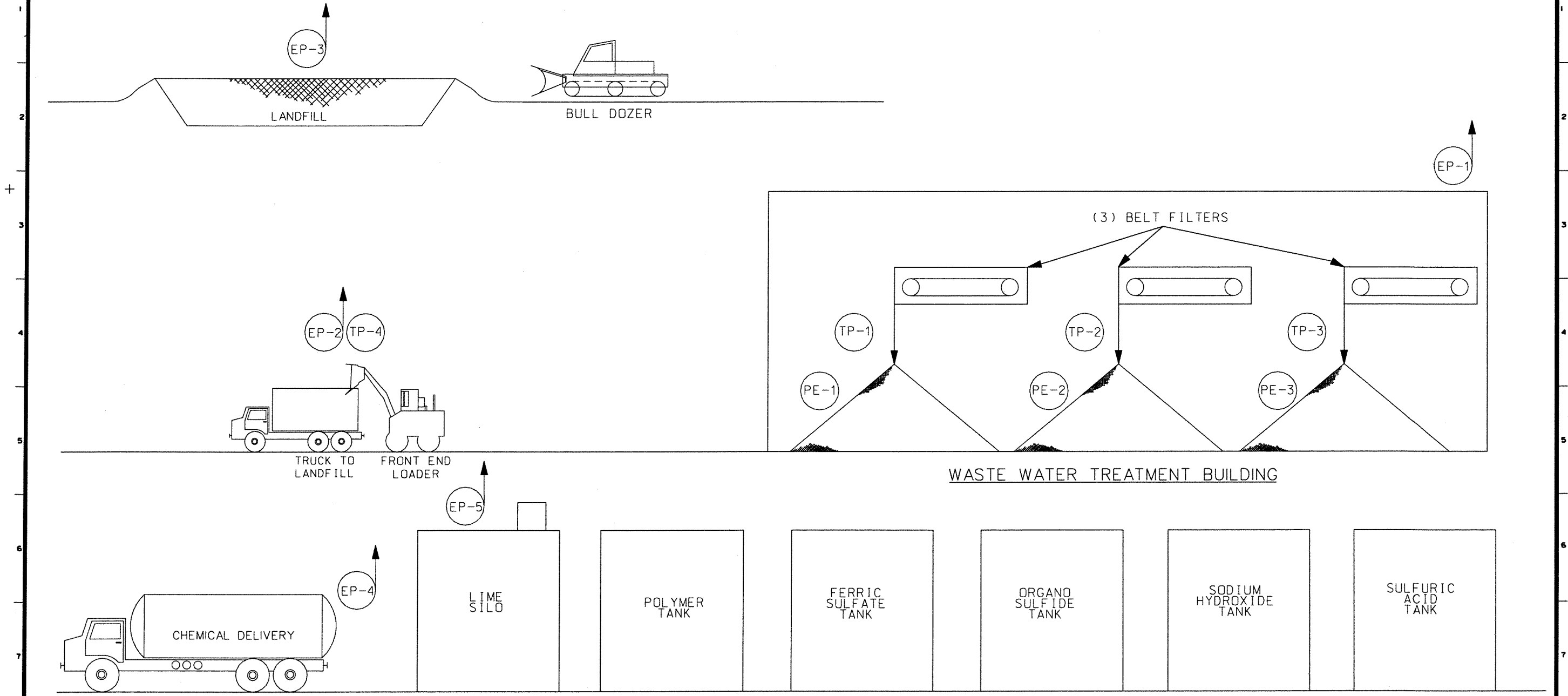
FILE NAME: 0-5134106.dgn

PROFESSIONAL ENGINEER'S STAMP

DATE	NO.	DESCRIPTION	APPROVED
<b>REVISIONS</b>			
<small>THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORPORATION. IT IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP. FOR ANY PURPOSE, DESTROYABLE, TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.</small>			
<b>APPALACHIAN POWER COMPANY</b> <b>AMOS PLANT</b> SCARY WEST VIRGINIA			
SO3 MITIGATION SYSTEM EMISSION FLOW DIAGRAM			
<b>DWG. NO. 0-5134106-B</b>			
<small>SCALE: NONE</small> <small>DATE: 6/1/05</small>			
<small>CONTRACTOR/INSTALLER SHALL USE ALL APPROPRIATE PRECAUTION TO ENSURE THE SAFETY OF ALL PEOPLE OPERATING IN THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE SAFETY OF HIS SUBCONTRACTORS AND HIS OWN PERSONNEL.</small>		<small>AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43218</small>	

A B C D E F G H J K L M N O

DWG. NO. 0-5134105-B



**LEGEND**

- PE INDICATES POINT OF EMISSION
- TP INDICATES TRANSFER POINT
- EP INDICATES EMISSIONS POINT

DATE	NO.	DESCRIPTION	APPRO.
<b>REVISIONS</b>			
<small>THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP. FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.</small>			
<b>APPALACHIAN POWER COMPANY</b> <b>AMOS PLANT</b> SCARY WEST VIRGINIA <b>WASTE WATER CONV. EMISSIONS FLOW DIAGRAM</b> DWG. NO. 0-5134105-B			
SCALE: NONE		DATE: 8/1/05	
PREPARED BY: T. GOTTON REVIEWED BY: S. MADAN APPROVED BY: S. MADAN		PROFESSIONAL ENGINEER'S STAMP <small>AMERICAN ELECTRIC POWER SERVICE CORP. ENGINEER</small>	
FILE NAME: 0-5134105.DGN		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

REV	DATE	RELEASED	PURPOSE	APPROVED
B	11/3/2005		FOR AIR PERMIT INPUT	T. GOTTON
A	10/06/2005		FOR AIR PERMIT INPUT	MARK E. S. MADAN

CM 1 2 3 4 5 6 7 1/16 INCH 4 12 16 J TENTHS 10 K 20 30 L INCHES 1 2 3 M N

Attachment D  
Equipment Table

<b>ATTACHMENT D - Title V Equipment Table</b> (includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)					
Emission Point ID <sup>1</sup>	Control Device <sup>1</sup>	Emission Unit ID <sup>1</sup>	Emission Unit Description	Design Capacity	Year Installed/Modified
<b>Boiler &amp; Associated Equipment</b>					
CS012	High efficiency ESP, LNB, SCR, FGD	Unit 1	Foster Wheeler, Model #2-85-543	7020 mmBtu/hr	1971
CS012	High efficiency ESP, LNB, SCR, FGD	Unit 2	Foster Wheeler, Model #2-85-706	7020 mmBtu/hr	1972
AM3	High efficiency ESP, LNB, SCR, FGD	Unit 3	Babcock & Wilcox, Model # UP-101	11936 mmBtu/hr	1973
Aux AM1	NA	Aux 1	Foster Wheeler, Model #SD-25 (Auxiliary Boiler for Unit 1 & Unit 2)	642 mmBtu/hr	1971
Aux AM3	NA	Aux 3	Babcock & Wilcox, Model # PFI-3134 (Auxiliary Boiler for Unit 3)	600 mmBtu/hr	1971
<b>Emergency Generators &amp; Associated Equipment</b>					
EG-1	None	EG-1	CAT® 3516C-HD TA Compression Ignition (CI) Engine Certificate No. ECPXL78.1NZZ-024 Engine ECPXL78.1NZZ	3,004- bhp @ 1,800 rpm	2014
EG-2	None	EG-2	CAT® 3516C-HD TA (CI) Engine Certificate No. ECPXL78.1NZZ-024 Engine ECPXL78.1NZZ	3,004- bhp @ 1,800 rpm	2014
EG-3	None	EG-3	CAT® 3516C-HD TA (CI) Engine Certificate No. ECPXL78.1NZZ-024 Engine ECPXL78.1NZZ	3,004- bhp @ 1,800 rpm	2014
EG-4	None	EG-4	CAT® 3516C-HD TA (CI) Engine Certificate No. ECPXL78.1NZZ-024 Engine ECPXL78.1NZZ	3,004- bhp @ 1,800 rpm	2014
EGT01	None	EGT01	Diesel Fuel Storage Tank for EG-1	4800 gal	2014

EGT02	None	EGT02	Diesel Fuel Storage Tank for EG-2	4800 gal	2014
EGT03	None	EGT03	Diesel Fuel Storage Tank for EG-3	4800 gal	2014
EGT04	None	EGT04	Diesel Fuel Storage Tank for EG-4	4800 gal	2014
<b>Coal Handling Equipment ( Units 1, 2, &amp; 3)</b>					
BU	WS, MC	BU	Barge Unloader (unload barge onto Conveyor 3 in Station 3)	4000 TPH	1971
C-3	WS, MC	C-3	Conveyor 3 (transfer from BU to conveyor 3A in Station 3)	4000 TPH	1971
Sta-3	FE, MC	Station 3	Drop Point from conveyor 3 to conveyor 3A	4000 TPH	1971
C-3A	FE, MC	C-3A	Conveyor 3A (transfer to Station 3A)	4000 TPH	1971
Sta-3A	FE, DC, MC	Station 3A	Drop point from conveyor 3A to coal crusher or conveyor 4	4000 TPH	1971
CR-3A	FE, DC, MC	CR-3A	Coal Crusher 3A (bypassed)	4000 TPH	1971
C-4	PE, MC	C-4	Conveyor 4 (transfer to Station 4)	4000 TPH	1971
Sta-4	FE, DC, MC	Station 4	Drop Point from Conveyor 4 or Conveyor 2 to Conveyor 5E/5W	4000 TPH	1971
BD-RCU	PE, MC	BD-RCU	Bottom Dump Coal Railcar Unloader (unload railcars onto conveyor R2)	4000 TPH	1999
C-R2	PE, MC	C-R2	Conveyor R2 (transfer from BD-RCU to Station 4a)	4000 TPH	1999
Sta-4a	FE, MC	Station 4a	Drop point from conveyor R2 to conveyor 5E/5W	4000 TPH	1999
C-5E, C-5W	MC	C-5E, C-5W	Conveyors 5E and 5W (transfer to stackers 5WS and 5ES or bypass pile to conveyors 8E and 8W)	4000 TPH, each	1971
5WS and 5ES	MC	5WS and 5ES	Stackers 5WS and 5ES (transfer to stockpile – CSA-1)	4000 TPH, each	1971
CSA-1	WS, MC	CSA-1	Amos Coal Storage Area #1	Approx. 35 acres	1971
Sta-5/5E	FE, MC	Station 5/5E	Drop point from stockpile CSA-1 to feeders 6E-A through 6E-K and/or feeders 6-A through 6-K	2000 TPH	1971
F6E-A through F6E-K and F6-A through F6-K	FE, MC	F6E-A through F6E-K and F6-A through F6-K	Feeders 6E-A through 6E-K and/or feeders 6-A through 6-K (transfer to Conveyors 7/7E in Stations 5 and 5E)	2000TPH	1971
C-7, C-7E	FE, MC	C-7, C-7E	Conveyors 7 and 7E (transfer to Station 6)	2000 TPH, each	1971
Sta-6	FE, MC	Station 6	Drop from Conveyors 7/7E or 5E/5W to Conveyors 8E/8W	2000 TPH	1971

C-8E, C-8W	PE, MC	C-8E, C-8W	Conveyors 8E and 8W (transfer to Station 7)	2000 TPH, each	1971
CR-70E	FE, MC	CR-70E	Coal Crushers 70E	1600 TPH	Replaced 2004
CR-70W	FE, MC	CR-70W	Coal Crusher 70W	1600 TPH	Replaced 2003
Sta-7	FE, MC	Station 7	Drop from Conveyors 8E/8W to Coal Crushers or to Conveyors 9E/9W	2000 TPH	1971
C-9E, C-9W	FE, MC	C-9E, C-9W	Conveyors 9E and 9W (transfer to Station 8)	2000 TPH, each	1971
Sta-8	FE, DC, MC	Station 8	Drop from Conveyors 9E/9W to Conveyor 10, Conveyors 12E/12W, or Conveyors 16N/16S	2000 TPH	1971
C-10	FE, DC, MC	C-10	Conveyor 10 (transfer to ½ of Unit 2 Coal Bunkers or to Conveyor 11)	2000TPH	1972
C-11	FE, DC, MC	C-11	Conveyor 11 (transfer to ½ of Unit 2 Coal Bunkers)	2000TPH	1972
C-12E, C-12W	PE, MC	C-12E, C-12W	Conveyors 12E and 12W (transfer to Station 9)	2000 TPH, each	1971
Sta-9	FE, MC	Station 9	Drop from Conveyors 12E/12W to Conveyor 13	2000 TPH	1971
C-13	FE, DC, MC	C-13	Conveyor 13 (transfer to ½ of Unit 1 Coal Bunkers or to Conveyor 14)	2000TPH	1971
C-14	FE, DC, MC	C-14	Conveyor 14 (transfer to ½ of Unit 1 Coal Bunkers)	2000TPH	1971
Sta-10	FE, DC, MC	Station 10	Drop from Conveyors 9E/9W to Conveyors 16N/16S	2000TPH	1973
C-16N, C-16S	FE, DC, MC	C-16N, C-16S	Conveyors 16N and 16S (transfer to Station 11)	2000TPH	1973
Sta-11	FE, MC	Station 11	Drop from Conveyors 16N/16S to Conveyors 17E/17W	2000 TPH	1973
C-17E, C-17W	FE, MC	C-17E, C-17W	Conveyors 17E and 17W (transfer to Station 12)	2000TPH	1973
Sta-12	FE, MC	Station 12	Drop from Conveyors 17E/17W to Conveyors 18N/18S	2000 TPH	1973
C-18N, C-18S	FE, MC	C-18N, C-18S	Conveyors 18N and 18S (transfer to Station 13)	2000TPH	1973
Sta-13	FE, MC	Station 13	Drop from Conveyors 18N/18S to Conveyors 21E/21W and/or 19N/19S	2000 TPH	1973
C-21E, C-21W	FE, MC	C-21E, C-21W	Conveyors 21E and 21W (transfer to Station 14)	2000TPH	1973
Sta-14	FE, MC	Station 14	Drop from Conveyors 21E/21W to Conveyors 22N/22S	2000 TPH	1973
C-22N, C-22S	FE, DC, MC	C-22N, C-22S	Conveyors 22N and 22S (transfer to ¼ of Unit 3 Coal Bunkers or to Conveyors 23N/23S)	2000TPH	1973
C-23N, C-23S	FE, DC, MC	C-23N, C-23S	Conveyors 23N and 23S (transfer to ¼ of Unit 3 Coal Bunkers)	2000TPH	1973

C-19N, C-19S	FE, DC, MC	C-19N, C-19S	Conveyors 19N and 19S (transfer to ¼ of Unit 3 Coal Bunkers or to Conveyors 20N/20S)	2000TPH	1973
C-20N, C-20S	FE, DC, MC	C-20N, C-20S	Conveyors 20N and 20S (transfer to ¼ of Unit 3 Coal Bunkers)	2000TPH	1973
CR-20	FE, DC, WS, MC	CR-20	Coal Crusher 20	4000 TPH	1971
C-2	PE, MC	C-2	Conveyor 2 (transfer to Station 4)	4000 TPH	1971
<b>Coal Handling Equipment (Putnam Terminal)</b>					
C-2B	FE, DC, MC	C-2B	Conveyor 2B (transfer to Station B)	3300 TPH	1979
Sta-B	FE, MC	Station B	Drop point from Conveyor 2B to Conveyors B or BC through Surge Hopper	3300 TPH	1979
SH	FE, DC, MC	SH	Surge Hopper in Station B	700 Tons	1979
C-B	PE, MC	C-B	Reversible Conveyor B between Station B and Radial Stacker B Drive Tower (for Putnam	3300 TPH	1979
RS-B Drive Tower	PE, MC	RS-B Drive Tower	Drop from Conveyor B to Radial Stacker B (RS-B)	1600 TPH	1979
RS-B	PE, MC	RS-B	Radial Stacker B (transfer to Putnam Terminal Coal Storage Area (CSA-2))	1600 TPH	1979
CSA-2	MC	CSA-2	Putnam Terminal Coal Storage Area	Approx. 30	1979
CSA-2 Reclaim	PE, MC	CSA-2 Reclaim	Drop point from stockpile CSA-2 to feeders VFB-1 and VFB-2	3200TPH (VFB-1), and 1600	1979
VFB-1, VFB-2	PE, MC	VFB-1, VFB-2	Vibrating feeders VFB-1 and VFB-2 (transfer to Conveyor B at CSA-2 Reclaim Area)	3200TPH (VFB-1), and 1600	1979
C-BC	FE, DC, MC	C-BC	Conveyor BC (transfer to Station C)	3300 TPH	1979
Sta-C	FE, MC	Station C	Drop point from Conveyor BC to Coal Barges via Shuttle Conveyors RB and/or RA	3300 TPH	1979
C-RA, C-RB	WS, MC	C-RA, C-RB	Shuttle Conveyors (Barge Loading) RB and RA	3000 TPH	1979
<b>Limestone Handling</b>					
4E	None	1S	Limestone Material Handling	1500 TPH	2006/2007

BUN-1		BUN-1	Limestone Unloading Crane	1100 TPH	2006/2007
RH-1	WS, PE, MC	RH-1	Limestone Unloading Hopper	80 Tons Nominal	2006/2007
BFLS-1	FE, MC	BFLS-1	Limestone Unloading Feeder	1500 TPH	2006/2007
BFLS-1/LS-1 Transfer	WS, ET, MC	BFLS-1/LS-1 Transfer	BFLS-1/LS-1 Transfer	1500 TPH	2006/2007
LS-1	PC, MC	LS-1	Limestone Conv. LS-1	1500 TPH	2006/2007
LS-1/Storage Pile Transfer	TC, MC	LS-1/Storage Pile Transfer	LS-1/Storage Pile Transfer	1500 TPH	2006/2007
LSSP	MC	LSSP	Limestone Active/Long-Term Stockpile	101,000 Tons	2006/2007
<b>Non-Metallic Mineral (Limestone) Processing System</b>					
FB	FE, TE, MC	FB	Limestone Reclaim Feeder/Breaker	500 TPH	2006/2007
BFLS-2	FE, TE, MC	BFLS-2	Limestone Reclaim Belt Feeder BFLS-2	500 TPH	2006/2007
BFLS-3	FE, TE, MC	BFLS-3	Limestone Reclaim Belt Feeder BFLS-3	500 TPH	2006/2007
BFLS-2/LS-2A, BFLS-3/LS-2A BF/LS-2B Transfer	FS, ET, TE, MC	BFLS-2/LS-2A, BFLS-3/LS-2A BF/LS-2B Transfer	BFLS-2/LS-2A, BFLS-3/LS-2A, BF/LS-2B Transfer	500 TPH	2006/2007
LS-2A, LS-2B	PC, MC	LS-2A, LS-2B	Limestone Tunnel Reclaim Conveyors	500 TPH	2006/2007
LS-2A and LS-2B to DB-B or LS-3A, LS-3B Transfer	ET, TE, BH, MC, FS	LS-2A and LS-2B to DB-B or LS-3A, LS-3B Transfer	Transfer to Day Bin "B" or Conveyors LS-3A or LS-3B	500 TPH	2006/2007
LS-3A, LS-3B	PC, MC	LS-3A, LS-3B	Limestone Conveyors	500 TPH	2006/2007
LS-3A to DB-A	ET, TE, BH, MC	LS-3A to DB-A	Transfer to Day Bin "A"	500 TPH	2006/2007
LS-3B to DB-C Transfer	ET, TE, BH, MC	LS-3B to DB-C Transfer	Transfer to Day Bin "C"	500 TPH	2006/2007
DB-A, DB-B, DB-C	BH	DB-A, DB-B, DB-C	Day Bin "A", "B", and "C"	1000 Tons Nominal	2006/2007



	FE, TE, MC		Vibrating Bin Discharger (one per silo)	65 TPH	2006/2007
	FE, TE, MC		Limestone Weigh Feeder (one per silo)	65 TPH	2006/2007
	TE, MC, Wet Slurry Grinding System		Wet Ball Mill (one per silo)	65 TPH Dry	2006/2007
5E	None	2S	Limestone Mineral Processing	500 TPH	2006/2007
6E	Fabric Filter	2S	Limestone Mineral Processing	500 TPH	2006/2007
7E	Fabric Filter	2S	Limestone Mineral Processing	500 TPH	2006/2007
8E	Fabric Filter	2S	Limestone Mineral Processing	500 TPH	2006/2007
<b>Gypsum Handling System Equipment</b>					
Dewatering Bldg. Transfer	ET, TE, MC	Dewatering Bldg. Transfer	Gypsum Discharge from Vacuum Belt Filters to Vacuum Filter Collecting Conveyor G1A or G1B	300 TPH	2006/2007
G1A or G1B	MC, PC	G1A or G1B	Collecting Conveyor G1A or G1B	300 TPH	2006/2007
G1A to G2 Transfer	ET, MC	G1A to G2 Transfer	Transfer from Collecting Conveyor G1A to Conveyor G2	300 TPH	2006/2007
G2	PC, MC	G2	Conveyor G2	300 TPH	2006/2007
G2 to G3 Transfer	ET, MC	G2 to G3 Transfer	Transfer from Conveyor G2 to Radial Stacker G3	300 TPH	2006/2007
G3	MC, PC	G3	Radial Stacker G3	300 TPH	2006/2007
G3 to Stockout Pile	MC	G3 to Stockout Pile	Transfer from Radial Stacker G3 to Kidney Shaped Stockout Pile	300 TPH	2006/2007
Stockout Pile	MC	Stockout Pile	Kidney Shaped Stockout Pile	15,000 Tons	2006/2007
G1B to Standby Pile	MC	G1B to Standby Pile	Transfer from Collecting Conveyor G1B to Standby Pile	300 TPH	2006/2007
Standby Pile		Standby Pile	Standby Pile	5,000 Tons	2006/2007
9E	None	3S	Gypsum Material Handling	300 TPH	2006/2007
<b>Dry Sorbent Material Handling Equipment</b>					
	FE		Truck Unloading Connection (2)	25 TPH	2006/2007
DSSB 1 & 2	BH, FE	DSSB 1 & 2	Dry Sorbent Storage Silos (2)	500 Ton (2)	2006/2007

	FE		Aeration Distribution Bins	4.6 TPH	2006/2007
	FE		De-aeration Bins	4.6 TPH	2006/2007
	FE		Rotary Feeder	4.6 TPH	2006/2007
10E	None	4S	Dry Sorbent Material Handling	50 TPH	2006/2007
11E	Fabric Filter	4S	Dry Sorbent Material Handling	50 TPH	2006/2007
12E	Fabric Filter	4S	Dry Sorbent Material Handling	50 TPH	2006/2007
<b>Magnesium Hydroxide Handling Equipment</b>					
	Wet Slurry System		Tanker Truck Unloading Connection	4000 GPH	2006/2007
	Wet Slurry System	MHM-1&2	Mag. Hydroxide Mix Tanks (2)	Later	2006/2007
13E	None	5S	MgOH Material Handling	8000 gal/hr	2006/2007
<b>Wastewater Treatment Handling Equipment</b>					
	FE		Lime Truck Unloading Connection	25 TPH	2006/2007
	BH, FE		Lime Storage Silo	8200 ft <sup>3</sup> , Approx. 145 Ton	2006/2007
Dewatering Bldg. Transfer	Building Enclosure (3 sides and roof), MC	Dewatering Bldg. Transfer	CPS Sludge Discharge from Filters to CPS Sludge Stock-Out Piles	25 TPH	2006/2007
14E	None	6S	Wastewater Treatment Handling	80 TPH	2006/2007
15E	Fabric Filter	6S	Wastewater Treatment Handling	50 TPH	2006/2007
<b>Dry Fly Ash Handling System</b>					
FAS-1, FAS-2, FAS-3, FAS-4	FE, Vent Filter	FAS-1, FAS-2, FAS-3, FAS-4	Unit 1 and 2 Fly Ash Silos (2 silos per unit)	96,000 ft <sup>3</sup> (ea.)	1971
RU 1-12	WS, MC	RU 1-12	Fly Ash Rotary Unloaders (3 per silo)	230 TPH (avg.)	1971
Haul Roads	Water Truck	Haul Roads	Fly Ash Material Haul Roads	N/A	N/A
3E	FS-A1, FS-B1	ME-1	Mechanical Extractor 1 for Unit 3 Fly Ash System	NA	2009
3E	FS-A2, FS-B2	ME-2	Mechanical Extractor 2 for Unit 3 Fly Ash System	NA	2009
3E	FS-A3, FS-B2	ME-3	Mechanical Extractor 3 for Unit 3 Fly Ash System	NA	2009
3E	FS-A4, FS-B4	ME-4	Mechanical Extractor 4 for Unit 3 Fly Ash System	NA	2009

3E	Filter Separator (FS-B5)	ME-5 (Spare)	Mechanical Extractor 5 for Unit 3 Fly Ash System	NA	2009
EP-1	BVF1	FAS-5	Unit 3 Fly Ash Silo A	1600 tons	2009
EP-2	BVF2	FAS-6	Unit 3 Fly Ash Silo B	1600 tons	2009
EP-5	VF1	FC-A31	Transfer dry fly ash from Unit 3 Fly Ash Silo A to Truck Unloader Pin/Paddle Mixer via Fluidized Conveyor A3-1 TP	360 tph	2009
EP-10	VF2	FC-A32	Transfer dry fly ash from Unit 3 Fly Ash Silo A to Truck Unloader Pin/Paddle Mixer via Fluidized Conveyor A3-2 TP	360 tph	2009
EP-8	VF3	FC-B31	Transfer dry fly ash from Unit 3 Fly Ash Silo B to Truck Unloader Pin/Paddle Mixer via Fluidized Conveyor B3-1 TP	360 tph	2009
EP-11	VF4	FC-B32	Transfer dry fly ash from Unit 3 Fly Ash Silo B to Truck Unloader Pin/Paddle Mixer via Fluidized Conveyor B3-2 TP	360 tph	2009
F-1	MC	WFA-3A1	Transfer conditioned fly ash from Unit 3 Fly Ash Silo A to Truck via Pin/Paddle Mixer A3-1 TP	450 tph	2009
F-2	MC	WFA-3A2	Transfer conditioned fly ash from Unit 3 Fly Ash Silo A to Truck via Pin/Paddle Mixer B3-1 TP	450 tph	2009
F-3	MC	WFA-3B1	Transfer conditioned fly ash from Unit 3 Fly Ash Silo B to Truck via Pin/Paddle Mixer B3-2 TP	450 tph	2009
F-4	MC	WFA-3B2	Transfer fly ash from Unit 3 Fly Ash Silo B to Dense Slurry Tanks Pin/Paddle Mixer via Fluidized Conveyor B3 TP	450 tph	2009
3-CNV-1001	DC	A3	Unit 3 Dry Fly Ash Fluidized Conveyor	360 tph	2012
3-CNV-1002	DC	B3	Unit 3 Dry Fly Ash Fluidized Conveyor	360 tph	2012
<b>Miscellaneous Other</b>					
EDFP-Unit1	N/A	EDFP-Unit1	Drive Engine for Unit 1 Engine Driven Fire Pump	230 HP	1971
EDFP-Unit2	N/A	EDFP-Unit2	Drive Engine for Unit 2 Engine Driven Fire Pump	230 HP	1972
EDFP-Unit3	N/A	EDFP-Unit3	Drive Engine for Unit 3 Engine Driven Fire Pump	270 HP	1973
Tank #2	N/A	Tank #2	Unit 1 No. 2 Fuel Oil Tank	500,000 gal	1970
Tank #3	N/A	Tank #3	Unit 2 No. 2 Fuel Oil Tank	500,000 gal	1970
Tank #4	N/A	Tank #4	Coal Transfer Station #12 No. 2 Fuel Oil Tank (heating oil) (Contractor owned)	3,000 gal	2014

Tank #6	N/A	Tank #6	Station #3A Heating Oil Tank (contractor owned)	10,000 gal	2010
Tank #8	N/A	Tank #8	Station #6 Heating Oil Tank (contractor owned)	4,000 gal	2014
Tank #9	N/A	Tank #9	Station #7 Heating Oil Tank (contractor owned)	10,000 gal	2010
<del>Tank #11</del>	<del>N/A</del>	<del>Tank #11</del>	<del>Tractor Garage (East) Mobile Equipment Diesel Fuel Tank</del>	<del>20,000 gal</del>	<del>1991-Removed</del>
<del>Tank #12</del>	<del>N/A</del>	<del>Tank #12</del>	<del>Tractor Garage (North) Locomotive Diesel Fuel Tank</del>	<del>6,000 gal</del>	<del>1991-Removed</del>
Tank #13	N/A	Tank #13	Unit 2 Diesel Fuel Tank (South)	1,000 gal	1991
Tank #14	N/A	Tank #14	Landfill Truck Wash Diesel Fuel Tank	250 gal	1999
Tank #15	N/A	Tank #15	Unit 2 Sulfuric Acid Tank #1	5,000 gal	1994
Tank #16	N/A	Tank #16	Unit 2 Sulfuric Acid Tank #2	5,000 gal	1994
Tank #17	N/A	Tank #17	Unit 3 Sulfuric Acid Tank #1 (next to U-3 Pretreatment)	5,000 gal	1995
Tank #18	N/A	Tank #18	Unit 3 Sulfuric Acid Tank #2 (next to U-3 Pretreatment)	5,000 gal	1995
Tank #19	N/A	Tank #19	Ammonium Hydroxide Tank (East of Unit 1)	4,750 gal	1971
Tank #20	N/A	Tank #20	Ammonium Hydroxide Tank (Northeast of Unit 3)	10,000 gal	1973
Tank #21	N/A	Tank #21	Diethylene Glycol Tank (Stak Rake)	275 gal	2000
Tank #22	N/A	Tank #22	Diethylene Glycol Tank (Coal Transfer Station #7)	3,000 gal	2000
Tank #23	N/A	Tank #23	Diethylene Glycol Tank (Coal Transfer Station #12)	275 gal	2000
<del>Tank #24</del>	<del>N/A</del>	<del>Tank #24</del>	<del>Fuel Solv (FS-20) Tank</del>	<del>1,000 gal</del>	<del>1995-Removed</del>
Tank #25	N/A	Tank #25	Sodium Hydroxide Tank #1	5,700 gal	1971
Tank #26	N/A	Tank #26	Sodium Hydroxide Tank #2	5,700 gal	1972
Tank #27	N/A	Tank #27	Carbon Dioxide #1 (fire protection)	6 Ton	1971
Tank #28	N/A	Tank #28	Carbon Dioxide #2 (fire protection)	12.5 Ton	1973
Tank #29	N/A	Tank #29	Sodium Hydroxide Tank #3 polishing	10,800 gal	1973
Tank #30	N/A	Tank #30	Main Turbine Lube Oil Tank Unit 1	11,500 gal	1971
Tank #31	N/A	Tank #31	Main Turbine Lube Oil Tank Unit 2	11,500 gal	1972
Tank #32	N/A	Tank #32	Main Turbine Lube Oil Tank Unit 3	20,000 gal	1973
Tank #33	N/A	Tank #33	Sodium Hydroxide Tank #4 pretreatment	13,800 gal	1973
Tank #34	N/A	Tank #34	Lube Oil Holding Tank Unit 1	18,000 gal	1971

Tank #35	N/A	Tank #35	Lube Oil Holding Tank Unit 2	18,000 gal	1972
Tank #36	N/A	Tank #36	Lube Oil Holding Tank Unit 3	30,000 gal	1973
Tank #37	N/A	Tank #37	Chemical Cleaning Solution Tank	1,500,000 gal	1989
Tank #38	N/A	Tank #38	Feed Pump Turbine Lube Oil Tank Unit 1	1,280 gal	1971
Tank #39	N/A	Tank #39	Feed Pump Turbine Lube Oil Tank Unit 2	1,280 gal	1972
Tank #40	N/A	Tank #40	Feed Pump Turbine Lube Oil Tank Unit 3	5000 gal	1973
Tank #41	N/A	Tank #41	New Lube Oil Tank Unit 1	1,000 gal	1971
Tank #42	N/A	Tank #42	New Lube Oil Tank Unit 2	1,000 gal	1972
Tank #43	N/A	Tank #43	New Lube Oil Tank Unit 3	3,000 gal	1973
Tank #44	N/A	Tank #44	Diesel Engine Fuel Tank Unit 1 (Engine Driven Fire Pump)	275 gal	1971
Tank #45	N/A	Tank #45	Diesel Engine Fuel Tank Unit 2 (Engine Driven Fire Pump)	275 gal	1972
Tank #46	N/A	Tank #46	Diesel Engine Fuel Tank Unit 3 (Engine Driven Fire Pump)	275 gal	1973
Tank #47	N/A	Tank #47	Control Fluid Tank Unit 1	600 gal	1971
Tank #48	N/A	Tank #48	Control Fluid Tank Unit 2	600 gal	1972
Tank #49	N/A	Tank #49	Feed Pump Turbine Control Fluid Tank Unit 3	550 gal	1973
Tank #50	N/A	Tank #50	Main Turbine Control Fluid Tank Unit 3	1,800 gal	1973
Tank #51	N/A	Tank #51	Waste Oil Tank "A"	250 gal	1985 est.
Tank #52	N/A	Tank #52	Waste Oil Tank "B"	250 gal	1985 est.
Tank #53	N/A	Tank #53	Waste Oil Tank "C"	300 gal	1985 est.
Tank #54	N/A	Tank #54	Waste Oil Tank "D"	300 gal	1985 est.
Tanks #55, #56, #57	N/A	Tanks #55, #56, #57	New Oil Tanks (North Bay in Tractor Shed)	1000 gal. each	1985
Tank #58	N/A	Tank #58	Used Oil Tank #1 (Station 7)	500 gal	1975 est.
Tank #59	N/A	Tank #59	Used Oil Tank #2 (Station 7)	500 gal	1975 est.
Tank #60	N/A	Tank #60	Used Oil Tank #3 (Tractor Garage)	500 gal	1975 est.
Tank #61	N/A	Tank #61	Used Oil Tank #4 (Tractor Garage)	500 gal	1975 est.
Tank #62	N/A	Tank #62	Used Oil Tank #5 (Tractor Garage)	500 gal	1975 est.
Tank #63	N/A	Tank #63	Used Oil Tank #6 (Station 7)	500 gal	1975 est.
Tank #64	N/A	Tank #64	Gasoline Tank (UST)	2,500 gal	1991
Tank #65	N/A	Tank #65	Urea Solution Recycle Tank	282,000 gal	2002
Tank #66	N/A	Tank #66	Urea Solution Holding Tank	422,000 gal	2002
Tank #67	N/A	Tank #67	Unit 2 Fuel Oil Recovery Tank (UST)	400 gal	1971

Title V Equipment Table (equipment\_table.doc)

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Tank #68	N/A	Tank #68	Unit 3 Fuel Oil Recovery Tank	300 gal	1973
Tank #69	N/A	Tank #69	Fuel Oil Spill Recovery Tank	10,000 gal	1973
Tank #70	N/A	Tank #70	Unit 3 Cooling Tower Sulfuric Acid Tank	10,000 gal	2005
Tank #71	N/A	Tank #71	Tractor Shed Heating Oil Tank	4,000 gal	2013
Tank #72	N/A	Tank #72	Unit 3 HPU Fluid tank for the Feed Pump and Main Turbine valve control	600 gal	2005
Tank #73	N/A	Tank #73	Station 11 Heating Oil Tank (contractor owned)	10,000 gal	2020
Tank #74	N/A	Tank #74	2000 gal Kerosene Storage Tank (PCT Warehouse)	2,000 gal	2010
Tank #75	N/A	Tank #75	4000 gal Kerosene Storage Tank (PCT Warehouse)	4,000 gal	2010
Tank #76	N/A	Tank #76	Diesel Storage Tank for Limestone Unloading Equipment (contractor owned)	10,000 gal	2009
Tank #77	N/A	Tank #77	Unit 1 Used Oil Tank "A"	300 gal	2009
Tank #78	N/A	Tank #78	Unit 1 Used Oil Tank "B"	300 gal	2009
Tank #79	N/A	Tank #79	Unit 2 Used Oil Tank "A"	300 gal	2009
Tank #80	N/A	Tank #80	Unit 2 Used Oil Tank "B"	300 gal	2009
Tank #81	N/A	Tank #81	Unit 3 Used Oil Tank "A"	150 gal	2009
Tank #82	N/A	Tank #82	Unit 3 Used Oil Tank "B"	300 gal	2009
Tank #83	N/A	Tank #83	Unit 3 Used Oil Tank "C"	300 gal	2009
Tank #84	N/A	Tank #84	Barge Unloader Drip Tank	240 gal	2015
Tank #85	N/A	Tank #85	Oil Water Separator Tank1	3,000 gal	1980
Tank #86	N/A	Tank #86	Oil Water Separator Tank 2	5,000 gal	1980
Tank #87	N/A	Tank #87	Oil Water Separator Tank 3	3,000 gal	1980
Tank #88	N/A	Tank #88	500 gal Kerosene Tank (Tractor Garage)	500 gal	1990
Tank #89	N/A	Tank #89	250 gal Kerosene Tank (Tractor Garage)	250 gal	1990
Tank #90	N/A	Tank #90	Tractor Shed Used Oil Tank 1A	240 gal	2015
Tank #91	N/A	Tank #91	Tractor Shed Used Oil Tank 1B	240 gal	2015
Tank #92	N/A	Tank #92	Gypsum Landfill Equip Diesel Fueling Tank 1	2,000 gal	2010
Tank #93	N/A	Tank #93	Gypsum Landfill Equip Diesel Fueling Tank 2	2,000 gal	2010
Tank #94	N/A	Tank #94	Gypsum Landfill Equip Diesel Fueling Tank 3	2,000 gal	2010
Tank #95	N/A	Tank #95	500 gal Equip Diesel Fuel Tank 4	500 gal	2014
Tank #96	N/A	Tank #96	Unit 1&2 Absorber Building Used Oil Tank 1	300 gal	2014
Tank #97	N/A	Tank #97	Unit 1&2 Absorber Building Used Oil Tank 2	300 gal	2014

Tank #98	N/A	Tank #98	Dewatering Building Used Oil Tank 1	300 gal	2014
Tank #99	N/A	Tank #99	Waste Water Building Used Oil Tank 1	300 gal	2014
Tank #100	N/A	Tank #100	Limestone Prep. Building Used Oil Tank 1	300 gal	2014
Tank #101	N/A	Tank #101	Unit 3 Absorber Building Used Oil Tank 1	300 gal	2014
<p><sup>1</sup>For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.</p>					

Attachment E  
Emission Unit Forms



<b>ATTACHMENT E - Emission Unit Form</b>			
<b>Emission Unit Description: John E. Amos Unit 1 Steam Generator</b>			
<b>Emission unit ID number:</b> Unit 1- AM1	<b>Emission unit name:</b> Unit 1 Boiler	<b>List any control devices associated with this emission unit:</b> High efficiency ESP, LNB, SCR, FGD	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Unit 1 is a coal-fired EGU boiler that also utilizes oil for supplemental firing. Oil use includes, but is not limited to, periods of start-up, shutdown, stabilization, and emergency operations. The boiler may also periodically combust non-hazardous material such as demineralizer resins, chemical cleaning solution, on-spec used oil, etc. The nominal design of the Unit 1 boiler is 7,020 mmBtu/hr. Coal is delivered to the site via river barge, truck, rail or conveyor. Oil is delivered to the site via river barge or truck.			
<b>Manufacturer:</b> Foster Wheeler	<b>Model number:</b> 2-85-543	<b>Serial number:</b> Custom	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 09/01/1971	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Nominal 7,020 mmBtu/hr. This heat input value is for operation at the nominal boiler rating. Boiler design enables the boiler to be operated above the nominal rated capacity.			
<b>Maximum Hourly Throughput:</b> Nominal 5,280,000 lb./hr steam.	<b>Maximum Annual Throughput:</b> Nominal 46,252,800,000 lb/ yr	<b>Maximum Operating Schedule:</b> 8760 hr/yr.	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 7020 mmBTU/hr		<b>Type and Btu/hr rating of burners:</b> Pulverized coal, opposed firing, low NOx burners.	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> The unit is capable of burning varying qualities of coal. The nominal full load feed rate is approximately 300 tons of coal per hour. Approximately 2,628,000 tons of coal per year.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal	4.5 lb/mmBtu		11,700
Fuel Oil	1.0%	Trace	148,000 BTU/gal.

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	450.37	1,972.62
Nitrogen Oxides (NO <sub>x</sub> )	3,229.20	14,143.90
Lead (Pb)	0.39	1.73
Particulate Matter (PM <sub>2.5</sub> )	87.25	382.17
Particulate Matter (PM <sub>10</sub> )	196.33	859.93
Total Particulate Matter (TSP)	290.84	1,273.89
Sulfur Dioxide (SO <sub>2</sub> )	7,020	30,747.6
Volatile Organic Compounds (VOC)	54	236.52
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge.

***Applicable Requirements***

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 4.0 through 4.1

**Requirements to be added to Title V permit:**

N/A

\_\_\_\_ Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 4.2 through 4.5

**Requirements to be added to Title V permit:**

N/A

**Are you in compliance with all applicable requirements for this emission unit?** X\_Yes \_\_\_No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>ATTACHMENT E - Emission Unit Form</b>			
<b>Emission Unit Description:</b> <i>John E. Amos Unit 2 Steam Generator</i>			
<b>Emission unit ID number:</b> Unit 2- AM2	<b>Emission unit name:</b> Unit 2 Boiler	<b>List any control devices associated with this emission unit:</b> High efficiency ESP, LNB, SCR, FGD	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Unit 2 is a coal-fired EGU boiler that also utilizes oil for supplemental firing. Oil use includes, but is not limited to, periods of start-up, shutdown, stabilization, and emergency operations. The boiler may also periodically combust non-hazardous material such as demineralizer resins, chemical cleaning solution, on-spec used oil, etc. The nominal design of the Unit 2 boiler is 7,020 mmBtu/hr. Coal is delivered to the site via river barge, rail, truck or conveyor. Oil is delivered to the site via river barge or truck.			
<b>Manufacturer:</b> Foster Wheeler	<b>Model number:</b> 2-85-706	<b>Serial number:</b> Custom	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 06/06/1972	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Nominal 7,020 mmBtu/hr. This heat input value is for operation at the nominal boiler rating. Boiler design enables the boiler to be operated above the nominal rated capacity.			
<b>Maximum Hourly Throughput:</b> Nominal 5,280,000 lb./hr steam.	<b>Maximum Annual Throughput:</b> Nominal 46,252,800,000 lb/ yr	<b>Maximum Operating Schedule:</b> 8760 hr/yr.	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 7020 mmBTU/hr		<b>Type and Btu/hr rating of burners:</b> Pulverized coal, opposed firing, low NOx burners.	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> The unit is capable of burning varying qualities of coal. The nominal full load feed rate is approximately 300 tons of coal per hour. Approximately 2,628,000 tons of coal per year.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal	4.5 lb/mmBtu		11,700
Fuel Oil	1.0%	Trace	148,000 BTU/gal.

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	450.37	1,972.62
Nitrogen Oxides (NO <sub>x</sub> )	3,229.20	14,143.90
Lead (Pb)	0.39	1.73
Particulate Matter (PM <sub>2.5</sub> )	87.25	382.17
Particulate Matter (PM <sub>10</sub> )	196.33	859.93
Total Particulate Matter (TSP)	290.84	1,273.89
Sulfur Dioxide (SO <sub>2</sub> )	7,020	30,747.6
Volatile Organic Compounds (VOC)	54	236.52
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge.

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 4.0 through 4.1

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 4.2 through 4.5

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<b>Emission Unit Description: John E. Amos Unit 3 Steam Generator</b>			
<b>Emission unit ID number:</b> Unit 3- AM3	<b>Emission unit name:</b> Unit 3 Boiler	<b>List any control devices associated with this emission unit:</b> High efficiency ESP, LNB, SCR, FGD	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Unit 3 is a coal-fired EGU boiler that also utilizes oil for supplemental firing. Oil use includes, but is not limited to, periods of start-up, shutdown, stabilization, and emergency operations. The boiler may also periodically combust non-hazardous material such as demineralizer resins, chemical cleaning solution, on-spec used oil, etc. The nominal design of the Unit 1 boiler is 11,936 mmBtu/hr. Coal is delivered to the site via river barge, rail, truck or conveyor. Oil is delivered to the site via river barge or truck.			
<b>Manufacturer:</b> Babcock & Wilcox	<b>Model number:</b> UP-101	<b>Serial number:</b> Custom	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 10/22/1973	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Nominal 11,936 mmBtu/hr. This heat input value is for operation at the nominal boiler rating. Boiler design enables the boiler to be operated above the nominal rated capacity.			
<b>Maximum Hourly Throughput:</b> Nominal 9,775,000 lb/hr steam	<b>Maximum Annual Throughput:</b> Nominal 85,629,000,000 lb/yr steam	<b>Maximum Operating Schedule:</b> 8760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 11,936 mmBTU/hr		<b>Type and Btu/hr rating of burners:</b> Pulverized coal, opposed firing, low NOx cell burners.	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> The unit is capable of burning varying qualities of coal. The nominal full load feed rate is approximately 550 tons of coal per hour. Approximately 4,818,000 tons of coal per year.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal	4.5 lb/mmBtu		
Fuel Oil	1.0%	Trace	148,000 BTU/gal.

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	955.88	4,186.76
Nitrogen Oxides (NO <sub>x</sub> )	963.74	42,721.2
Lead (Pb)	0.67	2.94
Particulate Matter (PM <sub>2.5</sub> )	185.55	812.47
Particulate Matter (PM <sub>10</sub> )	417.38	1,828.14
Total Particulate Matter (TSP)	618.32	2,708.22
Sulfur Dioxide (SO <sub>2</sub> )	11,936	52,279.68
Volatile Organic Compounds (VOC)	114.83	502.96
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge.



**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 4.0 through 4.1

**Requirements to be added to Title V permit:**

N/A

\_\_\_\_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 4.2 through 4.5

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<i>Emission Unit Description</i>			
<b>Emission unit ID number:</b> Aux AM1	<b>Emission unit name:</b> Auxiliary Boiler	<b>List any control devices associated with this emission unit:</b>	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Aux AM1 is utilized by both Units 1 and 2 for start-up support.			
<b>Manufacturer:</b> Foster Wheeler	<b>Model number:</b> SD-25	<b>Serial number:</b>	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 1971	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b>			
<b>Maximum Hourly Throughput:</b> 642 mmBTU/hr	<b>Maximum Annual Throughput:</b> 5,623,920 mmBTU/yr, however pending permit application will limit to 10% capacity factor	<b>Maximum Operating Schedule:</b> 8760 hrs/yr.	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 642 mmBTU/hr		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> The unit is capable of burning distillate fuel oil, typically #2 fuel oil.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Fuel Oil	1.0%	Trace	148,000 BTU/gal.

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	240.88	1055.06
Nitrogen Oxides (NO <sub>x</sub> )	115.64	506.51
Lead (Pb)	14.55	63.73
Particulate Matter (PM <sub>2.5</sub> )	7.22	31.63
Particulate Matter (PM <sub>10</sub> )	28.89	126.53
Total Particulate Matter (TSP)	57.78	253.07
Sulfur Dioxide (SO <sub>2</sub> )	1027.18	4,499.04
Volatile Organic Compounds (VOC)	2.89	12.66
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 5.0 through 5.1

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 5.2 through 5.5

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> Aux AM3	<b>Emission unit name:</b> Aux. Boiler for Unit 3	<b>List any control devices associated with this emission unit:</b>	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Aux AM3 is utilized by Unit 3 to assist with startup.			
<b>Manufacturer:</b> Babcock & Wilcox	<b>Model number:</b> PFI-3134	<b>Serial number:</b> N/A	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 1971	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b>			
<b>Maximum Hourly Throughput:</b> 600 mmBTU/hr	<b>Maximum Annual Throughput:</b> 5,256,000 mmBTU/yr, however pending permit application will limit to 10% capacity factor	<b>Maximum Operating Schedule:</b> 8760 hrs/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 600 mmBTU/hr		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> The unit is capable of burning distillate fuel oil, typically #2 fuel oil is used.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Fuel Oil	1.0%	Trace	148,000 BTU/gal.

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	225.12	986.04
Nitrogen Oxides (NO <sub>x</sub> )	108.08	473.39
Lead (Pb)	13.60	59.55
Particulate Matter (PM <sub>2.5</sub> )	6.75	29.57
Particulate Matter (PM <sub>10</sub> )	27.00	118.27
Total Particulate Matter (TSP)	54.00	236.53
Sulfur Dioxide (SO <sub>2</sub> )	960.01	4204.86
Volatile Organic Compounds (VOC)	2.70	11.84
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 5.0 through 5.1

**Requirements to be added to Title V permit:**

N/A

\_\_\_\_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 5.2 through 5.5

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> Coal and Ash Handling	<b>Emission unit name:</b> Coal and Ash Handling	<b>List any control devices associated with this emission unit:</b> Conveyor covers, partial and full enclosures, mechanical controls, water sprays
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**  
The coal and ash handling system consists of a barge unloader, chutes, and conveyors, transfer stations, crushers, storage piles, coal silos, dry fly ash silos and truck loading equipment.

<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A
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<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D	<b>Modification date(s):</b> MM/DD/YYYY
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
Coal transfer capacity (nominal) – 4,000 tons/hr

<b>Maximum Hourly Throughput:</b> 4,000 tons/hr coal	<b>Maximum Annual Throughput:</b> 35,040,000 tons/year coal	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No	<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable	<b>Type and Btu/hr rating of burners:</b> Not Applicable

**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**  
Not Applicable

### **Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value



<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	127.24 uncontrolled	318.84 uncontrolled
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.

*Applicable Requirements*

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.1.1 through 6.1.4 and 6.1.15 through 6.1.17

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.2.2, 6.2.11, 6.3.1, 6.4

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> 4S	<b>Emission unit name:</b> Dry Sorbent Material Handling System	<b>List any control devices associated with this emission unit: 7C and 8C</b>
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**  
Dry sorbent is injected through a pneumatic conveying system to ductwork downstream of the air preheaters as a means to reduce SO<sub>3</sub> in the stack plume. The feed rate for units 1 & 2 is at a maximum of 2.6 tons per hour. Unit 3 has a maximum feed rate of 4.6 tons per hour. Hydrated lime can be fed to Units 1 & 2 at 2.2 tons per hour and to unit 3 at 2.3 tons per hour.

<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D	<b>Modification date(s):</b> MM/DD/YYYY

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
50 TPH of dry sorbent unloaded.

<b>Maximum Hourly Throughput:</b> 50 TPH	<b>Maximum Annual Throughput:</b> 96,200 Tons Trona 62,400 Tons Hydrated Lime	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No	<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable	<b>Type and Btu/hr rating of burners:</b> Not Applicable

**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**  
Not Applicable

### **Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

### *Emissions Data*

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	2.73 uncontrolled 0.78 controlled	11.96 uncontrolled 3.42 controlled
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.1.10 – 6.1.11

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.2.7- 6.2.8 and 6.4

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<b>Emission Unit Description: John E. Amos Emergency Generators</b>			
<b>Emission unit ID number:</b> EG-1, EG-2, EG-3 and EG-4	<b>Emission unit name:</b> Emergency Coping Power Generators EG-1, EG-2, EG-3 and EG-4	<b>List any control devices associated with this emission unit:</b> none	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Unit 3 is a coal-fired EGU boiler that also utilizes oil for supplemental firing. Oil use includes, but is not limited to, periods of start-up, shutdown, stabilization, and emergency operations. The boiler may also periodically combust non-hazardous material such as demineralizer resins, chemical cleaning solution, on-spec used oil, etc. The nominal design of the Unit 1 boiler is 11,936 mmBtu/hr. Coal is delivered to the site via river barge, rail, truck or conveyor. Oil is delivered to the site via river barge or truck.			
<b>Manufacturer:</b> Caterpillar	<b>Model number:</b> CAT 3516C-HD-TA (all 4 machines)	<b>Serial number:</b> Custom	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 2014	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Nominal 3,004 Bhp at 1800 rpm. 4,800 gallon fuel tank on each of the 4 machines.			
<b>Maximum Hourly Throughput:</b> Nominal 145.1 gal/hr fuel per machine	<b>Maximum Annual Throughput:</b> Nominal 1,271,076 gal/yr per machine.	<b>Maximum Operating Schedule:</b> 8760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 3,004 Bhp at 1800 rpm		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Each of the units are capable of burning diesel fuel at the nominal full load feed rate of approximately 145.1 gal/hr for an annual capacity of 1,271,076 gallons if the emergency generator operated for a full 8,760 hours/year.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel Oil	15 ppm sulfur	Trace	Nominal 18,390 BTU/lb

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH (per machine)	TPY (per machine)
Carbon Monoxide (CO)	4.85	1.21
Nitrogen Oxides (NO <sub>x</sub> )	36.4	9.1
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	0.33	0.08
Total Particulate Matter (TSP)	0.33	0.08
Sulfur Dioxide (SO <sub>2</sub> )	0.19	0.05
Volatile Organic Compounds (VOC)	1.18	0.3
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge.

***Applicable Requirements***

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Section 7.1

**Requirements to be added to Title V permit:**

N/A

\_\_\_\_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 7.2 through 7.5

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.



<b>ATTACHMENT E - Emission Unit Form</b>			
<b>Emission Unit Description: John E. Amos Emergency Generators</b>			
<b>Emission unit ID number:</b> EG-1, EG-2, EG-3 and EG-4	<b>Emission unit name:</b> Emergency Coping Power Generators EG-1, EG-2, EG-3 and EG-4	<b>List any control devices associated with this emission unit:</b> none	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Unit 3 is a coal-fired EGU boiler that also utilizes oil for supplemental firing. Oil use includes, but is not limited to, periods of start-up, shutdown, stabilization, and emergency operations. The boiler may also periodically combust non-hazardous material such as demineralizer resins, chemical cleaning solution, on-spec used oil, etc. The nominal design of the Unit 1 boiler is 11,936 mmBtu/hr. Coal is delivered to the site via river barge, rail, truck or conveyor. Oil is delivered to the site via river barge or truck.			
<b>Manufacturer:</b> Caterpillar	<b>Model number:</b> CAT 3516C-HD-TA (all 4 machines)	<b>Serial number:</b> Custom	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> 2014	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Nominal 3,004 Bhp at 1800 rpm. 4,800 gallon fuel tank on each of the 4 machines.			
<b>Maximum Hourly Throughput:</b> Nominal 145.1 gal/hr fuel per machine	<b>Maximum Annual Throughput:</b> Nominal 1,271,076 gal/yr per machine.	<b>Maximum Operating Schedule:</b> 8760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 3,004 Bhp at 1800 rpm		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Each of the units are capable of burning diesel fuel at the nominal full load feed rate of approximately 145.1 gal/hr for an annual capacity of 1,271,076 gallons if the emergency generator operated for a full 8,760 hours/year.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>
Diesel Fuel Oil	15 ppm sulfur	Trace	Nominal 18,390 BTU/lb

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH (per machine)	TPY (per machine)
Carbon Monoxide (CO)	4.85	1.21
Nitrogen Oxides (NO <sub>x</sub> )	36.4	9.1
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	0.33	0.08
Total Particulate Matter (TSP)	0.33	0.08
Sulfur Dioxide (SO <sub>2</sub> )	0.19	0.05
Volatile Organic Compounds (VOC)	1.18	0.3
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge.

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Section 7.1

**Requirements to be added to Title V permit:**

N/A

 Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 7.2 through 7.5

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Gypsum Handling System 3S	<b>Emission unit name:</b> Gypsum Handling System	<b>List any control devices associated with this emission unit:</b>	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Gypsum is delivered by slurry to the landfill via pipeline. The gypsum slurry will be discharged into hydroclone feed tanks next to the dewatering building. The slurry is then pumped from the tanks to the hydroclones and vacuum filters for processing. The gypsum will be handled at 15% moisture by weight from the filtering process, additional dust collection/ suppression equipment is not provided. The transfer points are fully-enclosed and the outdoor conveyors utilize ¾ covers.			
<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 600 TPH of gypsum			
<b>Maximum Hourly Throughput:</b> 600 TPH	<b>Maximum Annual Throughput:</b> 1,750,000 Tons	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable		<b>Type and Btu/hr rating of burners:</b> Not Applicable	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Not Applicable			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
<b>Emissions Data</b>			

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	35.79 uncontrolled 3.06 controlled	156.76 uncontrolled 13.40 controlled
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.

*Applicable Requirements*

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.1.8

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.2.5 and 6.4

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<i>Emission Unit Description</i>			
<b>Emission unit ID number:</b> Limestone Handling System, 1S, 2S,	<b>Emission unit name:</b> Non- NSPS Subpart OOO Limestone Handling System	<b>List any control devices associated with this emission unit:</b> Conveyor covers, partial and full enclosures, mechanical controls, water sprays 4C, 5C, 6C,	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> The limestone handling system consists of chutes and conveyors, transfer stations, surge bins, and storage piles for limestone.			
<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D.	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 1,500 TPH of limestone offloaded from the barge. 1,000 tons per hour processed on conveyors LS2-A and LS2-B			
<b>Maximum Hourly Throughput:</b> 1500 TPH	<b>Maximum Annual Throughput:</b> 1,125,000 Tons	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable		<b>Type and Btu/hr rating of burners:</b> Not Applicable	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Not Applicable			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	5.351 uncontrolled 1.181 controlled	23.44 uncontrolled 5.17 controlled
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.



**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.1.6 – 6.1.7

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.2.3- 6.2.4 and 6.4

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<i>Emission Unit Description</i>			
<b>Emission unit ID number:</b> BM1, BM2, BM3	<b>Emission unit name:</b> NSPS Subpart OOO Limestone Handling System	<b>List any control devices associated with this emission unit:</b> Conveyor covers, partial and full enclosures, mechanical controls, water sprays	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> The NSPS Subpart OOO limestone handling system consists of chutes and conveyors, transfer stations, surge bins, and storage piles for limestone.			
<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D.	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 65 tons/hr			
<b>Maximum Hourly Throughput:</b> 65 TPH	<b>Maximum Annual Throughput:</b> 570,000 Tons	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable		<b>Type and Btu/hr rating of burners:</b> Not Applicable	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Not Applicable			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )		
Total Particulate Matter (TSP)	0.33 controlled	1.45 controlled
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.

<p><b><i>Applicable Requirements</i></b></p> <p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <b>construction permit</b> with the condition number. <i>(Note: Title V permit condition numbers alone are not the underlying applicable requirements).</i> If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</p> <p><b>Requirements currently captured in Title V permit:</b></p> <p>R30-07900006-2016 Sections 6.1.6 – 6.1.7</p> <p><b>Requirements to be added to Title V permit:</b></p> <p>N/A</p>
<p><input type="checkbox"/> Permit Shield</p>
<p><b>For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)</b></p> <p><b>Requirements currently captured in Title V permit:</b></p> <p>R30-07900006-2016 Sections 6.2.3- 6.2.4 and 6.4</p> <p><b>Requirements to be added to Title V permit:</b></p> <p>N/A</p>
<p><b>Are you in compliance with all applicable requirements for this emission unit?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, complete the <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b>.</p>

<b>ATTACHMENT E - Emission Unit Form</b>			
<i>Emission Unit Description</i>			
<b>Emission unit ID number:</b> Magnesium Hydroxide Material Handling	<b>Emission unit name:</b> Magnesium Hydroxide Material Handling System	<b>List any control devices associated with this emission unit:</b> Wet Slurry System	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> The magnesium hydroxide system is to assist in the mitigation of SO3 in the furnace. Mag hydroxide would be injected into the furnace as a 15% magnesium hydroxide/ water slurry. Approximately 650 gallons per hour of magnesium hydroxide will be required for 90% SO3 mitigation for Units 1 & 2. Approximately 1,300 gallons per hour magnesium hydroxide will be required for 90% SO3 mitigation on Unit 3.			
<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 8,000 gal/hour of Liquid Magnesium Hydroxide unloaded (2 trucks per hour).			
<b>Maximum Hourly Throughput:</b> 8,000 gal/hour	<b>Maximum Annual Throughput:</b> 22,703,000 gallons	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable		<b>Type and Btu/hr rating of burners:</b> Not Applicable	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Not Applicable			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	0.24 uncontrolled 0.07 controlled	1.05 uncontrolled 0.31 controlled
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.</p>		

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.1.9

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.2.6 and 6.4

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<b>ATTACHMENT E - Emission Unit Form</b>			
<b><i>Emission Unit Description</i></b>			
<b>Emission unit ID number:</b> WWT Material Handling System 6S	<b>Emission unit name:</b> WWT Material Handling System	<b>List any control devices associated with this emission unit:</b> 9C	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> The WWT system is used to treat the FGD wastewater prior to discharge into the Kanawha River. The WWT system process includes equipment for dissolved sulfate desaturation, primary clarification, chemical addition, mixing and reaction, secondary clarification, and filtration.			
<b>Manufacturer:</b> Various	<b>Model number:</b> Custom	<b>Serial number:</b> N/A	
<b>Construction date:</b> MM/DD/YYYY	<b>Installation date:</b> See equipment list in Attachment D	<b>Modification date(s):</b> MM/DD/YYYY	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 50 TPH of dry hydrated lime unloaded, 6 truck loads of liquid chemicals delivered per hour (worst case), and 80 TPH of filter cake transferred to landfill.			
<b>Maximum Hourly Throughput:</b> 50 TPH dry hydrated lime unloaded 80 TPH of filter cake	<b>Maximum Annual Throughput:</b> 6,840 Tons hydrated lime	<b>Maximum Operating Schedule:</b> 24 hrs/day, 365 days/ year	
<b><i>Fuel Usage Data (fill out all applicable fields)</i></b>			
<b>Does this emission unit combust fuel?</b> Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Not Applicable		<b>Type and Btu/hr rating of burners:</b> Not Applicable	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Not Applicable			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value



<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO <sub>x</sub> )		
Lead (Pb)		
Particulate Matter (PM <sub>2.5</sub> )		
Particulate Matter (PM <sub>10</sub> )	28.5 uncontrolled 1.642 controlled	124.83 uncontrolled 7.19 controlled
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO <sub>2</sub> )		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

Potential emissions are based on a combination of AP-42 emission factors, regulatory limits, and engineering knowledge. PPH values were estimated simply by dividing annual potential to emit by 8,760 hours.

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.1.12

**Requirements to be added to Title V permit:**

N/A

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

**Requirements currently captured in Title V permit:**

R30-07900006-2016 Sections 6.2.9 and 6.4

**Requirements to be added to Title V permit:**

N/A

Are you in compliance with all applicable requirements for this emission unit?  Yes  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment F  
Schedule of Compliance Forms  
(Not Applicable)

Attachment G  
Air Pollution Control Device Forms

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> Unit 1 ESP	<b>List all emission units associated with this control device.</b> Unit 1	
<b>Manufacturer:</b> Wheel Frye	<b>Model number:</b> Custom	<b>Installation date:</b> 04/08/1978
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input checked="" type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100.00%	99.850%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Design removal efficiency = 99.85%, 2 boxes, 732 SCA, 8 Fields		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</b>		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b>		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitor opacity as an indicator of electrostatic precipitator performance. Periodic stack tests are performed to assure compliance with the particulate mass emissions standard.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> Unit 2 ESP	<b>List all emission units associated with this control device.</b> Unit 2	
<b>Manufacturer:</b> Wheel Frye	<b>Model number:</b>	<b>Installation date:</b> 12/12/1977
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input checked="" type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100.00%	99.850%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Design removal efficiency = 99.85%, 2 boxes, 732 SCA, 8 Fields		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</b>		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b>		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitor opacity as an indicator of electrostatic precipitator performance. Periodic stack tests are performed to assure compliance with the particulate mass emissions standard.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> Unit 3 ESP	<b>List all emission units associated with this control device.</b> Unit 3	
<b>Manufacturer:</b> Environmental Elements	<b>Model number:</b> Custom	<b>Installation date:</b> 10/22/1973
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input checked="" type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100.00%	99.800%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Design removal efficiency = 99.80%, 6 boxes, 402 SCA, 6 fields		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</b>		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b>		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitor opacity as an indicator of electrostatic precipitator performance. Periodic stack tests are performed to assure compliance with the particulate mass emissions standard.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> Unit 1 FGD	<b>List all emission units associated with this control device.</b> Unit 1	
<b>Manufacturer:</b> B & W	<b>Model number:</b> Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input checked="" type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
SO2	100.00%	95% nominal
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Gas stream inlet = 350 F, Gas stream outlet = 128 F, Liquor flow rate maximum = 238,500 gal/min, gas pressure drop at max. flow rate = 12.5 inches H2O, pressure drop through scrubber = 10.5 in. H2O		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> SO2 emissions monitored with CEMS.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitor SO2 emissions in accordance with Monitoring Plan described in Attachment K.		



<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> Unit 2 FGD	<b>List all emission units associated with this control device.</b> Unit 2	
<b>Manufacturer:</b> B & W	<b>Model number:</b> Custom	<b>Installation date:</b> Estimated start date 2/15/2010
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input checked="" type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
SO2	100.00%	95% nominal
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Gas stream inlet = 350 F, Gas stream outlet = 128 F, Liquor flow rate maximum = 238,500 gal/min, gas pressure drop at max. flow rate = 12.5 inches H2O, pressure drop through scrubber = 10.5 in. H2O		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> SO2 emissions are monitored with CEMS.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitor SO2 emissions in accordance with Monitoring Plan described in Attachment K.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> Unit 3 FGD	<b>List all emission units associated with this control device.</b> Unit 3	
<b>Manufacturer:</b> B & W	<b>Model number:</b> Custom	<b>Installation date:</b> 2/15/2009
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input checked="" type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
SO2	100.00%	95.0% nominal
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Gas stream inlet = 350 F, Gas stream outlet = 128 F, Liquor flow rate maximum = 214,400 gal/min, gas pressure drop at max. flow rate = 13.4 inches H2O, pressure drop through scrubber = 10.1 in. H2O		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> SO2 emissions monitored with CEMS.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitor SO2 emissions in accordance with Monitoring Plan described in Attachment K.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> AM1 SCR	<b>List all emission units associated with this control device.</b> Unit 1 Steam Generator	
<b>Manufacturer:</b>	<b>Model number:</b> Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b> <input type="checkbox"/> Baghouse/Fabric Filter <input type="checkbox"/> Venturi Scrubber <input type="checkbox"/> Multiclone <input type="checkbox"/> Carbon Bed Adsorber <input type="checkbox"/> Packed Tower Scrubber <input type="checkbox"/> Single Cyclone <input type="checkbox"/> Carbon Drum(s) <input type="checkbox"/> Other Wet Scrubber <input type="checkbox"/> Cyclone Bank <input type="checkbox"/> Catalytic Incinerator <input type="checkbox"/> Condenser <input type="checkbox"/> Settling Chamber <input type="checkbox"/> Thermal Incinerator <input type="checkbox"/> Flare <input checked="" type="checkbox"/> Other (describe) <u>Selective Catalytic Reduction</u> <input type="checkbox"/> Wet Plate Electrostatic Precipitator <input type="checkbox"/> Dry Plate Electrostatic Precipitator		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
NO <sub>x</sub>	100%	90%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>  Design Operating Temperature - 750 °F Design Removal Efficiency - 90% Maximum Ammonia Slip - 2 ppmvd @ 3% O <sub>2</sub>		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification.</b> Continuous Emissions Monitoring is used for NO <sub>x</sub> emissions.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  Monitoring of NO <sub>x</sub> is performed by a Continuous Emissions Monitor.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> AM2 SCR	<b>List all emission units associated with this control device.</b> Unit 2 Steam Generator	
<b>Manufacturer:</b>	<b>Model number:</b> Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input checked="" type="checkbox"/> Other (describe) <u>Selective Catalytic Reduction</u>
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
NO <sub>x</sub>	100%	90%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Design Operating Temperature - 750 °F Design Removal Efficiency - 90% Maximum Ammonia Slip - 2 ppmvd @ 3% O <sub>2</sub>		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> Continuous Emissions Monitoring is used for NO <sub>x</sub> emissions.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitoring of NO <sub>x</sub> is performed by a Continuous Emissions Monitor.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> AM3 SCR	<b>List all emission units associated with this control device.</b> Unit 3 Steam Generator	
<b>Manufacturer:</b>	<b>Model number:</b> Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input checked="" type="checkbox"/> Other (describe) <u>Selective Catalytic Reduction</u>
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
NO <sub>x</sub>	100%	90%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Design Operating Temperature - 750 °F Design Removal Efficiency - 90% Maximum Ammonia Slip - 2 ppmvd @ 3% O <sub>2</sub>		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> Continuous Emissions Monitoring is used for NO <sub>x</sub> emissions.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Monitoring of NO <sub>x</sub> is performed by a Continuous Emissions Monitor.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> 7C, 8C	<b>List all emission units associated with this control device.</b> DSSB-1, 2	
<b>Manufacturer:</b>  Later	<b>Model number:</b>  Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<input checked="" type="checkbox"/> Baghouse/Fabric Filter <input type="checkbox"/> Venturi Scrubber <input type="checkbox"/> Multiclone <input type="checkbox"/> Carbon Bed Adsorber <input type="checkbox"/> Packed Tower Scrubber <input type="checkbox"/> Single Cyclone <input type="checkbox"/> Carbon Drum(s) <input type="checkbox"/> Other Wet Scrubber <input type="checkbox"/> Cyclone Bank <input type="checkbox"/> Catalytic Incinerator <input type="checkbox"/> Condenser <input type="checkbox"/> Settling Chamber <input type="checkbox"/> Thermal Incinerator <input type="checkbox"/> Flare <input type="checkbox"/> Other (describe) _____ <input type="checkbox"/> Wet Plate Electrostatic Precipitator <input type="checkbox"/> Dry Plate Electrostatic Precipitator		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
PM	100.00%	99.78%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Gas flow rate = 500 ACFM, pressure drop = 5 in. H <sub>2</sub> O		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> The unit has potential pre-control device emissions (as defined in 40 CFR 70) of PM that are less than the amount required for a source to be classified as a major source.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Pressure differential and alarm will notify of break in bag filter.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> 4C,5C,6C,	<b>List all emission units associated with this control device.</b> DB-A, DB-B, DB-C	
<b>Manufacturer:</b>  Later	<b>Model number:</b>  Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<input checked="" type="checkbox"/> Baghouse/Fabric Filter <input type="checkbox"/> Venturi Scrubber <input type="checkbox"/> Multiclone <input type="checkbox"/> Carbon Bed Adsorber <input type="checkbox"/> Packed Tower Scrubber <input type="checkbox"/> Single Cyclone <input type="checkbox"/> Carbon Drum(s) <input type="checkbox"/> Other Wet Scrubber <input type="checkbox"/> Cyclone Bank <input type="checkbox"/> Catalytic Incinerator <input type="checkbox"/> Condenser <input type="checkbox"/> Settling Chamber <input type="checkbox"/> Thermal Incinerator <input type="checkbox"/> Flare <input type="checkbox"/> Other (describe) _____ <input type="checkbox"/> Wet Plate Electrostatic Precipitator <input type="checkbox"/> Dry Plate Electrostatic Precipitator		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
PM	100.00%	99.78%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Gas flow rate = 1750 ACFM, pressure drop = 5 in. H2O		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> The unit has potential pre-control device emissions (as defined in 40 CFR 70) of PM that are less than the amount required for a source to be classified as a major source.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Pressure differential and alarm will notify of break in bag filter.		

<b>ATTACHMENT G - Air Pollution Control Device Form</b>		
<b>Control device ID number:</b> 9C	<b>List all emission units associated with this control device.</b> Bagfilter for WWT Lime Silo	
<b>Manufacturer:</b> Later	<b>Model number:</b> Custom	<b>Installation date:</b>
<b>Type of Air Pollution Control Device:</b>		
<input checked="" type="checkbox"/> Baghouse/Fabric Filter <input type="checkbox"/> Venturi Scrubber <input type="checkbox"/> Multiclone <input type="checkbox"/> Carbon Bed Adsorber <input type="checkbox"/> Packed Tower Scrubber <input type="checkbox"/> Single Cyclone <input type="checkbox"/> Carbon Drum(s) <input type="checkbox"/> Other Wet Scrubber <input type="checkbox"/> Cyclone Bank <input type="checkbox"/> Catalytic Incinerator <input type="checkbox"/> Condenser <input type="checkbox"/> Settling Chamber <input type="checkbox"/> Thermal Incinerator <input type="checkbox"/> Flare <input type="checkbox"/> Other (describe) _____ <input type="checkbox"/> Wet Plate Electrostatic Precipitator <input type="checkbox"/> Dry Plate Electrostatic Precipitator		
<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
PM	100.00%	99.78%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>		
Gas flow rate = 500 ACFM, pressure drop = 5 in. H <sub>2</sub> O		
<b>Is this device subject to the CAM requirements of 40 C.F.R. 64?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, <b>Complete ATTACHMENT H</b>		
If No, <b>Provide justification.</b> The unit has potential pre-control device emissions (as defined in 40 CFR 70) of PM that are less than the amount required for a source to be classified as a major source.		
<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>		
Pressure differential and alarm will notify of break in bag filter.		



Attachment H  
Compliance Assurance Monitoring (CAM) Forms

## ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at <http://www.epa.gov/ttn/emc/cam.html>

### CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*):

YES     NO

- a. The PSEU is located at a major source that is required to obtain a Title V permit;
- b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is **NOT** exempt;

**LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:**

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
  - Stratospheric Ozone Protection Requirements.
  - Acid Rain Program Requirements.
  - Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
  - An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).
- c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;
  - d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; **AND**
  - e. The PSEU is **NOT** an exempt backup utility power emissions unit that is municipally-owned.

### BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

**RENEWAL APPLICATION.** **ALL** PSEUs for which a CAM plan has **NOT** yet been approved need to be addressed in this CAM plan submittal.

**INITIAL APPLICATION** (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

**SIGNIFICANT MODIFICATION TO LARGE PSEUs.** **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, **Only** address the appropriate monitoring requirements affected by the significant modification.

**3) <sup>a</sup> BACKGROUND DATA AND INFORMATION**

Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU in order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	<sup>b</sup> EMISSION LIMITATION or STANDARD	<sup>c</sup> MONITORING REQUIREMENT
Unit 1	Coal-Fired Steam Generator	PM	ESP	45CSR2-4.1.a	Monitor Duct Opacity Using COMS
Unit 2	Coal-Fired Steam Generator	PM	ESP	45CSR2-4.1.a	Monitor Duct Opacity Using COMS
Unit 3	Coal-Fired Steam Generator	PM	ESP	45CSR2-4.1.a	Monitor Duct Opacity Using COMS
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

<sup>a</sup> If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

<sup>b</sup> Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

<sup>c</sup> Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

**CAM MONITORING APPROACH CRITERIA**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

<b>4a) PSEU Designation: Unit 1</b>	<b>4b) Pollutant: PM</b>	<b>4c) <sup>a</sup> Indicator No. 1: Opacity</b>	<b>4d) <sup>a</sup> Indicator No. 2: Opacity</b>
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:		Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.	Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		Opacity data has been collected during Method 5 particulate emission testing. The plan will incorporate existing test data along with CAM stack testing to verify a conservative indicator range. The proposed upper threshold value of the indicator range is a 3-hour block average opacity value greater than 10% Opacity	Excess short duration opacity increases occurring during any calendar quarter are not to exceed 5% of the total operating time.
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:		The COMs is located in a common stack downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.	The COMs is located in a common stack downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.
<sup>c</sup> For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:		N/A	N/A
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		QA/QC is performed in accordance with 40 CFR 75.	QA/QC is performed in accordance with 40 CFR 75.
<sup>d</sup> Provide the <u>MONITORING FREQUENCY</u> :		Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)	Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:		Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.	Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase).	The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase) and the total operating time of the units.

<sup>a</sup> Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

<sup>b</sup> Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

<sup>c</sup> The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

<sup>d</sup> Emission units with post-control PTE  $\geq$  100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

**CAM MONITORING APPROACH CRITERIA**

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for **EACH** indicator selected for **EACH** PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

<b>4a) PSEU Designation: Unit 2</b>	<b>4b) Pollutant: PM</b>	<b>4c) <sup>a</sup> Indicator No. 1: Opacity</b>	<b>4d) <sup>a</sup> Indicator No. 2: Opacity</b>
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:		Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.	Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		Opacity data has been collected during Method 5 particulate emission testing. The plan will incorporate existing test data along with CAM stack testing to verify a conservative indicator range. The proposed upper threshold value of the indicator range is a 3-hour block average opacity value greater than 10% Opacity	Excess short duration opacity increases occurring during any calendar quarter are not to exceed 5% of the total operating time.
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:		The COMs is located in a common stack downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.	The COMs is located in a common stack downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.
<sup>c</sup> For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:		N/A	N/A
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		QA/QC is performed in accordance with 40 CFR 75.	QA/QC is performed in accordance with 40 CFR 75.
<sup>d</sup> Provide the <u>MONITORING FREQUENCY</u> :		Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)	Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:		Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.	Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase).	The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase) and the total operating time of the units.

<sup>a</sup> Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

<sup>b</sup> Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

<sup>c</sup> The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

<sup>d</sup> Emission units with post-control PTE  $\geq$  100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

**CAM MONITORING APPROACH CRITERIA**

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for **EACH** indicator selected for **EACH** PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

<b>4a) PSEU Designation:</b> <b>Unit 3</b>	<b>4b) Pollutant:</b> <b>PM</b>	<b>4c) <sup>a</sup> Indicator No. 1:</b> <b>Opacity</b>	<b>4d) <sup>a</sup> Indicator No. 2:</b> <b>Opacity</b>
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:		Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.	Opacity data is measured and recorded by a certified continuous opacity monitoring system (COMS). The 6-minute average data is recorded and will be used to calculate block 3-hour average opacity values.
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		Opacity data has been collected during Method 5 particulate emission testing. The plan will incorporate existing test data along with CAM stack testing to verify a conservative indicator range. The proposed upper threshold value of the indicator range is a 3-hour block average opacity value greater than 10% Opacity	Excess short duration opacity increases occurring during any calendar quarter are not to exceed 5% of the total operating time.
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:		The COMs is located in a common stack downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.	The COMs is located in a common stack downstream of the ESP in accordance with 40 CFR 60.13(i)(1); the COMs is installed, maintained and provides data accuracy in accordance with 40 CFR 75.
<sup>c</sup> For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:		N/A	N/A
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		QA/QC is performed in accordance with 40 CFR 75.	QA/QC is performed in accordance with 40 CFR 75.
<sup>d</sup> Provide the <u>MONITORING FREQUENCY</u> :		Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)	Opacity is measured continuously except for periods of monitor malfunction or downtime (e.g. calibration, repairs, etc.)
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:		Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.	Opacity data will be collected and stored in a Data Acquisition System (DAS) on a block 3-hour average basis.
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase).	The opacity values used to compare with the upper threshold value of the indicator range is the block 3-hour average opacity (short duration opacity increase) and the total operating time of the units.

<sup>a</sup> Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

<sup>b</sup> Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

<sup>c</sup> The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.



<sup>d</sup> Emission units with post-control PTE  $\geq$  100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

**RATIONALE AND JUSTIFICATION**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:  
Unit 1

6b) Regulated Air Pollutant:  
PM

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer’s recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Appalachian Power believes that the continuous opacity monitoring system (COMS) data is the most appropriate and readily available indicator for continuously evaluating the performance and operations of the electrostatic precipitator and thereby assessing compliance with the applicable particulate emission rate limitation between periodic 40 CFR Part 60, Method 5 compliance testing. Monitoring of other ESP operating parameters such as TR set voltage and current levels may be beneficial in evaluating ESP performance trends on a short term basis as well, however, these are not continuous nor are they direct indicators of conditions in the stack prior to release of the flue gas. For these reasons, a specific corrective action plan has been developed based upon opacity monitoring. This corrective action plan will be implemented at any time there is a short duration or a sustained duration increase in opacity above the upper threshold value of the indicator range.

**Monitoring:** The permittee shall monitor and maintain 6-minute opacity averages measured by a continuous opacity monitoring system, operated and maintained pursuant to 40 C.F.R. Part 75, including the minimum data requirements, in order to determine 3-hour block average opacity values. The 6-minute opacity averages shall be used to calculate 3-hour block average opacity values. The COM QA/QC procedures shall be equivalent to the applicable requirements of 40 C.F.R. Part 75. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, but not limited to, calibration checks and required zero and span adjustments), the opacity shall be continuously monitored (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 QA/QC activities shall not be used for purposes of 40 C.F.R. Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement. Data availability shall be at least 50% of the operating time in the 3-hour block to satisfy the data requirements to calculate the 3-hour average opacity. The number of invalid 3-hour blocks shall not exceed 15% of the total 3-hour blocks during unit operation for a quarterly reporting period.

**Recordkeeping:** Records of the block 3-hour COMS opacity averages and corrective actions taken during excursions of the CAM plan indicator range shall be maintained on site and shall be made available to the Director or his duly authorized representative upon request. COMS performance data will be maintained in accordance with 40 C.F.R. Part 75 recordkeeping requirements. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 C.F.R. Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

**Reporting:** The permittee shall submit semiannual monitoring reports to the DAQ. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the following information: (a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective actions taken; (b) 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); and (c) A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

For purposes of this corrective action plan:

A **short duration increase in opacity** is defined as an increase in opacity that persists for at least a block three-hour period (30 consecutive 6-minute periods), and which measure greater than the upper threshold value of the indicator range.

A **sustained increase in opacity (or an excursion)** is defined as an increase in opacity that persists for two consecutive 3-hour block periods (two consecutive short duration opacity increase periods), and which measure greater than the upper threshold value of the indicator range.

This plan outlines specific corrective action procedures to be implemented by plant personnel for the following scenarios:

**Case A:** Upon alarm of a Short duration increase in opacity.

**Case B:** Upon alarm of a sustained increase in opacity.

These corrective action procedures do not apply to opacity increases that occur during exempt periods. Assignment of personnel to carry out each step of this plan will be the sole responsibility of Plant Management and may change based upon specific conditions.

**Case A: (Short duration increase in opacity.)**

Plant personnel will continue to observe the COMS data and at the same time initiate a review of other available information (such as: TR set status, voltage, current, operating parameters, etc.) in order to validate and/or identify the cause of the opacity increase.

1. If the opacity does not return to and remain at normal operating levels within (within 180 minutes), further corrective action may become necessary.
2. If the cause of the opacity increase is not already known, unit-operating data will be collected for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays; the unit-operations data may be collected the following working day.
4. Once the cause of the opacity increase is determined, plant personnel will take necessary steps to mitigate the unit operating condition or equipment failure that is found to be causing the short duration opacity increase.

**B. Case B: (Sustained increase in opacity.)**

1. 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.
2. If the opacity does not return and remain at normal operating levels within a short duration (within 180 minutes), and the cause of the opacity increase is not already known, further analysis of the unit, and auxiliary operating data will be analyzed and recorded for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays, off-shift personnel may be required to determine the cause of the opacity increase and initiate appropriate corrective actions.
4. Plant personnel will initiate the following corrective actions as necessary to reduce stack opacity to normal operating levels:
  - a. Any individual TR sets that are out-of-service or not operating at normal power levels shall be repaired and/or adjusted as appropriate.
  - b. ESP rapping procedures may be initiated and/or adjusted as necessary.
  - c. Flue gas conditioning systems will be placed in service or adjusted as necessary.
  - d. Depending on the specific events found to be the cause of the opacity increase, other corrective actions will be implemented as necessary to reduce the opacity to normal operating levels.

If five (5) percent or greater of the block three (3) hour average COMS opacity values indicate excursions of the 10% opacity threshold during a calendar quarter, the permittee shall develop and implement a QIP. The Director may waive this QIP requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to permit condition 3.3.1.

If the opacity level continues to exceed the upper threshold value of the indicator range Opacity after the corrective actions as outlined above for Case B are implemented, plant personnel will contact appropriate management staff to obtain necessary approvals to reduce load, or in extreme cases, commence a unit shutdown in order to remediate the cause of the opacity increase.

Based on the results of a determination of actions taken by the permittee, the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, then it shall be developed, implemented, and modified as required according to 40 C.F.R. §§ 64.8(b) through (e).

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

**RATIONALE AND JUSTIFICATION:**

The indicator is based upon an opacity/mass relationship of the emissions unit at full load operation. It is anticipated that the 0.05 lb/mmBTU particulate emissions limit will not be exceeded when 3-hour block opacity values remain at or below 10% opacity. Accordingly, the Amos Plant can demonstrate a reasonable assurance of compliance with the particulate mass emission limit as long as the 3-hour block average stack opacity is maintained below the upper threshold value of 10% opacity.

Appalachian Power Company is proposing that the opacity/mass relationship be verified using existing baseline mass particulate emission test results and additional full load "CAM Testing". Based on previous compliance or performance testing of the electrostatic precipitator using 40 CFR Part 60 methods, Appalachian Power Company believes that compliance with the upper threshold value of 10% opacity for the 3-hour block average periods will provide reasonable assurance of compliance with the particulate emission standard. The 10% threshold was chosen for two reasons: first, the historic particulate emission test data that has been collected over the past few years shows this source to be in compliance with the 0.05 lb/mmBTU particulate limit by a good margin when stack opacity is less than 10% and second, we presume that DAQ established the 10% 45 CSR 2 opacity SIP limit at a level that DAQ believes sources will likely be in compliance with the mass SIP limit to provide a conservative reasonable assurance of compliance with the mass emission limit. The 3-hour block averaging time period was chosen to provide adequate time to make operational corrections to comply with the particulate mass emission standard.

Historic baseline test data collected in the past recent years and submitted to WV DEP is summarized below:

Test Date	Measured Emission Rate AM1	Average Opacity
10/21/2004	0.0121 lb/mmBtu	6.9
2/9/2007	0.0156 lb/mmBtu	7.5
10/1/2009	0.0025 lb/mmBtu	3.5
5/5/2011	0.0207 lb/mmBtu	5.1
3/6/2014	0.0041 lb/mmBtu	3.5
2/14/2017	0.0017 lb/mmBtu	3.0
2/19/2020	0.0029 lb/mmBtu	2.0

No changes have been made that would significantly impact ESP performance. Data collected during future periodic 45CSR2 mass emissions tests will be used to supplement the existing data set in order to verify the continuing appropriateness of the 10% indicator range value.

While the above test data has been used as baseline confirmation of mass emission compliance at full load, additional full load testing was also conducted to supplement the data set with data points collected while operating at or near the 10% opacity threshold. These points were established by "de-tuning" the electrostatic precipitator (making adjustments to operating parameters of the precipitator) and/or making other operational adjustments to the unit to increase the particulate mass loading and opacity downstream of the precipitator. The data set used to establish the opacity/mass relationship and the indicator verification consist of the previously collected particulate mass emissions data and the data collected during the CAM testing program. The CAM testing at elevated opacity levels was performed for one 2-hour test run (as opposed to a full 6-hour time period typical of a compliance test). Limiting the data collection to 2-hours will minimize the environmental impacts of operating the particulate control equipment under less than normal operating conditions. Nevertheless, it is understood that more than one run under specific unit operating conditions may be necessary.

**RATIONALE AND JUSTIFICATION**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:  
Unit 2

6b) Regulated Air Pollutant:  
PM

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer’s recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Appalachian Power believes that the continuous opacity monitoring system (COMS) data is the most appropriate and readily available indicator for continuously evaluating the performance and operations of the electrostatic precipitator and thereby assessing compliance with the applicable particulate emission rate limitation between periodic 40 CFR Part 60, Method 5 compliance testing. Monitoring of other ESP operating parameters such as TR set voltage and current levels may be beneficial in evaluating ESP performance trends on a short term basis as well, however, these are not continuous nor are they direct indicators of conditions in the stack prior to release of the flue gas. For these reasons, a specific corrective action plan has been developed based upon opacity monitoring. This corrective action plan will be implemented at any time there is a short duration or a sustained duration increase in opacity above the upper threshold value of the indicator range.

**Monitoring:** The permittee shall monitor and maintain 6-minute opacity averages measured by a continuous opacity monitoring system, operated and maintained pursuant to 40 C.F.R. Part 75, including the minimum data requirements, in order to determine 3-hour block average opacity values. The 6-minute opacity averages shall be used to calculate 3-hour block average opacity values. The COM QA/QC procedures shall be equivalent to the applicable requirements of 40 C.F.R. Part 75. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, but not limited to, calibration checks and required zero and span adjustments), the opacity shall be continuously monitored (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 QA/QC activities shall not be used for purposes of 40 C.F.R. Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement. Data availability shall be at least 50% of the operating time in the 3-hour block to satisfy the data requirements to calculate the 3-hour average opacity. The number of invalid 3-hour blocks shall not exceed 15% of the total 3-hour blocks during unit operation for a quarterly reporting period.

**Recordkeeping:** Records of the block 3-hour COMS opacity averages and corrective actions taken during excursions of the CAM plan indicator range shall be maintained on site and shall be made available to the Director or his duly authorized representative upon request. COMS performance data will be maintained in accordance with 40 C.F.R. Part 75 recordkeeping requirements. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 C.F.R. Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

**Reporting:** The permittee shall submit semiannual monitoring reports to the DAQ. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the following information: (a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective actions taken; (b) 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); and (c) A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

For purposes of this corrective action plan:

A **short duration increase in opacity** is defined as an increase in opacity that persists for at least a block three-hour period (30 consecutive 6-minute periods), and which measure greater than the upper threshold value of the indicator range.

A **sustained increase in opacity (or an excursion)** is defined as an increase in opacity that persists for two consecutive 3-hour block periods (two consecutive short duration opacity increase periods), and which measure greater than the upper threshold value of the indicator range.

This plan outlines specific corrective action procedures to be implemented by plant personnel for the following scenarios:

**Case A:** Upon alarm of a Short duration increase in opacity.

**Case B:** Upon alarm of a sustained increase in opacity.

These corrective action procedures do not apply to opacity increases that occur during exempt periods. Assignment of personnel to carry out each step of this plan will be the sole responsibility of Plant Management and may change based upon specific conditions.

**Case A: (Short duration increase in opacity.)**

Plant personnel will continue to observe the COMS data and at the same time initiate a review of other available information (such as: TR set status, voltage, current, operating parameters, etc.) in order to validate and/or identify the cause of the opacity increase.

5. If the opacity does not return to and remain at normal operating levels within (within 180 minutes), further corrective action may become necessary.
3. If the cause of the opacity increase is not already known, unit-operating data will be collected for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays; the unit-operations data may be collected the following working day.
4. Once the cause of the opacity increase is determined, plant personnel will take necessary steps to mitigate the unit operating condition or equipment failure that is found to be causing the short duration opacity increase.

**B. Case B: (Sustained increase in opacity.)**

1. 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.
2. If the opacity does not return and remain at normal operating levels within a short duration (within 180 minutes), and the cause of the opacity increase is not already known, further analysis of the unit, and auxiliary operating data will be analyzed and recorded for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays, off-shift personnel may be required to determine the cause of the opacity increase and initiate appropriate corrective actions.
4. Plant personnel will initiate the following corrective actions as necessary to reduce stack opacity to normal operating levels:
  - a. Any individual TR sets that are out-of-service or not operating at normal power levels shall be repaired and/or adjusted as appropriate.
  - b. ESP rapping procedures may be initiated and/or adjusted as necessary.
  - c. Flue gas conditioning systems will be placed in service or adjusted as necessary.
  - d. Depending on the specific events found to be the cause of the opacity increase, other corrective actions will be implemented as necessary to reduce the opacity to normal operating levels.

If five (5) percent or greater of the block three (3) hour average COMS opacity values indicate excursions of the 10% opacity threshold during a calendar quarter, the permittee shall develop and implement a QIP. The Director may waive this QIP requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to permit condition 3.3.1.

If the opacity level continues to exceed the upper threshold value of the indicator range Opacity after the corrective actions as outlined above for Case B are implemented, plant personnel will contact appropriate management staff to obtain necessary approvals to reduce load, or in extreme cases, commence a unit shutdown in order to remediate the cause of the opacity increase.

Based on the results of a determination of actions taken by the permittee, the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, then it shall be developed, implemented, and modified as required according to 40 C.F.R. §§ 64.8(b) through (e).

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

## RATIONALE AND JUSTIFICATION:

The indicator is based upon an opacity/mass relationship of the emissions unit at full load operation. It is anticipated that the 0.05 lb/mmBTU particulate emissions limit will not be exceeded when 3-hour block opacity values remain at or below 10% opacity. Accordingly, the Amos Plant can demonstrate a reasonable assurance of compliance with the particulate mass emission limit as long as the 3-hour block average stack opacity is maintained below the upper threshold value of 10% opacity.

Appalachian Power Company is proposing that the opacity/mass relationship be verified using existing baseline mass particulate emission test results and additional full load "CAM Testing". Based on previous compliance or performance testing of the electrostatic precipitator using 40 CFR Part 60 methods, Appalachian Power Company believes that compliance with the upper threshold value of 10% opacity for the 3-hour block average periods will provide reasonable assurance of compliance with the particulate emission standard. The 10% threshold was chosen for two reasons: first, the historic particulate emission test data that has been collected over the past few years shows this source to be in compliance with the 0.05 lb/mmBTU particulate limit by a good margin when stack opacity is less than 10% and second, we presume that DAQ established the 10% 45 CSR 2 opacity SIP limit at a level that DAQ believes sources will likely be in compliance with the mass SIP limit to provide a conservative reasonable assurance of compliance with the mass emission limit. The 3-hour block averaging time period was chosen to provide adequate time to make operational corrections to comply with the particulate mass emission standard.

Historic baseline test data collected in the past recent years and submitted to WV DEP is summarized below:

Test Date	Measured Emission Rate AM2	Average Opacity
10/21/2004	0.0121 lb/mmBtu	6.9
2/9/2007	0.0156 lb/mmBtu	7.5
10/1/2009	0.0025 lb/mmBtu	3.5
5/3/2011	0.0169 lb/mmBtu	3.0
3/5/2014	0.0103 lb/mmBtu	3.0
2/15/2017	0.0007 lb/mmBtu	3.0
2/20/2020	0.0029 lb/mmBtu	3.0

No changes have been made that would significantly impact ESP performance. Data collected during future periodic 45CSR2 mass emissions tests will be used to supplement the existing data set in order to verify the continuing appropriateness of the 10% indicator range value.

While the above test data has been used as baseline confirmation of mass emission compliance at full load, additional full load testing was also conducted to supplement the data set with data points collected while operating at or near the 10% opacity threshold. These points were established by "de-tuning" the electrostatic precipitator (making adjustments to operating parameters of the precipitator) and/or making other operational adjustments to the unit to increase the particulate mass loading and opacity downstream of the precipitator. The data set used to establish the opacity/mass relationship and the indicator verification consist of the previously collected particulate mass emissions data and the data collected during the CAM testing program. The CAM testing at elevated opacity levels was performed for one 2-hour test run (as opposed to a full 6-hour time period typical of a compliance test). Limiting the data collection to 2-hours will minimize the environmental impacts of operating the particulate control equipment under less than normal operating conditions. Nevertheless, it is understood that more than one run under specific unit operating conditions may be necessary.

**RATIONALE AND JUSTIFICATION**

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of **EACH** indicator and monitoring approach and **EACH** indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:  
Unit 3

6b) Regulated Air Pollutant:  
PM

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer’s recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Appalachian Power believes that the continuous opacity monitoring system (COMS) data is the most appropriate and readily available indicator for continuously evaluating the performance and operations of the electrostatic precipitator and thereby assessing compliance with the applicable particulate emission rate limitation between periodic 40 CFR Part 60, Method 5 compliance testing. Monitoring of other ESP operating parameters such as TR set voltage and current levels may be beneficial in evaluating ESP performance trends on a short term basis as well, however, these are not continuous nor are they direct indicators of conditions in the stack prior to release of the flue gas. For these reasons, a specific corrective action plan has been developed based upon opacity monitoring. This corrective action plan will be implemented at any time there is a short duration or a sustained duration increase in opacity above the upper threshold value of the indicator range.

**Monitoring:** The permittee shall monitor and maintain 6-minute opacity averages measured by a continuous opacity monitoring system, operated and maintained pursuant to 40 C.F.R. Part 75, including the minimum data requirements, in order to determine 3-hour block average opacity values. The 6-minute opacity averages shall be used to calculate 3-hour block average opacity values. The COM QA/QC procedures shall be equivalent to the applicable requirements of 40 C.F.R. Part 75. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, but not limited to, calibration checks and required zero and span adjustments), the opacity shall be continuously monitored (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 QA/QC activities shall not be used for purposes of 40 C.F.R. Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement. Data availability shall be at least 50% of the operating time in the 3-hour block to satisfy the data requirements to calculate the 3-hour average opacity. The number of invalid 3-hour blocks shall not exceed 15% of the total 3-hour blocks during unit operation for a quarterly reporting period.

**Recordkeeping:** Records of the block 3-hour COMS opacity averages and corrective actions taken during excursions of the CAM plan indicator range shall be maintained on site and shall be made available to the Director or his duly authorized representative upon request. COMS performance data will be maintained in accordance with 40 C.F.R. Part 75 recordkeeping requirements. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 C.F.R. Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

**Reporting:** The permittee shall submit semiannual monitoring reports to the DAQ. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the following information: (a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective actions taken; (b) 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); and (c) A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

For purposes of this corrective action plan:

A **short duration increase in opacity** is defined as an increase in opacity that persists for at least a block three-hour period (30 consecutive 6-minute periods), and which measure greater than the upper threshold value of the indicator range.

A **sustained increase in opacity (or an excursion)** is defined as an increase in opacity that persists for two consecutive 3-hour block periods (two consecutive short duration opacity increase periods), and which measure greater than the upper threshold value of the indicator range.

This plan outlines specific corrective action procedures to be implemented by plant personnel for the following scenarios:

**Case A:** Upon alarm of a Short duration increase in opacity.

**Case B:** Upon alarm of a sustained increase in opacity.

These corrective action procedures do not apply to opacity increases that occur during exempt periods. Assignment of personnel to carry out each step of this plan will be the sole responsibility of Plant Management and may change based upon specific conditions.



**Case A: (Short duration increase in opacity.)**

Plant personnel will continue to observe the COMS data and at the same time initiate a review of other available information (such as: TR set status, voltage, current, operating parameters, etc.) in order to validate and/or identify the cause of the opacity increase.

6. If the opacity does not return to and remain at normal operating levels within (within 180 minutes), further corrective action may become necessary.
3. If the cause of the opacity increase is not already known, unit-operating data will be collected for the purpose of determining the cause of the opacity increase.
3. If the opacity increase occurs after normal working hours, on weekends, or holidays; the unit-operations data may be collected the following working day.
4. Once the cause of the opacity increase is determined, plant personnel will take necessary steps to mitigate the unit operating condition or equipment failure that is found to be causing the short duration opacity increase.

**B. Case B: (Sustained increase in opacity.)**

5. 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.
6. If the opacity does not return and remain at normal operating levels within a short duration (within 180 minutes), and the cause of the opacity increase is not already known, further analysis of the unit, and auxiliary operating data will be analyzed and recorded for the purpose of determining the cause of the opacity increase.
7. If the opacity increase occurs after normal working hours, on weekends, or holidays, off-shift personnel may be required to determine the cause of the opacity increase and initiate appropriate corrective actions.
8. Plant personnel will initiate the following corrective actions as necessary to reduce stack opacity to normal operating levels:
  - e. Any individual TR sets that are out-of-service or not operating at normal power levels shall be repaired and/or adjusted as appropriate.
  - f. ESP rapping procedures may be initiated and/or adjusted as necessary.
  - g. Flue gas conditioning systems will be placed in service or adjusted as necessary.
  - h. Depending on the specific events found to be the cause of the opacity increase, other corrective actions will be implemented as necessary to reduce the opacity to normal operating levels.

If five (5) percent or greater of the block three (3) hour average COMS opacity values indicate excursions of the 10% opacity threshold during a calendar quarter, the permittee shall develop and implement a QIP. The Director may waive this QIP requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to permit condition 3.3.1.

If the opacity level continues to exceed the upper threshold value of the indicator range Opacity after the corrective actions as outlined above for Case B are implemented, plant personnel will contact appropriate management staff to obtain necessary approvals to reduce load, or in extreme cases, commence a unit shutdown in order to remediate the cause of the opacity increase.

Based on the results of a determination of actions taken by the permittee, the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, then it shall be developed, implemented, and modified as required according to 40 C.F.R. §§ 64.8(b) through (e).

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

## RATIONALE AND JUSTIFICATION:

The indicator is based upon an opacity/mass relationship of the emissions unit at full load operation. It is anticipated that the 0.05 lb/mmBTU particulate emissions limit will not be exceeded when 3-hour block opacity values remain at or below 10% opacity. Accordingly, the Amos Plant can demonstrate a reasonable assurance of compliance with the particulate mass emission limit as long as the 3-hour block average stack opacity is maintained below the upper threshold value of 10% opacity.

Appalachian Power Company is proposing that the opacity/mass relationship be verified using existing baseline mass particulate emission test results and additional full load "CAM Testing". Based on previous compliance or performance testing of the electrostatic precipitator using 40 CFR Part 60 methods, Appalachian Power Company believes that compliance with the upper threshold value of 10% opacity for the 3-hour block average periods will provide reasonable assurance of compliance with the particulate emission standard. The 10% threshold was chosen for two reasons: first, the historic particulate emission test data that has been collected over the past few years shows this source to be in compliance with the 0.05 lb/mmBTU particulate limit by a good margin when stack opacity is less than 10% and second, we presume that DAQ established the 10% 45 CSR 2 opacity SIP limit at a level that DAQ believes sources will likely be in compliance with the mass SIP limit to provide a conservative reasonable assurance of compliance with the mass emission limit. The 3-hour block averaging time period was chosen to provide adequate time to make operational corrections to comply with the particulate mass emission standard.

Historic baseline test data collected in the past recent years and submitted to WV DEP is summarized below:

Test Date	Measured Emission Rate AM3	Average Opacity
10/22/2004	0.0256 lb/mmBtu	6.1
2/8/2007	0.0211 lb/mmBtu	9.6
9/30/2009	0.0190 lb/mmBtu	5.7
5/7/2011	0.0176 lb/mmBtu	6.6
3/4/2014	0.0047 lb/mmBtu	6.9
2/16/2017	0.0021 lb/mmBtu	6.1
2/21/2020	0.0053 lb/mmBtu	5.3

No changes have been made that would significantly impact ESP performance. Data collected during future periodic 45CSR2 mass emissions tests will be used to supplement the existing data set in order to verify the continuing appropriateness of the 10% indicator range value.

While the above test data has been used as baseline confirmation of mass emission compliance at full load, additional full load testing was also conducted to supplement the data set with data points collected while operating at or near the 10% opacity threshold. These points were established by "de-tuning" the electrostatic precipitator (making adjustments to operating parameters of the precipitator) and/or making other operational adjustments to the unit to increase the particulate mass loading and opacity downstream of the precipitator. The data set used to establish the opacity/mass relationship and the indicator verification consist of the previously collected particulate mass emissions data and the data collected during the CAM testing program. The CAM testing at elevated opacity levels was performed for one 2-hour test run (as opposed to a full 6-hour time period typical of a compliance test). Limiting the data collection to 2-hours will minimize the environmental impacts of operating the particulate control equipment under less than normal operating conditions. Nevertheless, it is understood that more than one run under specific unit operating conditions may be necessary.

Attachment I  
Existing Applicable Permits




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**west virginia department of environmental protection**

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Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: (304) 926-0475 • FAX: (304) 926-0479

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

September 1, 2015

CERTIFIED MAIL  
91 7199 9991 7033 2721 4456

David Wickline, Plant Manager  
Appalachian Power - Amos Plant  
PO Box 4000  
St. Albans, WV 25177

Re: Appalachian Power Company  
John E. Amos Plant  
Permit No. R13-2663E  
Plant ID No. 079-00006

Dear Mr. Wickline:


Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permit, General Permit, and Procedures for Evaluation" has been approved. The enclosed permit R13-2663E is hereby issued pursuant to Subsection 5.7 of 45CSR13. Please be aware of the notification requirements in the permit which pertain to commencement of construction, modification, or relocation activities; startup of operations; and suspension of operations.

In accordance with 45CSR30- Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

Should you have any questions or comments, please contact me at (304) 926-0499, extension 1218.

Sincerely,

  
 Steven R. Pursley, PE  
 Engineer

Enclosures

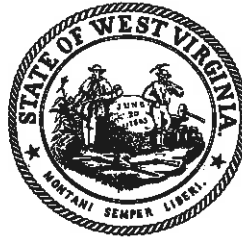
c: GJ Wooten  
AEP Air Quality Services Section

*West Virginia Department of Environmental Protection*

*Division of Air Quality*

Earl Ray Tomblin Randy C. Huffman  
Governor Cabinet Secretary

# Permit to Modify



**R13-2663E**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

Issued to:  
**Appalachian Power Company**  
**John E. Amos Plant**  
**079-00006**

\_\_\_\_\_  
*William F. Durham*  
Director

*Issued: September 1, 2015*

This permit will supercede and replace Permit R13-2663D.

Facility Location: Saint Albans, Putnam County, West Virginia  
Mailing Address: P.O. Box 4000  
State Route 817  
Saint Albans, WV 25177  
Facility Description: Electrical Power Generator  
SIC Codes: 4911  
UTM Coordinates: 428.2 km Easting • 4,258.4 km Northing • Zone 17  
Permit Type: Modification  
Description of Change: Voluntary heat input capacity limit on the two auxiliary boiler in order to meet the definition of "Limited Use" boiler per 40 CFR 63 Subpart DDDDD

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [ §§ 22B-1-1 et seq. ], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

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*The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.*

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**1.0 Emission Units**

<b>Emission Point ID</b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Design Capacity</b>	<b>Control Device</b>
4E	1S	Limestone Material Handling	2006/2007	1500 TPH	None
5E	2S	Limestone Mineral Processing	2006/2007	500 TPH	None
6E	2S	Limestone Mineral Processing	2006/2007	500 TPH	Fabric Filter
7E	2S	Limestone Mineral Processing	2006/2007	500 TPH	Fabric Filter
8E	2S	Limestone Mineral Processing	2006/2007	500 TPH	Fabric Filter
9E	3S	Gypsum Material Handling	2006/2007	300 TPH	None
10E	4S	Dry Sorbent Material Handling	2006/2007	50 TPH	None
11E	4S	Dry Sorbent Material Handling	2006/2007	50TPH	Fabric Filter
12E	4S	Dry Sorbent Material Handling	2006/2007	50 TPH	Fabric Filter
13E	5S	MgOH Material Handling	2006/2007	8000 gal/hr	None
14E	6S	Wastewater Treatment Handling	2006/2007	80 TPH	None
15E	6S	Wastewater Treatment Handling	2006/2007	50 TPH	Fabric Filter
3E	ME-1	Mechanical Extractor 1	2009	NA	Filter Separator
3E	ME-2	Mechanical Extractor 2	2009	NA	Filter Separator
3E	ME-3	Mechanical Extractor 3	2009	NA	Filter Separator
3E	ME-4	Mechanical Extractor 4	2009	NA	Filter Separator
3E	ME-5	Mechanical Extractor 5	2009	NA	Filter Separator
EP-1	FAS-5	Unit 3 Fly Ash Silo A	2009	1600 tons	Bin Vent Filter
EP-2	FAS-6	Unit 3 Fly Ash Silo B	2009	1600 tons	Bin Vent Filter
EP-5	FC-A31	Fluidized Conveyor A31 TP	2009	360 tph	Vent Filter
EP-10	FC-A32	Fluidized Conveyor A32 TP	2009	360 tph	Vent Filter
EP-8	FC-B31	Fluidized Conveyor B31 TP	2009	360 tph	Vent Filter
EP-11	FC-B32	Fluidized Conveyor B32 TP	2009	360 tph	Vent Filter
F-1	WFA-3A1	Pin/Paddle Mixer A31 TP	2009	450 tph	N
F-2	WFA-3A2	Pin/Paddle Mixer A32 TP	2009	450 tph	N
F-3	WFA-3B1	Pin/Paddle Mixer B31 TP	2009	450 tph	N
F-4	WFA-3B2	Pin/Paddle Mixer B32 TP	2009	450 tph	N
Aux AM1	Aux 1	Auxiliary Boiler	1971	642 mmbtu/hr	N
Aux AM3	Aux 3	Auxiliary Boiler	1971	600 mmbtu/hr	N



**2.0. General Conditions****2.1. Definitions**

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

**2.2. Acronyms**

<b>CAAA</b>	Clean Air Act Amendments	<b>NSPS</b>	New Source Performance Standards
<b>CBI</b>	Confidential Business Information	<b>PM</b>	Particulate Matter
<b>CEM</b>	Continuous Emission Monitor	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5µm in diameter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>Ppb</b>	Pounds per Batch
<b>CO</b>	Carbon Monoxide	<b>pph</b>	Pounds per Hour
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>ppm</b>	Parts per Million
<b>DAQ</b>	Division of Air Quality	<b>Ppmv or ppmv</b>	Parts per million by volume
<b>DEP</b>	Department of Environmental Protection	<b>PSD</b>	Prevention of Significant Deterioration
<b>dscm</b>	Dry Standard Cubic Meter	<b>psi</b>	Pounds per Square Inch
<b>FOIA</b>	Freedom of Information Act	<b>SIC</b>	Standard Industrial Classification
<b>HAP</b>	Hazardous Air Pollutant	<b>SIP</b>	State Implementation Plan
<b>HON</b>	Hazardous Organic NESHAP	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HP</b>	Horsepower	<b>TAP</b>	Toxic Air Pollutant
<b>lbs/hr</b>	Pounds per Hour	<b>TPY</b>	Tons per Year
<b>LDAR</b>	Leak Detection and Repair	<b>TRS</b>	Total Reduced Sulfur
<b>M</b>	Thousand	<b>TSP</b>	Total Suspended Particulate
<b>MACT</b>	Maximum Achievable Control Technology	<b>USEPA</b>	United States Environmental Protection Agency
<b>MDHI</b>	Maximum Design Heat Input	<b>UTM</b>	Universal Transverse Mercator
<b>MM</b>	Million	<b>VEE</b>	Visual Emissions Evaluation
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOL</b>	Volatile Organic Liquids
<b>NA</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	Nitrogen Oxides		

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**2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

**2.4. Term and Renewal**

- 2.4.1. This permit supercedes and replaces previously issued Permit R13-2663B. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

**2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2663, R13-2663A, R13-2663B, R13-2663C, R13-2663D, R13-2663E and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

**2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

## **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

## **2.10. Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon 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 this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission

limitation under the permit, 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.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are not met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. 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; and,
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

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

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

**2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

[Reserved]

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit

and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language;
  2. The result of the test for each permit or rule condition; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

### 3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
[45CSR§4. *State-Enforceable only.*]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304-2345

**If to the USEPA:**

Associate Director  
Office of Air Enforcement and Compliance  
Assistance (3AP20)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029



**3.5.4. Operating Fee.**

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

**4.0. Source-Specific Requirements****4.1. Limitations and Standards**

4.1.1. Emissions from the baghouses covered by this permit shall not exceed the following:

Source	PM		PM <sub>10</sub>	
	lb/hr	tpy	lb/hr	tpy
<b>Limestone Processing System</b>				
Baghouses	0.33	0.37	0.16	0.18
<b>Dry SO<sub>3</sub> Sorbent Handling System</b>				
Baghouses	0.19	0.02	0.09	0.01
<b>Wastewater Treatment Handling System</b>				
Baghouse	0.01	0.01	0.04	0.01

- 4.1.2. The amount of limestone unloaded from barges (conveyor LS1) shall not exceed 1,500 tons per hour nor 1,125,000 tons per year based on a 12 month rolling total. For the purposes of this permit a 12 month rolling total means the sum of material throughput at the end of any given month for the previous 12 months.
- 4.1.3. The amount of limestone processed at the facility (conveyors LS2-A and LS2-B combined) shall not exceed 1000 tons per hour nor 1,125,000 tons per year based on a 12 month rolling total.
- 4.1.4. The amount of gypsum trucked to the landfill shall not exceed 600 tons per hour nor 1,750,000 tons per year based on a 12 month rolling total.
- 4.1.5. The amount of magnesium hydroxide used at the facility shall not exceed 22,703,000 gallons per year based on a 12 month rolling total.
- 4.1.6. The amount of Dry SO<sub>3</sub> sorbent used at the facility shall not exceed 96,200 tons per year based on a 12 month rolling total if Trona is used.
- 4.1.7. The amount of Dry SO<sub>3</sub> sorbent used at the facility shall not exceed 62,400 tons per year based on a 12 month rolling total if hydrated lime is used.
- 4.1.8. The amount of hydrated lime delivered to the facility for use in wastewater treatment shall not exceed 6,840 tons per year based on a 12 month rolling total.
- 4.1.9. The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haulroads and other work areas where mobile equipment is used. The spraybar shall be equipped with spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated.

The pump delivering the water shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haulroads and work areas where mobile equipment is used.

Additionally, at least twice per year the permittee shall apply a mixture of water and an environmentally acceptable dust control additive hereafter referred to as solution to all unpaved haul roads. The solution shall have a concentration of dust control additive sufficient to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haulroads.

For paved haulroads, the use of a wet road sweeper is an acceptable alternative to a water truck as long as it is operated in such a manner as to assure minimization of the atmospheric entrainment of fugitive particulate emissions.

**[45CSR§2-5.1.]**

4.1.10. The maximum amount of fly ash handled by the Unit 3 fly ash handling system shall not exceed 600,000 tons (dry weight) per year (actual weight 690,000-780,000 tons per year based on 15%-30% moisture). Compliance with the throughput limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the fly ash transferred for the previous twelve consecutive calendar months.

4.1.11. A regular fugitive fly ash emissions inspection program shall be implemented and properly documented. The permittee shall, at a minimum, inspect all fly ash fugitive dust control systems weekly to ensure that they are operated as necessary and maintained in good working order. The inspection program shall include provisions to document any observed accumulations of fly ash on or around facility control equipment and proximate areas. The inspections shall be documented and maintained on site for a minimum of five years.

**[Consent Order CO-R2-E-2005-2 §III.2]**

4.1.12. Fugitive fly ash accumulations identified on or around all fugitive dust control systems per permit condition 4.1.11. above, shall be removed and properly disposed of as soon as reasonably and safely possible. Removal techniques may include, but are not limited to, the use of vacuum trucks, hand removal, or any other method so deemed suitable by the permittee.

**[[45CSR§2-5.1 and Consent Order CO-R2-E-2005-2 §III.3]**

4.1.13. Emissions from the facility (transfer of the fly ash by truck) shall not exceed the following:

	PM		PM <sub>10</sub>	
	lb/hr	tpy	lb/hr	tpy
Emissions from 3E	0.97	4.23	0.97	4.23
EP-1	0.24	1.04	0.24	1.04
EP-2	0.24	1.04	0.24	1.04
EP-5	0.01	0.06	0.01	0.06
EP-8	0.01	0.06	0.01	0.06

Trucking Fugitives*	35.72	15.01	10.24	4.33
<b>Total</b>	<b>37.19</b>	<b>21.44</b>	<b>11.71</b>	<b>10.76</b>

4.1.14. The fly ash from units 1, 2, and 3 shall be conditioned such that the minimum moisture content of the ash shall be no less than 15% by wt. prior to being loaded into trucks.

[45CSR§2-5.1.]

4.1.15 The permittee shall operate the dry sorbent injection system as necessary to minimize the appearance of a trailing SO<sub>3</sub> plume, consistent with the technological capabilities of the system and good operation and maintenance practices..

4.1.16 In the event that a trailing plume is observed, the following actions shall be taken:

4.1.16.1 Review unit process and/or equipment data to verify that the plume is an SO<sub>3</sub> plume.

4.1.16.2 Verify sufficient dry sorbent injection flow.

4.1.16.3 Investigate for potential dry sorbent nozzle pluggage.

4.1.16.4 Increase injection rate, consistent with the technological capabilities and limitations of the system and with good operations and maintenance practices.

4.1.16.5 If system conditions allow, reducing unit load may be considered.

4.1.17 Maximum emissions to the atmosphere from Auxiliary Boiler #1 (AUX 1) shall not exceed the following limits:

**Limits applicable before January 31, 2016:**

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
Nitrogen Oxides	128.40	562.4
Sulfur Dioxide	379.85	1,663.74
Carbon Monoxide	26.75	117.17
PM	10.70	46.87
PM <sub>10</sub>	5.35	23.43
Volatile Organic Compounds	1.07	4.69

**Limits applicable beginning January 31, 2016:**

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
Nitrogen Oxides	128.40	56.24
Sulfur Dioxide	379.85	166.37
Carbon Monoxide	26.75	11.72
PM	10.70	4.69
PM <sub>10</sub>	5.35	2.34
Volatile Organic Compounds	1.07	0.47

- 4.1.18 Maximum emissions to the atmosphere from Auxiliary Boiler #3 (AUX 3) shall not exceed the following limits:

**Limits applicable before January 31, 2016:**

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
Nitrogen Oxides	120.00	525.60
Sulfur Dioxide	355.00	1,554.90
Carbon Monoxide	25.00	109.50
PM	10.00	43.80
PM <sub>10</sub>	5.00	21.90
Volatile Organic Compounds	1.00	4.38

**Limits applicable beginning January 31, 2016:**

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
Nitrogen Oxides	120.00	52.56
Sulfur Dioxide	355.00	155.49
Carbon Monoxide	25.00	10.95
PM	10.00	4.38
PM <sub>10</sub>	5.00	2.19
Volatile Organic Compounds	1.00	0.44

- 4.1.19 Maximum fuel feed rate to Auxiliary Boiler 1 (AUX 1) shall not exceed 128,400 gallons of fuel oil per day. The percent sulfur of the fuel oil shall not exceed 0.5%.
- 4.1.19.1 Beginning January 31, 2016, the annual heat input to Auxiliary Boiler 1 (AUX 1) shall not exceed 562,392 mmbtu/year.
- 4.1.20 Maximum fuel feed rate to Auxiliary Boiler 3 (AUX 3) shall not exceed 120,000 gallons of fuel oil per day. The percent sulfur of the fuel oil shall not exceed 0.5%.
- 4.1.20.1 Beginning January 31, 2016, the annual heat input to Auxiliary Boiler 3 (AUX 3) shall not exceed 525,600 mmbtu/year.
- 4.1.21 Auxiliary boilers AUX 1 and AUX 3 shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD no later than January 31, 2016.  
[40 CFR §63.7495(b)]
- 4.1.22 The permittee shall complete an initial tune up of auxiliary boilers AUX 1 and AUX 3 by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495.  
[40 CFR §63.7510(e)]
- 4.1.23 The permittee shall complete a tune-up of auxiliary boilers AUX 1 and AUX 3 every 5 years as specified in paragraphs (a)(10)(i) through (vi) of 40 C.F.R. §7540 to demonstrate continuous compliance.  
[40 CFR §63.7540(a)(12)]
- 4.1.24 **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.11.]

## 4.2. Monitoring Requirements

- 4.2. 1. For the purposes of determining compliance with condition 4.1.2 of this permit, the permittee shall maintain monthly records of the amount of limestone unloaded from barges.
- 4.2. 2. For the purposes of determining compliance with condition 4.1.3 of this permit, the permittee shall maintain monthly records of the amount of limestone processed at the facility.
- 4.2. 3. For the purposes of determining compliance with condition 4.1.4 of this permit, the permittee shall maintain monthly records of the amount of gypsum trucked to the landfill. At the permittee's discretion the permittee may use records from belt scales located on belts G2 and G1B as a surrogate for records of actual material trucked to the landfill.
- 4.2. 4. For the purposes of determining compliance with condition 4.1.5 of this permit, the permittee shall maintain monthly records of the amount of magnesium hydroxide used at the facility.

- 4.2. 5. For the purposes of determining compliance with condition 4.1.6 of this permit, the permittee shall maintain monthly records of the amount of Trona used as dry SO<sub>3</sub> sorbent at the facility.
- 4.2. 6. For the purposes of determining compliance with condition 4.1.7 of this permit, the permittee shall maintain monthly records of the amount of hydrated lime used at the facility as dry SO<sub>3</sub> Sorbent.
- 4.2. 7. For the purposes of determining compliance with condition 4.1.8 of this permit, the permittee shall maintain monthly records of the amount of hydrated lime used at the facility for wastewater treatment.
- 4.2. 8. For the purposes of determining compliance with condition 4.1.9 of this permit, the permittee shall maintain records of the amount of dust control additive used at the facility and the dates the solution was applied.
- 4.2. 9. For the purposes of determining compliance with the maximum throughput limit set forth in condition 4.1.10 above, the facility shall maintain monthly (and calculated rolling yearly total) records of the amount of fly ash handled by the Unit 3 fly ash system.
- 4.2. 10. Each stack plume shall be visually observed (downstream of the moisture plume), at a minimum of, once per daylight shift.
- 4.2. 11. To determine compliance with requirement 4.1.17, 4.1.18, 4.1.19 and 4.1.20, the permittee shall monitor and maintain records of the maximum fuel feed rate to Auxiliary Boiler 1 (AUX 1) and Auxiliary Boiler 3 (AUX 3) and sulfur content of the fuel oil. In addition, to determine compliance with 4.1.19.1 and 4.1.20.1, the permittee shall maintain records of the monthly fuel feed rate and fuel heat content. These records shall be maintained on site for a period of not less than five (5) years and certified records shall be made available to the Director or a duly authorized representative of the Director upon request. Compliance with the annual limits in conditions 4.1.17, 4.1.18, 4.1.19.1 and 4.1.20.1 shall be based on a rolling yearly total.

### 4.3. Testing Requirements

*[Reserved]*

### 4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
  - a. The date, place as defined in this permit and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and

- f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
  - b. Steps taken to minimize emissions during the event.
  - c. The duration of the event.
  - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
  - f. Steps taken to correct the malfunction.
  - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. The permittee shall inspect all fugitive dust control systems weekly from May 1 through September 30 and monthly (except for flyash, see permit condition 4.1.13) from October 1 through April 30, to ensure that they are operated as necessary and maintained in good working order. The permittee shall maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the weekly and/or monthly inspections, the times the fugitive dust control system(s) were inoperable and any corrective actions taken.  
[Consent Order CO-R2-E-2005-2 §III.4]
- 4.4.5. The permittee shall properly document any fugitive fly ash emissions not being minimized as discovered through the implementation of condition 4.1.13 of this permit, and repair such problems as soon as reasonably and safely possible. The permittee at a minimum shall maintain records of all scheduled and non-scheduled maintenance or corrective actions taken as a result of the weekly inspections, the times the fugitive dust control systems were inoperable, and any corrective actions taken. The existing facility work order system database is acceptable for demonstrating proper documentation and repair of such discoveries. The company shall make a good faith effort to notify DAQ as necessary regarding fugitive emission minimization concerns. Additional documentation of corrective actions taken shall be provided by the permittee to DAQ upon the request of the Director.



- 4.4.6. All records documenting the monitoring of compliance as required in the conditions in 4.2. and 4.3. of this permit shall be maintained in accordance with Condition 3.4.1. of this permit.
- 4.4.7. A record shall be kept of the date, time and personnel completing the visual inspection of the plume monitoring required by condition 4.2.10 of this permit. The record should also include a description of the plume and any actions taken. The record may include the inability of the visual inspector to observe a plume due to atmospheric conditions.
- 4.4.8. In order to determine compliance with 4.2.11, the permittee shall maintain records of the monthly fuel feed rate and fuel heat content.
- 4.4.9. You must keep records according to paragraphs (1) and (2) of this condition.
- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).
- (2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).
- [40 CFR §63.7555(a)]**
- 4.4.10. You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.  
**[40 CFR §63.7555(i)]**
- 4.4.11. You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.  
**[40 CFR §63.7555(j)]**
- 4.4.12. All records required to comply with 40 CFR 63 Subpart DDDDD shall be kept in the following form:
- (a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).
- (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.
- [40 CFR §63.7560]**
- 4.4.13. For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.  
**[40 CFR §63.7525(k)]**

#### **4.5. Reporting Requirements**

- 4.5.1 Records of plume observations should be maintained on site and made available to the Director or his authorized representative for inspection upon request.

**CERTIFICATION OF DATA ACCURACY**

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup> \_\_\_\_\_  
(please use blue ink) Responsible Official or Authorized Representative Date

Name and Title \_\_\_\_\_  
(please print or type) Name Title

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

<sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.



Class II General Permit G60-C  
Emergency Generator

Page 2 of 3

Facility Location: 1530 Winfield Road  
Winfield, Putnam County, West Virginia  
Mailing Address: P.O. Box 4000  
Saint Albans, WV 25177  
Facility Description: Electric Generation Facility  
NAICS Codes: 221112  
UTM Coordinates: 428.2 km Easting • 4,258.4 km Northing • Zone 17  
Registration Type: Construction  
Description of Change: Installation of four emergency diesel generators to provide Coping Power to critical circuits for a restart from blackout of either the 765 KV or 138 KV transmission lines.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit or registration issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

*The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.*

*Unless otherwise stated WVDEP DAQ did not determine whether the permittee is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart ZZZZ.*

**All registered facilities under Class II General Permit G60-C are subject to Sections 1.0, 2.0, 3.0, and 4.0.**

The following sections of Class II General Permit G60-C apply to the registrant:

Section 5	Reciprocating Internal Combustion Engines (R.I.C.E.)	<b>X</b>
Section 6	Tanks	<b>X</b>
Section 7	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart III)	<b>X</b>

**Emission Units**

Emission Unit ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity (Bhp/rpm)
EG-1	CAT® 3516C-HD TA (Compression Ignition (CI) Engine) Certificate No. ECPXL78.1NZN-024 Engine ECPXL78.1NZN	2014	3,004/1,800
EG-2	CAT® 3516C-HD TA (CI Engine) Certificate No. ECPXL78.1NZN-024 Engine ECPXL78.1NZN	2014	3,004/1,800
EG-3	CAT® 3516C-HD TA (CI Engine) Certificate No. ECPXL78.1NZN-024 Engine ECPXL78.1NZN	2014	3,004/1,800
EG-4	CAT® 3516C-HD TA (CI Engine) Certificate No. ECPXL78.1NZN-024 Engine ECPXL78.1NZN	2014	3,004/1,800

**Emission Limitations**

Source ID#	Nitrogen Oxides		Carbon Monoxide		Volatile Organic Compounds	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
EG-1	36.4	9.1	4.85	1.21	1.18	0.03
EG-2	36.4	9.1	4.85	1.21	1.18	0.03
EG-3	36.4	9.1	4.85	1.21	1.18	0.03
EG-4	36.4	9.1	4.85	1.21	1.18	0.03
<b>TOTAL</b>	145.6	36.4	19.4	4.84	4.72	0.12



west virginia department of environmental protection  
Division of Air Quality

## Phase II Acid Rain Permit

Plant Name: <b>John E. Amos Power Station</b>		Permit #: <b>R33-3935-2022-5A</b>
Affected Unit(s): <b>1, 2, 3</b>		
Operator: <b>Appalachian Power Company</b>		ORIS Code: <b>3935</b>
Effective Date	From: <b>January 1, 2018</b>	To: <b>December 31, 2022</b>

### Contents:

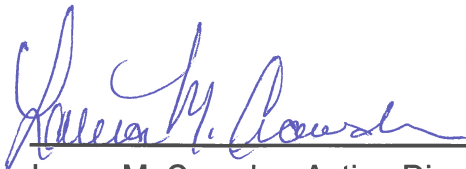
1. Statement of Basis.
2. SO<sub>2</sub> allowances allocated under this permit and NO<sub>x</sub> requirements for each affected unit.
3. Comments, notes and justifications regarding permit decisions and changes made to permit application forms during the review process, and any additional requirements or conditions.
4. The permit application forms submitted for this source, as corrected by the West Virginia Division of Air Quality. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

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### 1. Statement of Basis

**Statutory and Regulatory Authorities:** In accordance with W. Va. Code §22-5-4(a)(16) and Titles IV and V of the Clean Air Act, the West Virginia Department of Environmental Protection, Division of Air Quality issues this permit pursuant to 45CSR33 and 45CSR30.

### Permit Approval

  
 \_\_\_\_\_  
 Laura M. Crowder, Acting Director  
 Division of Air Quality

March 12, 2019  
 \_\_\_\_\_

Date

## West Virginia Department of Environmental Protection • Division of Air Quality

Plant Name: <b>John E. Amos Power Station</b>	Permit #: <b>R33-3935-2022-5A</b>
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**2. SO<sub>2</sub> Allocations and NO<sub>x</sub> Requirements for each affected unit**

Unit No. <b>1</b>
-------------------

SO <sub>2</sub> Allowances	Year				
	2018	2019	2020	2021	2022
<b>Table 2 allowances, as adjusted by 40 CFR Part 73</b>	22630	22630	22630	22630	22630
<b>Repowering plan allowances</b>	N/A	N/A	N/A	N/A	N/A

The number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. The aforementioned condition does not necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR §72.84).

NO <sub>x</sub> Requirements	2018	2019	2020	2021	2022
<b>NO<sub>x</sub> Limit (lb/mmBtu)</b>	0.46	0.46	0.46	0.46	0.46

Pursuant to 40 CFR §76.11, the West Virginia Department of Environmental Protection, Division of Air Quality approves four (4) NO<sub>x</sub> emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2019, 2020, 2021 and 2022. Under each plan, the unit's NO<sub>x</sub> emissions shall not exceed the annual alternative contemporaneous emission limitation (ACEL) of 0.46 lb/mmBtu.

Under the plan, the actual Btu-weighted annual average NO<sub>x</sub> emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO<sub>x</sub> emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR §76.5, 76.6 or 76.7, except that for early election units, the applicable emission 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 the 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.

In accordance with 40 CFR §72.40(b)(2), approval of the averaging plan shall be final only when the Ohio Environmental Protection Agency, Division of Air Pollution Control has also approved the averaging plan.

In addition to the described NO<sub>x</sub> compliance plans, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO<sub>x</sub> compliance plan and requirements covering excess emissions.

**3. Comments, notes and justifications regarding decisions, and changes made to the permit application forms during the review process:**

A permit modification application to include and approve a revised Phase II NO<sub>x</sub> Averaging Plan for the years 2019, 2020, 2021 and 2022 was received on December 26, 2018. This permit modification incorporates the requested revision.

**4. Permit application forms:**

Attached.



**West Virginia Department of Environmental Protection • Division of Air Quality**

Plant Name: <b>John E. Amos Power Station</b>	Permit #: <b>R33-3935-2022-5A</b>
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**2. SO<sub>2</sub> Allocations and NO<sub>x</sub> Requirements for each affected unit**

Unit No.     2
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SO <sub>2</sub> Allowances	Year				
	2018	2019	2020	2021	2022
<b>Table 2 allowances, as adjusted by 40 CFR Part 73</b>	25944	25944	25944	25944	25944
<b>Repowering plan allowances</b>	N/A	N/A	N/A	N/A	N/A

The number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. The aforementioned condition does not necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR §72.84).

NO <sub>x</sub> Requirements	2018	2019	2020	2021	2022
<b>NO<sub>x</sub> Limit (lb/mmBtu)</b>	0.46	0.46	0.46	0.46	0.46

Pursuant to 40 CFR §76.11, the West Virginia Department of Environmental Protection, Division of Air Quality approves four (4) NO<sub>x</sub> emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2019, 2020, 2021 and 2022. Under each plan, the unit's NO<sub>x</sub> emissions shall not exceed the annual alternative contemporaneous emission limitation (ACEL) of 0.46 lb/mmBtu.

Under the plan, the actual Btu-weighted annual average NO<sub>x</sub> emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO<sub>x</sub> emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR §76.5, 76.6 or 76.7, except that for early election units, the applicable emission 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 the 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.

In accordance with 40 CFR §72.40(b)(2), approval of the averaging plan shall be final only when the Ohio Environmental Protection Agency, Division of Air Pollution Control has also approved the averaging plan.

In addition to the described NO<sub>x</sub> compliance plans, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO<sub>x</sub> compliance plan and requirements covering excess emissions.

**3. Comments, notes and justifications regarding decisions, and changes made to the permit application forms during the review process:**

A permit modification application to include and approve a revised Phase II NO<sub>x</sub> Averaging Plan for the years 2019, 2020, 2021 and 2022 was received on December 26, 2018. This permit modification incorporates the requested revision.

**4. Permit application forms:**

Attached.

**West Virginia Department of Environmental Protection • Division of Air Quality**

Plant Name: <b>John E. Amos Power Station</b>	Permit #: <b>R33-3935-2022-5A</b>
---	-----------------------------------

**2. SO<sub>2</sub> Allocations and NO<sub>x</sub> Requirements for each affected unit**

Unit No. <b>3</b>
-------------------

SO <sub>2</sub> Allowances	Year				
	2018	2019	2020	2021	2022
<b>Table 2 allowances, as adjusted by 40 CFR Part 73</b>	41584	41584	41584	41584	41584
<b>Repowering plan allowances</b>	N/A	N/A	N/A	N/A	N/A

The number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. The aforementioned condition does not necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR §72.84).

NO <sub>x</sub> Requirements	2018	2019	2020	2021	2022
<b>NO<sub>x</sub> Limit (lb/mmBtu)</b>	0.68	0.68	0.68	0.68	0.68

Pursuant to 40 CFR §76.11, the West Virginia Department of Environmental Protection, Division of Air Quality approves four (4) NO<sub>x</sub> emissions averaging plans for this unit. Each plan is effective for one calendar year for the years 2019, 2020, 2021 and 2022. Under each plan, the unit's NO<sub>x</sub> emissions shall not exceed the annual alternative contemporaneous emission limitation (ACEL) of 0.68 lb/mmBtu.

Under the plan, the actual Btu-weighted annual average NO<sub>x</sub> emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO<sub>x</sub> emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR §76.5, 76.6 or 76.7, except that for early election units, the applicable emission 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 the 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.

In accordance with 40 CFR §72.40(b)(2), approval of the averaging plan shall be final only when the Ohio Environmental Protection Agency, Division of Air Pollution Control has also approved the averaging plan.

In addition to the described NO<sub>x</sub> compliance plans, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO<sub>x</sub> compliance plan and requirements covering excess emissions.

**3. Comments, notes and justifications regarding decisions, and changes made to the permit application forms during the review process:**

A permit modification application to include and approve a revised Phase II NO<sub>x</sub> Averaging Plan for the years 2019, 2020, 2021 and 2022 was received on December 26, 2018. This permit modification incorporates the requested revision.

**4. Permit application forms:**

Attached



Facility (Source) Name (from STEP 1) <b>John E. Amos</b>
--

**STEP 3****Permit Requirements****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).
- (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.

Facility (Source) Name (from STEP 1) <b>John E. Amos</b>
--

**STEP 3, Cont'd.****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;
  - (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.

Facility (Source) Name (from STEP 1) <b>John E. Amos</b>
--

**STEP 3, Cont'd.****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 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.

**STEP 4****Certification**

**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 <b>John M. McManus, Designated Representative</b>	
Signature <i>John M. McManus</i>	Date <i>5/9/17</i>





United States  
Environmental Protection Agency  
Acid Rain Program

OMB No. 2060-0258  
Approval expires 11/30/2012

# Acid Rain NO<sub>x</sub> Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9

Page 1

This submission is:  New  Revised

Page 1 of 2

**STEP 1**

Indicate plant name, State, and Plant code from the current Certificate of Representation covering the facility.

John E Amos	WV	3935
Plant Name	State	Plant Code

**STEP 2**

Identify each affected Group 1 and Group 2 boiler using the unit IDs from the current Certificate of Representation covering the facility. Also indicate the 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, and select the compliance option for each unit by making an 'X' in the appropriate row and column.

	ID# 1	ID# 2	ID# 3	ID#	ID#	ID#
	Type DBW	Type DBW	Type CB	Type	Type	Type
(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for <u>Phase I</u> dry bottom wall-fired boilers)						
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for <u>Phase I</u> tangentially fired boilers)						
(c) Standard annual average emission limitation of 0.46 lb/mmBtu (for <u>Phase II</u> dry bottom wall-fired boilers)						
(d) Standard annual average emission limitation of 0.40 lb/mmBtu (for <u>Phase II</u> tangentially fired boilers)						
(e) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)						
(f) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)						
(g) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)						
(h) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)						



## STEP 2, cont'd

John E Amos  
Plant Name (From Step 1)

	ID# 1	ID# 2	ID# 3	ID#	ID#	ID#
	Type DBW	Type DBW	Type CB	Type	Type	Type
(i) NO <sub>x</sub> Averaging Plan (include NO <sub>x</sub> Averaging form)	X	X	X			
(j) 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)						
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO <sub>x</sub> Averaging (check the NO <sub>x</sub> Averaging Plan box and include NO <sub>x</sub> Averaging Form )						
(l) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17(a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)						

## STEP 3: Identify the first calendar year in which this plan will apply.

January 1, 2019

## STEP 4: Read the special provisions and certification, enter the name of the designated representative, sign and date.

**Special Provisions**

General. This source is subject to the standard requirements in 40 CFR 72.9. These requirements are listed in this source's Acid Rain Permit.

**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	Scott A Weaver	
Signature	Scott A Weaver	Date 12-18-19





# Acid Rain NO<sub>x</sub> Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

Page 1

 This submission is:  New  Revised

Page 1 of 2

## STEP 1

Identify the units participating in this averaging plan by plant name, State, and unit ID. 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	Unit ID#	(a) Emission Limitation	(b) ACEL	(c) Annual Heat Input Limit
Conesville	OH	4	0.45	0.45	2,974,949
Conesville	OH	5	0.40	0.40	545,578
Conesville	OH	6	0.40	0.40	611,804
John E Amos	WV	1	0.46	0.46	41,029,223
John E Amos	WV	2	0.46	0.46	44,697,145
John E Amos	WV	3	0.68	0.68	72,362,420

## 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

$$\frac{\sum_{i=1}^n (R_{Li} \times HI_i)}{\sum_{i=1}^n HI_i}$$

0.55

Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7

$$\frac{\sum_{i=1}^n [R_{ii} \times HI_i]}{\sum_{i=1}^n HI_i}$$

0.55

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

Plant Name (from Step 1) **John E Amos**

**STEP 3**

Identify the first calendar year in which this plan will apply.

January 1, 2019

**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<sub>x</sub> 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	Scott A Weaver	
Signature	<i>Scott A Weaver</i>	Date <i>12-18-19</i>

STATE OF WEST VIRGINIA



Const.   X    
Mod.         
Relo.       

AIR POLLUTION CONTROL COMMISSION  
PERMIT TO CONSTRUCT, MODIFY, OR RELOCATE  
STATIONARY SOURCES OF AIR POLLUTANTS

DATE:   March 8, 1979   PERMIT NO.   480  

This permit is issued in accordance with Chapter 16, Article 20, Code of West Virginia. Administrative Regulation, Series XIII, and is subject to the conditions thereof.

NAME OF PARENT COMPANY:   Appalachian Power Company  

PLANT NAME:   John E. Amos Power Plant  

PLANT MAILING ADDRESS:   40 Franklin Road, Roanoke, Va. 24022  

COUNTY:   Putnam  

DESCRIPTION OF EXACT LOCATION:   One and one-half (1½) miles north of Interstate 64 on Route 35 to the John E. Amos Power Plant  

PERMIT FOR:   Coal Handling Operation - Rail car to barge load transfer  

SPECIAL CONDITIONS:   Mr. Jack Lloyd's letter of March 3, 1979 limits the total throughput of this coal transfer operation to 4 million tons in any 12 month period and 400,000 tons of emergency storage in any 12 month period. Measurement and record-keeping procedures are stated in Mr. Beard's & Mr. Lloyd's letters dated March 1 and 2, 1979, respectively.  

ISSUED BY:   *[Signature]*    
DIRECTOR

Possession of this permit does not relieve any person of the responsibility of complying with any and all applicable rules or regulations of the Commission or any other governmental agency. The Director may cancel or suspend a permit if the plans and specifications upon which the approval was based are not adhered to.





WEST VIRGINIA  
AIR POLLUTION CONTROL COMMISSION  
1558 Washington Street, East  
CHARLESTON, WEST VIRGINIA 25311  
TELEPHONE: 348-2275 OR 348-3286

March 1, 1979

Mr. Jack Lloyd, Vice President  
Appalachian Power Company  
Charleston, West Virginia

Dear Mr. Lloyd:

As stated in your telephone conversation of February 27, 1979 with Mr. Charles Huss, there are several points that remain before a permit can be issued for the proposed coal transfer facility at the John Amos Plant.

The reclaim hoppers must be redesigned to further limit the effect of wind on dust entrainment. This can be done with a two or, preferably, three sided hood with a roof over each hopper. This type design has proven to be quite effective in controlling emissions from truck dumps. Also, we would like to know what precautions will be taken to prevent freezing of the spray nozzles.

This agency must impose "enforceable permit conditions" to limit the throughput of this facility to four million tons/yr and the throughput of the emergency stockpile to four-hundred thousand tons/yr. This requires that the throughput be measured, records be kept and that an enforceable agreement be worked out between your company and this agency.

The new facility as I understand it will have weigh conveyors between stations #2 and B; and between B and the barge loader. The one leading to station B should be used to measure the total throughput of the facility. Readings should be taken from this scale at least once an operating day. Since the emissions are much more sensitive to the coal coming from the emergency storage pile than the coal going to the pile; the former figure should be used as the piles throughput. When no coal is being fed from the surge silo and coal is being reclaimed from the emergency storage pile; the readings on the scale between station B and the barge loader may be used to determine throughput from the pile. Readings must be taken at least once a day and whenever the coal flow from the silo starts or stops. If coal is flowing from both the silo and the emergency storage pile, the coal flowing from the emergency storage pile shall be calculated as the

*Handwritten signature/initials*

*in telecopies*

*Arthur R. Reingold*  
*Arthur*

*R. A. Moore*

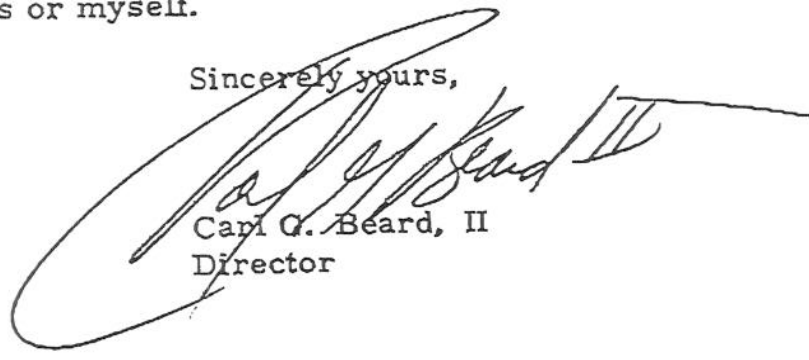
WEST VIRGINIA  
AIR POLLUTION CONTROL COMMISSION

difference between the flow to the silo and to the barge loader. Readings should be taken from these conveyors at least once a day and when the position of the diversion gate at the bottom of station B is moved. The individual throughputs should be totalized on a monthly basis and maintained on file for at least two years for possible inspection.

This can be done in the form of a permit condition referencing a response from your company showing exactly how the records are to be maintained.

If you have any questions regarding this matter, please feel free to contact Charles Huss or myself.

Sincerely yours,



Carl G. Beard, II  
Director

CGB, II/CHH/clk

cc: Charles H. Huss  
Engineer II



Post Office Box 1988, Charleston, West Virginia 25320  
 Telephone: area code 304-349-4700

March 2, 1979

Mr. Carl G. Beard, II, Director  
 West Virginia Air Pollution Control Commission  
 1558 Washington Street, East  
 Charleston, West Virginia 25311

Dear Mr. Beard:

In response to your letter of March 1, 1979, the following measures will be taken at the proposed coal transfer facility at the John Amos Plant:

A two-sided hood with a roof will be placed over the two reclaim hoppers to further control emissions at this point; and during cold weather, an anti-freeze solution will be used to prevent freeze-ups of the spray nozzles.

I agree that a method needs to be worked out between Appalachian Power Company and your agency to account for the amount of coal transferred through the facility each year. The technique outlined in your letter is reasonable, and will be implemented. Readings will be taken each operating day at the weigh conveyor leading to Station B to determine the total yearly throughput of the facility. Readings will be taken each operating day at the weigh conveyor between Station B and the barge loader to determine the amount of coal transferred through the storage area. This amount will be determined as a direct reading, or by difference. Records will be maintained on a monthly basis and kept on file for two years.

If more information is needed, or further questions arise, please call me.

Very truly yours,

Jack Lloyd  
 Vice President

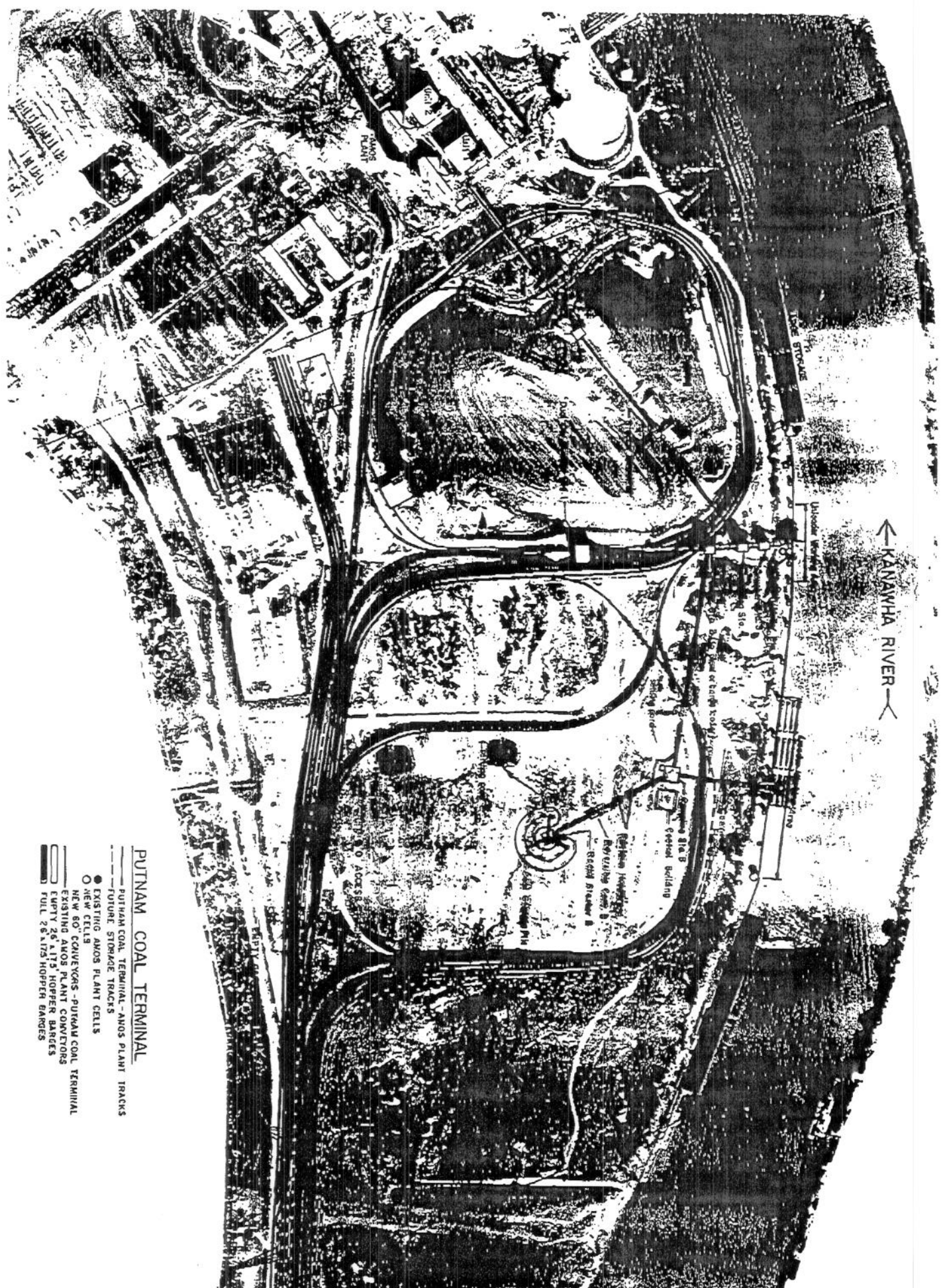
JL:gbs

BC: Mr. A. Rheingold  
 Mr. R. W. Reeves  
 Mr. J. W. Vaughan  
 Mr. R. E. Northup

AEP Service Corporation

MAR 05 1979





← KANAWHA RIVER →

**PUTNAM COAL TERMINAL**

- PUTNAM COAL TERMINAL - AMOS PLANT TRACKS
- FUTURE STORAGE TRACKS
- EXISTING AMOS PLANT CELLS
- NEW CELLS
- NEW 60' CONVEYORS - PUTNAM COAL TERMINAL
- EXISTING AMOS PLANT CONVEYORS
- EMPTY 26' x 175' HOPPER BARGES
- FULL 26' x 175' HOPPER BARGES






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west virginia department of environmental protection

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Division of Air Quality  
 601 57<sup>th</sup> Street SE  
 Charleston, WV 25304  
 Telephone Number: (304) 926-0475  
 Fax Number: (304) 926-0479

Bob Wise, Governor  
 Stephanie R. Timmermeyer, Cabinet Secretary  
 www.wvdep.org

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF AIR QUALITY  
 601 57<sup>th</sup> Street, SE  
 Charleston, West Virginia 25304

**USPS CERTIFIED MAIL**

Article No. 7003 2260 0000 2773 8023

v.

CO-R2-E-2005-2  
 Plant ID # 079-00006 (John E. Amos Plant)

AMERICAN ELECTRIC POWER COMPANY  
 Attn: Mr. Mark C. McCullough,  
 Vice President of Baseload Generation Assets  
 1 Riverside Plaza  
 Columbus, OH 43215-2373

**FINAL CONSENT ORDER**

This Consent Order is entered into under the authority and direction of West Virginia Code § 22-1-7 and -8 and West Virginia Code § 22-5-4 which authorizes the Chief of the Office of Air Quality, now Director of the Division of Air Quality ("DAQ"), acting on behalf of the Director of the Division of Environmental Protection, now the Secretary of the Department of Environmental Protection ("DEP"), to enter Orders requiring compliance with the provisions of the West Virginia Air Pollution Control Act to regulate and control air pollution in the State of West Virginia.

**I. FINDINGS OF FACT**

1. Beginning in December 2003, DAQ received and investigated several complaints alleging that excessive amounts of fugitive particulate matter ("Flyash") were originating from the John E. Amos Plant ("Facility"), traversing property lines, and settling on the complainants' property. During investigation of these complaints, DAQ inspectors observed what appeared to be fugitive airborne Flyash originating from the vicinity of the Facility's Unit 3 electrostatic precipitator ("ESP").
2. On March 10, 2004, DAQ inspectors conducted an inspection of the Facility. During this inspection, the DAQ inspectors observed a leak in a North Side Duct expansion joint. This duct conveys combustion gases from Unit 3 boiler into the Unit 3 ESP. DAQ personnel observed the leak discharging Flyash into the atmosphere.

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3. During the inspection, Company personnel informed DAQ that the Company was aware of the leak. Company personnel also stated that this leak was the only leak known to them. Company personnel further informed DAQ inspectors that a work request and a work order had been placed into its maintenance database authorizing a permanent repair of the leak. Repairs were scheduled to be completed during a planned outage of Unit 3, during which other maintenance issues were scheduled to be addressed.
4. The scheduled outage began on March 20, 2004. During the planned outage, the Company repaired the leak in the North Side Duct expansion joint. The Company also repaired other areas on the ESP that it considered potential sources of fugitive Flyash. The Company restarted Unit 3 on May 29, 2004.
5. On June 2, 2004, DAQ received a citizen complaint alleging that excessive Flyash was being discharged into the atmosphere from the vicinity of the Unit 3 ESP. This complaint included photographic documentation of the fugitive emissions.
6. On June 2, 2004, Company personnel also observed fugitive Flyash being discharged into the atmosphere from the vicinity of the Unit 3 ESP. The Company identified the fugitive Flyash as coming from previously undiscovered leaks in Hopper Number 23 Upper and in Hopper Number 27 Upper on Unit 3 ESP.
7. On June 3, 2004, DAQ notified the Company of the citizen complaint. DAQ's notification to the Company included photographic documentation from the citizen complaint.
8. On June 3, 2004, during an inspection of the ESP, the Company discovered leaks in the South Side Inlet Duct of the Unit 3 ESP Number 1 Box and in the North Side Inlet Duct of the Unit 3 ESP Number 3 Box. The Company immediately placed work requests and work orders for temporary and permanent repairs of all known leaks into its maintenance database.
9. On June 4, 2004, the Company shutdown Unit 3. Also on June 4, DAQ personnel met with Company officials at the facility to observe and document the source of the fugitive Flyash and to discuss a course of corrective action. DAQ encouraged Company officials to monitor more closely their operations for system leaks and to immediately notify DAQ when problems were discovered.
10. On July 2, 2004, DAQ issued a Notice of Violation ("NOV") to the Company for violation of the West Virginia Code §§ 22-5-3 and West Virginia Code of Legislative Rules, 45 CSR 2, "To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers," specifically Section 5.1. The Company received the NOV on July 14, 2004.
11. On July 16, 2004, DAQ and the Company met to discuss initial comments on the content of the NOV.
12. On August 19, 2004, the Company submitted to the DAQ written comments in response to the NOV. The comments questioned DAQ's allegations of an association between the complaints referenced in the NOV and Facility operations. The comments also discussed actions taken by the Company at the Facility to improve its fugitive emission minimization program and addressed specific items referenced in the NOV.

13. On September 17, 2004, DAQ and the Company met to discuss the written response submitted by the company and the next steps to be taken to resolve the NOV.

## II. CONCLUSIONS OF LAW

1. The facility is subject to the jurisdiction of the Division of Air Quality for the purposes specified in this Consent Order.
2. The Company violated West Virginia Code §§ 22-5-3 and 45 CSR 2.5.1 in the manner described above, specifically by failing to operate and maintain a source of particulate air pollution in a manner so as to minimize emissions of fugitive particulate matter.

## III. COMPLIANCE PROGRAM

1. The Company shall maintain and properly operate the Facility ESP's and associated support appurtenances to ensure optimal fugitive emission control system performance and to minimize fugitive emissions of Flyash per the requirements of 45CSR 2.5.1.
2. The Company shall implement and properly document a regular fugitive Flyash emissions inspection program. Specifically, the Company at a minimum shall inspect all fugitive dust control systems weekly to ensure that they are operated as necessary and maintained in good working order. The inspection program shall include provisions to document any observed accumulations of Flyash on or around Facility control equipment and proximate areas. The Company shall document these inspections and maintain records on-site for a minimum of five (5) years.
3. The Company shall remove and properly dispose of fugitive Flyash accumulations identified on or around all fugitive dust control systems per Paragraph 2 of this section as soon as reasonably and safely possible. Removal techniques may include, but are not limited to, the use of vacuum trucks, hand removal, or any other method so deemed suitable by the Company.
4. The Company shall properly document any fugitive Flyash emissions not being minimized as discovered through the implementation of Paragraph 2 of this section and repair such problems as soon as reasonably and safely possible. The Company at a minimum shall maintain records of all scheduled and non-scheduled maintenance or corrective actions taken as a result of the weekly inspections, the times the fugitive dust control systems were inoperable, and any corrective actions taken. The existing Facility work order system database is acceptable for demonstrating proper documentation and repair of such discoveries. Records and documentation developed as a result of Paragraph 4 shall be maintained on-site for a minimum of five (5) years. The Company shall make a good faith effort to notify DAQ as necessary regarding fugitive emission minimization concerns. Additional documentation of corrective actions taken shall be provided by the Company to DAQ upon the request of the Director.




#### IV. OTHER PROVISIONS

1. The Company waives any and all rights of appeal of this Consent Order.
2. Nothing contained in this Consent Order shall be interpreted in such a manner as to relieve the Company of the responsibility to make all necessary short-term emission reductions as provided and required in 45 CSR 11.
3. The provisions of this Consent Order are severable and should any provisions be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.
4. The Director agrees that the Company shall have the right to petition DAQ for an amendment to this Consent Order in the event of a "force majeure" condition. The petition shall state such force majeure condition with specificity. The Director shall hear the Company's petition and determine the relief accorded, if any. The determination of the Director shall be final and not subject to appeal.
5. This Consent Order shall become effective immediately upon signing by both parties.
6. The Company makes no admissions of fact or law in this Consent Order and reserves all rights and defenses available regarding liability or responsibility for the contended violations.  
  
 The foregoing paragraph notwithstanding, the Company agrees that the violation cited herein may be considered as admitted solely for purposes of enforcement of this Consent Order or for penalty enhancement or permit revocation in future enforcement actions.
7. This Consent Order is binding on the Company, its successors and assigns.
8. As part of this Consent Order, the Company agrees to pay to the Air Pollution Education and Environment Fund, pursuant to the West Virginia Code § 22-5-4(a)(11), the amount of twelve-thousand, five hundred dollars (\$12,500.00). Payment shall be made within thirty (30) days after the effective date of this Consent Order. In addition, if the Company fails to pay the foregoing amount timely or to complete the items agreed upon in Section III of this Consent Order by the times scheduled, the Company shall pay one thousand (\$1,000) dollars per day per violation for each scheduled deadline that is missed. All payments shall be made by check payable to the Air Pollution Education and Environment Fund and shall be sent to the Division of Air Quality, Attention: John A. Benedict, Director, 601 57th Street, SE, Charleston, WV 25304. The Company shall not treat these payments as tax deductible for purposes of federal or state law.
9. In addition to the amounts specified in Paragraph 8, any violations of this Consent Order may subject the Company to penalties in accordance with West Virginia Code § 22-5-6 and injunctive relief in accordance with West Virginia Code § 22-5-7. The Company hereby waives any requirement for written notice of violation, to the extent any such notice may be required by West Virginia Code § 22-5-6, for failure to comply with any provision of Section III of this Consent Order.
10. The Division of Air Quality reserves the right to take further action if the compliance program described above fails to adequately address the violation.

American Electric Power Company  
Mr. Mark C. McCullough, VP - Baseload Generation Assets  
Appalachian Power Company, John E. Amos Plant  
Final Consent Order  
January 13, 2005

AND NOW, this 14 day of January, 2005, the DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF AIR QUALITY agrees to and enters into this Consent Order.

DIVISION OF AIR QUALITY

  
By Its Director  
John A. Benedict

AND NOW, this 8 day of February, 2005, AMERICAN ELECTRIC POWER by its duly authorized representative agrees to and enters into this Consent Order.

By   
Signature

By Mark C. McCullough  
Print Name

Its Vice President  
Title

THS



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west virginia department of environmental protection

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Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: (304) 926-0475  
Fax: (304) 926-0479

Joe Manchin III, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.wvdep.org](http://www.wvdep.org)

July 9, 2009

Patrick A. Dal Porto, P.E.  
Manager - Air Quality Services  
Environmental Services Division  
American Electric Power  
1 Riverside Plaza  
Columbus, OH 43215

Re: Consent Order #: CO-E-2009-12  
Facility ID NO.: 079-00006

Dear Mr. Dal Porto:

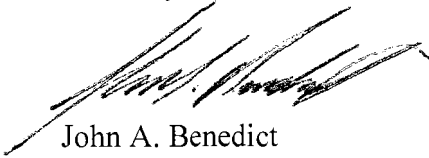
Attached is a Consent Order, that seeks to resolve issues surrounding the Notice of Violation (NOV) issued to Appalachian Power Company, John Amos Power Plant (AEP), on May 9, 2008. Said NOV alleged that emissions from the John Amos Power Plant were a major contributor to the atmospheric pollution event known as the "Blue Haze Incident" of January 25, 2008, and caused statutory air pollution.

The cornerstone of DAQ's negotiations of this order has been its belief that a dry-sorbent injection (DSI) system, as proposed by AEP, installed and properly operated on all three John Amos units offers the best practice for mitigating future pollution events of the type addressed by the NOV and the attached order. The DAQ also believes that the operation and maintenance of such system must be memorialized in an enforceable permit. During the negotiations, AEP representatives expressed the same intention or, at least, found such a condition acceptable. Unfortunately, subsequent delays in crafting suitable permit conditions presents the appearance of trying to circumvent definitive action.

While AEP has continued to negotiate this order, two more similar pollution events have occurred, one in July, 2008 and more recently in June, 2009. The DAQ is frustrated that these types of events continue to happen while AEP repeatedly seeks changes in the order and prolongs its finalization. We have negotiated in good faith and have attempted to address AEP's legitimate technical concerns. Any further revisions are deemed superfluous and merely delay resolution of this issue. As a regulatory agency, we have a responsibility to protect the health and well-being of our citizens. Given the potential health impacts of sulfuric acid concentrations which might otherwise occur without a properly functioning DSI system, we strongly believe that enforceable permit operating conditions are required.

It is now time to finalize this order. Two originals, signed by the Director of the Division of Air Quality (DAQ), John A. Benedict, are enclosed - one for AEP and one for DAQ. Therefore, finalization requires only the signature of a responsible party of AEP and return of one document to DAQ, which we expect to be promptly forthcoming.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Benedict", written over a horizontal line.

John A. Benedict  
Director

enclosure

cc: Jesse Adkins, DAQ  
Earl Billingsley, DAQ  
Greg Massey, APCo




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west virginia department of environmental protection

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Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475

Joe Manchin III, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.wvdep.org](http://www.wvdep.org)

**CONSENT ORDER  
ISSUED UNDER THE  
AIR POLLUTION CONTROL ACT  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 5, SECTION 4**

TO: APPALACHIAN POWER COMPANY  
Mr. Greg W. Massey, General Manager  
John Amos Power Plant  
PO Box 4000  
St. Albans, West Virginia 25177

DATE: July 8, 2009  
ORDER No.: CO-E-2009-12  
FACILITY ID NO.: 079-00006

**INTRODUCTION**

This Consent Order is issued by the Director of the Division of Air Quality (“Director”), under the authority of West Virginia Code, Chapter 22, Article 5, Section 1 et seq. to Appalachian Power Company, John Amos Power Plant (“APCo” or “AEP”).

**FINDINGS OF FACT**

In support of this Order, the Director hereby finds the following:

1. APCo owns and operates the John Amos Power Plant (“Amos”) located in St. Albans, West Virginia, in the Kanawha Valley.
2. Amos consists of 3 coal-fired units (Units 1, 2, & 3) that are controlled with selective catalytic reduction (“SCR”) for NO<sub>x</sub> emissions and electrostatic precipitators (“ESP”) for particulate matter emissions. These units were recently or are currently being retrofitted with flue gas desulphurization (“FGD”) systems for sulfur dioxide (“SO<sub>2</sub>”) control and with dry-sorbent injection (“DSI”) systems for sulfur trioxide (“SO<sub>3</sub>”) control. Unit 3 was retrofitted first and began operation with the FGD and DSI controls in March, 2009.
3. In January 25, 2008 there was a significant atmospheric pollution event, commonly referred to as “the Blue Haze Incident,” in the Kanawha Valley, near Charleston, WV.

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4. On May 9, 2008 the Division of Air Quality (“DAQ”) issued a Notice of Violation (“NOV”) to APCo concerning the Blue Haze Incident. That NOV alleged that the Amos facility was the major contributor to the incident and it caused statutory air pollution.
5. APCo formally disagreed with the findings and allegations in the Notice of Violation.
6. An additional incident of pollution induced haze in the Kanawha Valley occurred in July 2008.
7. The DAQ identified SO<sub>3</sub>, which is present in the Amos combustion exhaust gas, as a potential contributor to the haze incidents.
8. In the ensuing months APCo and DAQ engaged in numerous technical reviews and discussions in a continuing effort to address any significant contribution the Amos facility may have made to the haze incidents.
9. The parties have agreed on certain actions to be taken by APCo to address potential haze issues.

#### **ORDER FOR COMPLIANCE**

Now, therefore, in accordance with Chapter 22, Article 5, Section 1 et seq. of the West Virginia Code, it is hereby agreed between the parties, and ORDERED by the Director:

1. APCo shall operate the Unit 3 SO<sub>3</sub> DSI control system consistent with the technological capabilities and limitations of the system and with good operation and maintenance practices whenever Unit 3 is operating, except during periods of startup, shut-down, malfunction and maintenance. APCo shall be subject to the same operational obligations for an SO<sub>3</sub> DSI control system on Unit 1 and Unit 2 after these units are tied in to their respective FGD systems and restarted.
2. After the restart of each unit, APCo shall perform daily monitoring and recordkeeping of the total daily dry sorbent usage rate (pounds or tons per day) and startups, shut-downs, malfunctions, and maintenance of the DSI system. Daily records maintained in accordance with this paragraph shall be available upon request at the plant. APCo shall include the provisions of paragraphs 1 and 2 of these orders as state enforceable provisions in its application for renewal of the Amos Plant Title V operating permit.
3. By August 1, 2009, APCo shall begin a 12 month technical and operational evaluation to determine the appropriate operating parameters for the SO<sub>3</sub> DSI control system on Unit 3. During the 12 month technical and operational evaluation, Unit 3 shall utilize coals that are representative of the range of coals the Unit is capable of accommodating.
4. During the 12 month technical and operational evaluation, APCo shall monitor and record, at a minimum, the following boiler and SO<sub>3</sub> DSI control system information: (a) data that show basic boiler operating conditions, including but not limited to, heat input as recorded in the Continuous Emission Monitors (CEM) data and gross unit MW load on an hourly average basis; (b) hourly average SO<sub>2</sub> inlet concentration (lb/mmBtu); (c)



hourly average opacity values, and; (d) total hourly dry sorbent usage rate (tons per day). The above listed data shall be collected and maintained at the plant and shall be made available to the DAQ upon request.

5. During the 12 month technical and operational evaluation, APCo shall also conduct SO<sub>3</sub> testing using the Controlled Condensation Method for Flue Gas SO<sub>3</sub> Measurements as developed by AEP and used at its other facilities. Such testing shall be conducted at least four times over the 12 month technical and operational evaluation period. During each test APCo shall collect information concerning unit load, proximate coal quality characteristics, sorbent injection rates, and SO<sub>3</sub> concentrations at the stack discharge. APCo shall notify DAQ at least 30 days prior to conducting each test to allow DAQ representatives to witness the testing. APCo shall submit a testing protocol to the Director at least 30 days prior to the actual testing date for review and approval. Results of each stack test shall be submitted to DAQ within 30 days after completion of the test.
6. A report including summaries of the operating data collected and the results of the stack testing performed during the 12 month technical and operational evaluation shall be submitted to DAQ by October 31, 2010. Within 30 days after submission of the report, APCo shall develop and submit to the Director a 45CSR13 permit application for the operation of the SO<sub>3</sub> DSI control systems for all units at Amos.
7. APCo shall expeditiously provide any supplemental information requested from the Company by the Director or his authorized representative. APCo shall respond in writing within 15 days after any written request from the Director or the Director's authorized representative, unless such time for response is extended by the Director. If APCo does not respond within fifteen (15) calendar days or any other period specified by the Director, then APCo may be subject to stipulated penalties.
8. If APCo fails to complete any of the requirements contained in this Order to the satisfaction of the Director or within the time limits set forth herein, APCo agrees to pay a stipulated penalty of one thousand dollars (\$1,000) to the Air Pollution Education and Environment Fund for each day that the action remains incomplete. The Director shall first notify APCo in writing that the facility is in violation of the terms and conditions of the Order, and the stipulated penalty shall then become immediately due and payable. Payments made pursuant to this paragraph are not tax deductible expenditures for purposes of State or federal law.

#### **OTHER PROVISIONS**

1. APCo hereby waives its right to appeal this Order under the provisions of Chapter 22, Article 5, Section 1 of the Code of West Virginia. Under this Order, APCo agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, APCo does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding APCo other than proceedings, administrative or civil, to enforce this Order.
2. The Director reserves the right to take further action if compliance with the terms and conditions of this Order does not adequately address the violations noted herein and

reserves all rights and defenses which he or she may have pursuant to any legal authority, as well as the right to raise, as a basis for supporting such legal authority or defenses, facts other than those contained in the Findings of Fact.

3. DAQ reserves all rights and defenses which it has pursuant to any legal authority, as well as the right to raise, as a basis for supporting such rights or defenses, facts other than those contained in the Findings of Facts.
4. If any event occurs which causes delay in the achievement of the requirements of this Order, APCo shall have the burden of proving that the delay was caused by circumstances beyond its reasonable control which could not have been overcome by due diligence (i.e., force majeure). Force majeure shall not include delays caused or contributed to by the lack of sufficient funding. Within three (3) working days after APCo becomes aware of such a delay, notification shall be provided to the Director and shall, within ten (10) working days of initial notification, submit a detailed written explanation of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and a timetable by which APCo intends to implement these measures. If the Director agrees that the delay has been or will be caused by circumstances beyond the reasonable control of (i.e., force majeure), the time for performance hereunder shall be extended for a period of time equal to the delay resulting from such circumstances. A force majeure amendment granted by the Director shall be considered a binding extension of this Order and of the requirements herein. The determination of the Director shall be final and not subject to appeal.
5. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving APCo of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject APCo to additional penalties and injunctive relief in accordance with the applicable law.
6. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.
7. This Order is binding on APCo, its successors and assigns.
8. This Order shall become effective immediately upon signing by both parties.
9. This Order shall terminate upon incorporation of the 45CSR13 permit modification referenced in paragraph 6 of the Order for Compliance section above into the permits for the Amos Units.

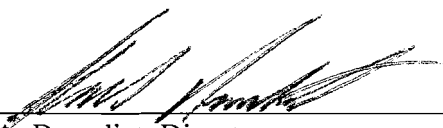
Appalachian Power Company

By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Print Name)

Its \_\_\_\_\_  
(Print Title)\*

  
\_\_\_\_\_  
John A. Benedict, Director  
Division of Air Quality

*July 9, 2009*  
\_\_\_\_\_  
Date

\*Must be signed by a responsible APCo official.

## Attachment J

### 45 CSR 2/10 Monitoring Plan

## **45 CSR 2 and 45 CSR 10 Monitoring and Recordkeeping Plan**

### **John E. Amos Plant**

#### **Facility Information:**

Facility Name: John E. Amos Plant

Facility Address: P.O. Box 4000  
State Route 35  
St. Albans, WV 25177

Facility Environmental Contact: Christy L. Lawrence

#### **A. Facility Description:**

John E. Amos (i.e. Amos) Plant is a coal-fired electric generating facility with three main combustion units. Units 1 and 2 discharge through a common stack shell utilizing two separate stack discharge flues. Unit 3 discharges through a separate main stack utilizing a single discharge flue. Amos plant also has two auxiliary boilers. Auxiliary boiler 1 discharges through an independent auxiliary stack (aux 1.) Auxiliary boiler 3 discharges through an independent auxiliary stack (aux. 3.) Units 1, 2 and 3, and Aux. Boilers 1 and 3 each have design heat inputs greater than 10 mmBTU/hr making both 45 CSR 2A (Interpretive Rule for 45 CSR 2) and 4 CSR 10A (Interpretive Rule for 45 CSR 10) applicable to these sources.

#### **I. 45 CSR 2 Monitoring Plan:**

In accordance with Section 8.2.a of 45 CSR 2, following is the proposed plan for monitoring compliance with opacity limits found in Section 3 of that rule:

##### **A. Main Stacks (1E, 2E, 3E)**

###### 1. Applicable Standard:

*45 CSR 2, §3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.*

###### 2. Monitoring Method(s):

**45 CSR 2, §8.2.a.1.** *Direct measurement with a certified continuous opacity monitoring system (COMS) shall be deemed to satisfy the requirements for a monitoring plan. Such COMS shall be installed, calibrated, operated and maintained as specified in 40 CFR Part 60, Appendix B, Performance Specification 1 (PS1). COMS meeting the requirements of 40 CFR Part 75 (Acid Rain) will be deemed to have satisfied the requirements of PS1.*

- a. **Primary Monitoring Method:** While a Continuous Opacity Monitoring System (COMS) would not be required on a wet scrubbed fuel burning unit, Amos Plant has chosen to use COMS on each of the fuel burning units upstream of the wet scrubbers and located in plant ductwork. As such, the primary method of monitoring opacity at Amos Plant will be Continuous Opacity Monitors (COMS). The COMS are installed, maintained and operated in compliance with requirements of 40 CFR Part 75.
- b. **Other Credible Monitoring Method(s):** While Amos Plant will use COMS as the primary method of monitoring opacity of the fuel burning units, we are also reserving the right to use Method 9 readings or any other appropriate method that would produce credible data. These “other monitoring methods” will generally be used in the absence of COMS data or as other credible evidence used in conjunction with COMS data.

3. Recordkeeping:

a. **Operating Schedule and Quality/Quantity of Fuel Burned**

**45 CSR 2A §7.1.a.** *The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit as specified in paragraphs 7.1.a.1 through 7.1.a.6, as applicable.*

The applicable paragraphs for Amos Plant are the following:

**§7.1.a.2:** *For fuel burning unit(s) which burn only distillate oil, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a monthly basis and a BTU analysis for each shipment.*

**§7.1.a.4:** *For fuel burning unit(s) which burn only coal, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a daily basis and an ash and BTU analysis for each shipment.*

**§7.1.a.6:** *For fuel burning unit(s) which burn a combination of fuels, the owner or operator shall comply with the applicable Recordkeeping requirements of paragraph 7.1.a.1 through 7.1.a.5 for each fuel burned.*

The date and time of each startup and shutdown of Units 1, 2 and 3 will be maintained. The quantity of coal burned on a daily basis as well as the ash and Btu content will also be maintained. From a fuel oil perspective, the quantity of fuel oil burned on a monthly basis, as well as the Btu content will be maintained. The fuel oil analysis will generally be one that is provided by the supplier for a given shipment but in some cases, we may use independent sampling and analyses. The quantity of fuel oil burned on a monthly basis may be maintained on a facility wide basis.

**b. Record Maintenance**

**45 CSR 2A §7.1.b.** *Records of all required monitoring data and support information shall be maintained on-site for a period of at least five (5) years from the date of monitoring, sampling, measurement or reporting. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.*

Records of all required monitoring data and support information will be maintained on-site for at least five (5) years. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.

**4. Exception Reporting:**

**a. Particulate Mass Emissions:**

**45 CSR 2A, §7.2.a.** *With respect to excursions associated with measured emissions under Section 4 of 45CSR2, compliance with the reporting and testing requirements under the Appendix to 45CSR2 shall fulfill the requirement for a periodic exception report under subdivision 8.3.b. or 45CSR2.*

Amos Plant will comply with the reporting and testing requirements specified under the Appendix to 45 CSR 2.

**b. Opacity:**

**45 CSR 2A, §7.2.b.** *COMS – In accordance with the provisions of this subdivision, each owner or operator employing COMS as the method of monitoring compliance with opacity limits shall submit a “COMS Summary Report” and/or an “Excursion and COMS Monitoring System Performance Report” to the Director on a quarterly basis; the Director may, on a case-by-case basis, require more frequent reporting if the Director deems it necessary to*

*accurately assess the compliance status of the fuel burning unit(s). All reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter. The COMS Summary Report shall contain the information and be in the format shown in Appendix B unless otherwise specified by the Director.*

**45 CSR 2A, §7.2.b.1.** *If the total duration of excursions for the reporting period is less than one percent (1%) of the total operating time for the reporting period and monitoring system downtime for the reporting period is less than five percent (5%) of the total operating time for the reporting period, the COMS Summary Report shall be submitted to the Director; the Excursion and COMS Monitoring System Performance report shall be maintained on-site and shall be submitted to the Director upon request.*

**45 CSR 2A, §7.2.b.2.** *If the total duration of excursions for the reporting period is one percent (1%) or greater of the total operating time for the reporting period or the total monitoring system downtime for the reporting period is five percent (5%) or greater of the total operating time for the reporting period, the COMS Summary Report and the Excursion and COMS Monitoring System Performance Report shall both be submitted to the Director.*

**45 CSR 2A, §7.2.b.3.** *The Excursion and COMS Monitoring System Performance Report shall be in a format approved by the Director and shall include, but not be limited to, the following information:*

**45 CSR 2A, §7.2.b.3.A.** *The magnitude of each excursion, and the date and time, including starting and ending times, of each excursion.*

**45 CSR 2A, §7.2.b.3.B.** *Specific identification of each excursion that occurs during start-ups, shutdowns, and malfunctions of the facility.*

**45 CSR 2A, §7.2.b.3.C.** *The nature and cause of any excursion (if known), and the corrective action taken and preventative measures adopted (if any).*

**45 CSR 2A, §7.2.b.3.D.** *The date and time identifying each period during which quality- controlled monitoring data was unavailable, except for zero and span checks, and the reason for data unavailability and the nature of the repairs or adjustments to the monitoring system.*

**45 CSR 2A, §7.2.b.3.E.** *When no excursions have occurred or there were no periods of quality-controlled data unavailability, and no*



*monitoring systems were inoperative, repaired, or adjusted, such information shall be stated in the report.*

Attached, as Appendices A and B are sample copies of the COMS “Summary Report” and “Excess opacity and COM downtime report” that we plan on using to fulfill the opacity reporting requirements. The COMS “Summary Report” will satisfy the conditions under 45 CSR 2A, §7.2.b for the “COMS Summary Report” and will be submitted to the Director according to its requirements. The “Excess opacity and COM downtime report” satisfies the conditions under 45 CSR 2A, §7.2.b.3. for the “Excursion and COMS Monitoring System Performance Report”. The “Excess opacity and COM downtime report” shall be submitted to the Director following the conditions outlined in 45 CSR 2A, §7.2.b.1. and §7.2.b.2.

To the extent that an excursion is due to a malfunction, the reporting requirements in section 9 of 45CSR2 shall be followed – 45 CSR 2A, §7.2.d.

**B. Aux. Stacks (aux 1 and aux 3)**

1. Applicable Standard:

**45 CSR 2, §3.1.** *No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.*

2. Monitoring Method:

**45 CSR 2, §8.2.a.1.** *Direct measurement with a certified continuous opacity monitoring system (COMS) shall be deemed to satisfy the requirements for a monitoring plan. Such COMS shall be installed, calibrated, operated and maintained as specified in 40 CFR Part 60, Appendix B, Performance Specification 1 (PS1). COMS meeting the requirements of 40 CFR Part 75 (Acid Rain) will be deemed to have satisfied the requirements of PS1.*

**45 CSR 2, §8.4.a.** *The owner or operator of a fuel burning unit(s) may petition for alternatives to testing, monitoring, and reporting requirements prescribed pursuant to this rule for conditions, including, but not limited to, the following:*

**45 CSR 2, §8.4.a.1.** *Infrequent use of a fuel burning unit(s)*

Pursuant to 45 CSR 2, Section 8.4.a and 8.4.a.1, Amos Plant previously petitioned the Office of Air Quality (OAQ) Chief for alternative testing, monitoring, and reporting requirements for the auxiliary boilers and associated stacks. Based on limited operating hours, the requirement for COMS installation per Section 6.2.a of interpretive rule 45 CSR 2A was determined to be overly-burdensome and sufficient reason for the granting of alternative monitoring methods. The

alternative monitoring method based on USEPA Method 9 visible emission readings is described below.

- **Primary Monitoring Method:** As an alternative to COMS monitoring, a Method 9 reading will be conducted one time per month provided the following conditions are met: 1) The auxiliary boiler has operated at normal, stable load conditions for at least 24 consecutive hours and 2) weather/lighting conditions are conducive to taking proper Method 9 readings. Because the Amos auxiliary boilers do not utilize post-combustion particulate emissions controls, operating parameters of control equipment are nonexistent and are therefore unable to be monitored.

### 3. Recordkeeping:

#### a. **Operating Schedule and Quality/Quantity of Fuel Burned**

**45 CSR 2A §7.1.a.** *The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit as specified in paragraphs 7.1.a.1 through 7.1.a.6, as applicable.*

The applicable paragraph for the Amos Plant auxiliary boilers follows:

**§7.1.a.2:** *For fuel burning unit(s) which burn only distillate oil, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a monthly basis and a BTU analysis for each shipment.*

As such, the date and time of each startup and shutdown for each auxiliary boiler will be maintained. The quantity of fuel oil burned on a monthly basis, as well as the Btu content will be maintained. The fuel oil analysis will generally be one that is provided by the supplier for a given shipment but in some cases, we may use independent sampling and analyses. The quantity of fuel oil burned on a monthly basis may be maintained on a facility wide basis.

#### b. **Record Maintenance**

**45 CSR 2A §7.1.b.** *Records of all required monitoring data and support information shall be maintained on-site for a period of at least five (5) years from the date of monitoring, sampling, measurement or reporting. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.*

Records of all required monitoring data and support information will be maintained on-site for at least five (5) years. In the case of the auxiliary boilers, strip chart recordings, etc are generally not available.

#### 4. Exception Reporting:

Pursuant to 45 CSR 2, Section 8.4.a and 8.4.a.1, Amos Plant previously petitioned the Office of Air Quality (OAQ) Chief for alternative testing, monitoring, and reporting requirements for the auxiliary boilers and associated stacks.

- a. **Particulate Mass Emissions** – As an alternative to the testing and exception reporting requirements for particulate mass emissions from the auxiliary boiler, the following was previously proposed and approved. Based on an average heat content of approximately 139,491 Btu/gallon (calendar year 2000 data for Aux. 1) and 139,748 Btu/gallon (calendar year 2000 data for Aux. 3) and an AP-42 based particulate mass emissions emission factor of 2 lbs/thousand gallons, the calculated particulate mass emissions of the auxiliary boilers are 0.01 lb/mmBtu. As such, the fuel analysis records maintained under the fuel quality analysis and recordkeeping section of this plan provide sufficient evidence of compliance with the particulate mass emission limit. For the purpose of meeting exception reporting requirements, any fuel oil analysis indicating a heat content of less than 25,000 Btu per gallon will be reported to the OAQ to fulfill the requirement for a periodic exception report under subdivision 8.3.b. or 45 CSR 2 – 45 CSR 2A, §7.2.a. A heat content of 25,000 Btu/gal and a particulate emissions factor of 2 lbs/thousand gallons would result in calculated particulate mass emissions of approximately 90% of the applicable 45 CSR 2 standard.
- b. **Opacity** – As an alternative to the exception reporting requirements for opacity emissions from the auxiliary boilers, the following was previously proposed and approved. We will maintain a copy of each properly conducted (correct weather/lighting conditions, etc.) Method 9 evaluation performed. Any properly conducted Method 9 test which indicates an exceedance shall be submitted to the OAQ on a quarterly basis (within 30 days of the end of the quarter) along with an accompanying description of the excursion cause, any corrective action taken, and the beginning and ending times for the excursion.

To the extent that an excursion is due to a malfunction, the reporting requirements in section 9 of 45CSR2 shall be followed – 45 CSR 2A, §7.2.d.

If no exceptions have occurred during the quarter, then a report will be submitted to the OAQ stating so. This report will identify periods in which no method 9 tests were conducted (e.g. unit out of service) or when no fuel oil was received.

## **II. 45 CSR 10 Monitoring Plan:**

In accordance with Section 8.2.c of 45 CSR 10, following is the proposed plan for monitoring compliance with the sulfur dioxide weight emission standards expressed in Section 3 of that rule:

## A. Main Stacks

### 1. Applicable Standard:

**45 CSR 10, §3.2.a.** *For fuel burning units of the John Amos Plant of Appalachian Power Company, located in Air Quality Control Region IV, the product of 1.6 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.*

**45 CSR 10, §3.8.** *Compliance with the allowable sulfur dioxide emission limitations from fuel burning units shall be based on continuous twenty-four (24) hour averaging time...A continuous twenty-four (24) hour period is defined as one (1) calendar day.*

A new SO<sub>2</sub> limit will be effectively established as a result of the installation of the flue gas desulfurization system/new stack configuration and the subsequent NAAQS compliance demonstration modeling. Because the new SO<sub>2</sub> limit is more stringent than the current limit expressed in 45 CSR 10, Appalachian Power Company believes that compliance with the limits should be streamlined such that compliance with the new limit is sufficient to deem compliance with the existing 45 CSR 10 limit.

Appalachian Power Company believes that the new limit should be described as follows: "Sulfur Dioxide emissions from the Unit 1 (1E), Unit 2 (2E) and Unit 3 (3E) flue gas stacks shall not exceed a heat input weighted average of 1.0 lbs SO<sub>2</sub>/mmBTU on a 3-hour block average basis, with SO<sub>2</sub> emissions not to exceed an average of 29,428 lbs SO<sub>2</sub>/hr, also on a 3-hour block average basis. Compliance with this limitation will assure compliance with the 45 CSR 10 limitation of 1.6 lb SO<sub>2</sub>/mmBTU."

### 2. Monitoring Method:

**45 CSR 10, §8.2.c.1.** *The installation, operation and maintenance of a continuous monitoring system meeting the requirements 40 CFR Part 60, Appendix B, Performance Specification 2 (PS2) or Performance Specification 7 (PS7) shall be deemed to fulfill the requirements of a monitoring plan for a fuel burning unit(s), manufacturing process source(s) or combustion source(s). CEMS meeting the requirements of 40 CFR Part 75 (Acid Rain) will be deemed to have satisfied the requirements of PS2.*

- a. Primary Monitoring Method: The primary method of monitoring SO<sub>2</sub> mass emissions from the two new stacks (one stack with dual flues and the other with a single flue) will be Continuous Emissions Monitors (CEMS). Data used in evaluating the performance of the Amos Units with the applicable standard will be unbiased, unsubstituted data as specified in

definition 45 CSR 10A, §6.1.b.1. Data capture of more than 50% constitutes sufficient data for the daily mass emissions to be considered valid. The CEMS are installed, maintained and operated in compliance with requirements of 40 CFR Part 75. Because each of the three generating units discharge through separate flues and all three are “Type a” fuel burning units as defined in 45 CSR 10, the plant wide limit is calculated by summing the limits for the three flues.

- b. Other Credible Monitoring Method(s): While Amos Plant will use CEMS as the primary method of monitoring SO<sub>2</sub> mass emissions from the three flues, we are also reserving the right to use other appropriate methods that would produce credible data. These “other monitoring methods” will generally be used in the absence of CEMS data or as other credible evidence used in conjunction with CEMS data.

### 3. Recordkeeping:

#### a. **Operating Schedule and Quality/Quantity of Fuel Burned:**

**45 CSR 10A, §7.1.a.** *Fuel burning units - The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule and the quality or quantity of fuel burned in each unit...*

**45 CSR 10A, §7.1.c.** *The owner or operator of a fuel burning unit or combustion source which utilizes CEMS shall be exempt from the provisions of subdivision 7.1.a. or 7.1.b, respectively.*

As such, Amos plant will not maintain records of the operating schedule and the quality and quantity of fuel burned in each unit for purposes of meeting the requirements for a monitoring plan under 45 CSR 10. While fuel sampling and analysis may continue to be performed at this facility, it is done so at the discretion of the owner/operator and is not required by this monitoring plan for the purposes of indicating compliance with SO<sub>2</sub> standards.

#### b. **Record Maintenance**

**45 CSR 10A, §7.1.d.** *For fuel burning units, manufacturing process sources, and combustion sources, records of all required monitoring data as established in an approved monitoring plan and support information shall be maintained on-site for a period of at least five (5) years from the date of monitoring, sampling, measurement or reporting. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports.*

As such, CEMS records at Amos Plant will be maintained for at least five years.

4. Exception Reporting:

**45 CSR 10A, §7.2.a.** *CEMS - Each owner or operator employing CEMS for an approved monitoring plan, shall submit a “CEMS Summary Report” and/or a “CEMS Excursion and Monitoring System Performance Report” to the Director quarterly; the Director may, on a case-by-case basis, require more frequent reporting if the Director deems it necessary to accurately assess the compliance status of the source. All reports shall be postmarked no later than forty-five (45) days following the end of each calendar quarter. The CEMS Summary Report shall contain the information and be in the format shown in Appendix A unless otherwise specified by the Director.*

**45 CSR 10A, §7.2.a.1.** *Submittal of 40 CFR Part 75 data in electronic data (EDR) format to the Director shall be deemed to satisfy the requirements of subdivision 7.2.a.*

As such, Amos Plant will submit the 40 CFR 75 quarterly electronic data reports (EDRs) to the OAQ to meet the requirements for a CEMS Summary Report and the CEMS Excursion and Monitoring System Performance Report. The EDR reports will be submitted to the OAQ no later than 45 days following the end of the quarter.

When no excursions of the 24-hour SO<sub>2</sub> standard have occurred, such information shall be stated in the cover letter of the EDR submittal.

**B. Aux. Stacks (aux 1 and aux 3)**

1. Applicable Standard:

**45 CSR 10, §3.1.e.** *For type ‘b’ and Type ‘c’ fuel burning units, the product of 1.6 and the total design heat inputs for such units discharging through those stacks in million BTU’s per hour.*

**45 CSR 10, §3.8.** *Compliance with the allowable sulfur dioxide emission limitations from fuel burning units shall be based on continuous twenty-four (24) hour averaging time...A continuous twenty-four (24) hour period is defined as one (1) calendar day.*

2. Monitoring, Recordkeeping, Exception Reporting Requirements:

**45 CSR 10, §10.3.** *The owner or operator of a fuel burning unit(s) which combusts natural gas, wood or distillate oil, alone or in combination, shall be exempt from the requirements of section 8.*

As such, the Amos Plant auxiliary boilers (auxiliary stacks) are exempt from Testing, Monitoring, Recordkeeping, and Reporting requirements found in 45 CSR 10, Section 8 because the fuel burning source combusts only distillate oil. 45 CSR 10, Section 8 also contains the requirement for the development of a monitoring plan. The simple nature of burning distillate oil results in an SO<sub>2</sub> emission rate well below the standard.

While fuel sampling and analysis may continue to be performed at this facility, it is done so at the discretion of the owner/operator and is not required by this monitoring plan for the purposes of indicating compliance with SO<sub>2</sub> standards.

### **Revisions of Monitoring Plan:**

Amos Plant reserves the right to periodically revise the conditions of this monitoring plan. Any revised plan will become effective only after approval by the OAQ.

### **Implementation of Monitoring Plan:**

Implementation of this revised monitoring plan will occur concurrently with the installation and operation of the new stacks for Units 1, 2, and 3 at Amos Plant.

Attachment K  
Suggested Title V Permit Language



## Appalachian Power Suggests revising the equipment table to reflect updates that have occurred over the past few years.

**Table 1.1 Emission Units:**

Tank #4	N/A	Tank #4	Coal Transfer Station #12 No. 2 Fuel Oil Tank (heating oil) (contractor owned)	3,000 gal	2014
Tank #6	N/A	Tank #6	Station #3A Heating Oil Tank (contractor owned)	10,000 gal	2010
Tank #8	N/A	Tank #8	Station #6 Heating Oil Tank (contractor owned)	4,000 gal	2014
Tank #9	N/A	Tank #9	Station #7 Heating Oil Tank (contractor owned)	10,000 gal	2010
<del>Tank #11</del>	<del>N/A</del>	<del>Tank #11</del>	<del>Tractor Garage (East) Mobile Equipment Diesel Fuel Tank</del>	<del>20,000 gal</del>	<del>1991</del> Removed
<del>Tank #12</del>	<del>N/A</del>	<del>Tank #12</del>	<del>Tractor Garage (North) Locomotive Diesel Fuel Tank</del>	<del>6,000 gal</del>	<del>1991</del> Removed
<del>Tank #24</del>	<del>N/A</del>	<del>Tank #24</del>	<del>Fuel Solv (FS-20) Tank</del>	<del>1,000 gal</del>	<del>1995</del> Removed
Tank #73	N/A	Tank #73	Station 11 Heating Oil Tank (contractor owned)	10,000 gal	2020
Tank #76	N/A	Tank #76	Diesel Storage Tank for Limestone Unloading Equipment (contractor owned)	10,000 gal	2009

## Following are suggested updates to other permit terms and conditions.

Permit conditions 3.1.12, 3.1.13 and 3.1.14, pertaining to regional NO<sub>x</sub> and SO<sub>2</sub> programs, should be revised to reflect current boilerplate language for the currently applicable programs.