Received
May 9, 2024
WV DEP/Div of Air Quality

Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Wheeling Power Company; Mitchell Plant
[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 03-054-05100005
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R30-05100005-2019 (MM01)

- 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 ATTACHMENT S 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 57th Street, SE
    Charleston, WV 25304

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.

- If the permit writer has any questions, please contact (all that apply):
  - ☐ Responsible Official/Authorized Representative
    - Name: Joshua D. Snodgrass
    - Email: jdsnodgrass@aep.com
    - Phone Number: 304-843-6005
  - ☑ Company Contact
    - Name: G. M.(Matt) Palmer
    - Email: gmpalmer@aep.com
    - Phone Number: 304-843-6048
  - ☑ Consultant
    - Name: Brandon T. Belcher
    - Email: btbelcher@aep.com
    - Phone Number: 304-541-7437

American Electric Power
1 Riverside Plaza
Columbus, OH 43215
aep.com

May 9, 2024

Ms. Laura M. Crowder, Director (electronically via DEPAirQualityPermitting@wv.gov)
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, West Virginia 25304

RE: 45 CSR 30 Permit Renewal Application
Plant ID# 051-00005

Dear Ms. Crowder:

In accordance with Condition 2.3 for the subject permit, enclosed is an electronic copy (via email) of a signed Title V Permit Renewal Application for Wheeling Power Company's Mitchell Plant. The subject application is for the Steam Electric Generating Facility located near Moundsville, WV in Marshall County. The existing permit expires on November 26, 2024.

Please contact Brandon T. Belcher at (304) 541-7437 or G. M. (Matt) Palmer at (304) 843-6048 if you have any questions.

Sincerely,

Joshua D. Snodgrass
Plant Manager, Mitchell Plant

Re: 45 CSR 30 Permit Renewal Application
Plant ID# 051-00005

ec: T. W. Lohner / B. T. Belcher — Environmental Services
G. M. Palmer / D. R. Roski — Mitchell Plant

Enclosure: Mitchell Plant Title V Renewal Application Package

Wheeling Power Company
Mitchell Plant

Title V Permit Renewal Application
R30-05100005-2019 (MM01)

Prepared For:

Wheeling Power Company
Mitchell Plant
Moundsville, West Virginia

Prepared By:

American Electric Power
Environmental Services
1 Riverside Plaza
Columbus, Ohio 43215
May 2024

Wheeling Power Company
Mitchell 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

1. **Name of Applicant (As registered with the WV Secretary of State's Office):** Wheeling Power Company	**2. Facility Name or Location:** Mitchell Plant
3. DAQ Plant ID No.: 051-00005	**4. Federal Employer ID No. (FEIN):** 610247775

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 1970

☑ Permit Renewal — What is the expiration date of the existing permit? 11/26/2024

☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☑ Corporation ☐ Governmental Agency ☐ LLC ☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☑ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. Number of onsite employees:

Approx. 181

9. Governmental Code:

☑ Privately owned and operated; 0

☐ Federally owned and operated; 1

☐ State government owned and operated; 2

☐ County government owned and operated; 3

☐ Municipality government owned and operated; 4

☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☑ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: P.O. Box K		
City: Moundsville	**State:** West Virginia	**Zip:** 26041
Telephone Number: (304) 843-6000	**Fax Number:** (304) 843-6080	

12. Facility Location (Physical Address)		
Street: State Route 2	**City:** Cresap/Moundsville	**County:** Marshall
UTM Easting: 516.00 km	**UTM Northing:** 4409.00 km	**Zone:** ☑ 17 or ☐ 18
Directions: From Charleston, WV, take I-77 N to Exit 179. Travel north on State Route 2 approximately 70 miles to Cresap, WV. Facility is located on State Route 2, approximately 9 miles south of Moundsville, WV.		
Portable Source? ☐ Yes ☑ No		
Is facility located within a nonattainment area? ☑ Yes ☐ No		**If yes, for what air pollutants?** Sulfur Dioxide
Is facility located within 50 miles of another state? ☑ Yes ☐ No		**If yes, name the affected state(s).** Ohio, Pennsylvania
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☑ No **If no, do emissions impact a Class I Area[1]?** ☑ Yes ☐ No		**If yes, name the area(s).**

[1] *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.*

13. Contact Information		
Responsible Official: Joshua D. Snodgrass		**Title:** Plant Manager
Street or P.O. Box: P.O. Box K		
City: Moundsville	**State:** WV	**Zip:** 26041
Telephone Number: (304) 843-6005	**Cell Number:** (304) 972-7279	
E-mail address: jdsnodgrass@aep.com		
Environmental Contact: G. M. (Matt) Palmer		**Title:** Plant Environmental Coordinator
Street or P.O. Box: P.O. Box K		
City: Moundsville	**State:** WV	**Zip:** 26041
Telephone Number: (304) 843-6048	**Cell Number:** (304) 559-4538	
E-mail address: gmpalmer@aep.com		
Application Preparer: Brandon T. Belcher		**Title:** Environmental Specialist Sr.
Company: AEP Service Corporation		
Street or P.O. Box: 1 Riverside Plaza, 17th Floor		
City: Columbus	**State:** OH	**Zip:** 43215
Telephone Number: (614) 716-1800	**Cell Number:** (304) 541-7437	
E-mail address: btbelcher@aep.com		

14. Facility Description

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

Provide a general description of operations.

The Mitchell Plant is a fossil fuel fired electric generation facility and operates under Standard Industrial Code (SIC) 4911. The facility consists of two coal-fired steam generators that provide a steam supply to turbine driven electrical generators, and an oil-fired auxiliary boiler that provides auxiliary steam services to the facility. The facility also includes various supporting operations including by not limited to coal handling, ash handling, gypsum handling, limestone handling, wastewater treatment system filter cake 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.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☑ SIP	☐ FIP
☑ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☑ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☑ Section 111 NSPS	☐ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☑ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ Cross-State Air Pollution Rule (45CSR43)	

19. Non Applicability Determinations

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.

45 CSR 5: Pursuant to 45CSR5, if 45CSR2 is applicable to the facility, then the facility is exempt from 45CSR5. 45CSR2 is applicable to the facility.

45 CSR 17: Pursuant to 45CSR17, if 45CSR2 is applicable to the facility, then the facility is exempt from 45CSR17. 45CSR2 is applicable to the facility.

40 CFR 60 Subpart D: The fossil fuel fired steam generators potentially affected by this rule have not commenced construction or modification after August 17, 1971.

40 CFR 60 Subpart Da: The electric utility steam generating units potentially affected by this rule have not commenced construction or modification after September 18, 1978.

40 CFR 60 Subpart K: The facility doesn't include storage vessels that are used to store petroleum liquids (as defined in 40 CFR 60.111(b)) and have storage capacity greater than 40,000 gallons for which construction, reconstruction, or modification commenced after June 11, 1973 and prior to May 19, 1978.

☐ 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 60.111(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 has not been constructed or modified after October 24, 1974.

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*).

45CSR6-3, R30-05100005-2019 (MM01) Section 3.1.1 and 3.1.2 (Open Burning)

40CFR61, 45CSR34, and R30-05100005-2019 (MM01) Section 3.1.3 (Asbestos)

45CSR4, R30-05100005-2019 (MM01) Section 3.1.4 (Odor)

45CSR11-5.2, R30-05100005-2019 (MM01) Section 3.1.5 (Standby Plan)

WV Code 22-5-4(a)(14), R30-05100005-2019 (MM01) Section 3.1.6 (Emission Inventory)

40CFR82 Subpart F, R30-05100005-2019 (MM01) Section 3.1.7 (Ozone-depleting Substances)

45CSR2-5, 45CSR13, R13-2608, 4.1.18, and R30-05100005-2019 (MM01) Section 3.1.9 (Fugitive Particulate Matter Control)

40CFR97.406, , 45CSR43, and R30-05100005-2019 (MM01) Section 3.1.11 (CSAPR NOx Annual Trading Program)

☐ 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)(14-15), R30-05100005-2019 (MM01) Section 3.3.1 (Stack Testing)

45CSR30-5.1.c.2.A, R30-05100005-2019 (MM01) Section 3.4.1 (Monitoring Information)

45CSR30-5.1.c.2.B, R30-05100005-2019 (MM01) Section 3.4.2 (Retention of Records)

45CSR30-5.1.c, R30-05100005-2019 (MM01) Section 3.4.3 (Odors)

45CSR30-5.1.c, R30-05100005-2019 (MM01) Section 3.4.4 (Fugitive Particulate Matter Control)

45CSR30-4.4 and 5.1.c.3, R30-05100005-2019 (MM01) Sections 3.5.1-3.5.3 (Reporting Requirements)

45CSR30-8, R30-05100005-2019 (MM01) Section 3.5.4 (Certified Emissions Statement)

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.

40CFR97.806, 45CSR43, and R30-05100005-2019 (MM01) Section 3.1.12 (CSAPR NOx Ozone Season Trading Program)

40CFR97.606, 45CSR43, and R30-05100005-2019 (MM01) Section 3.1.13 (CSAPR SO2 Group 1 Trading Program)

☐ 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.)

45CSR30-5.3.e, R30-05100005-2019 (MM01) Section 3.5.5 (Compliance Certification)

45CSR30-5.1.c.3.A, R30-05100005-2019 (MM01) Section 3.5.6 (Semi-Annual Monitoring Reports)

R30-05100005-2019 (MM01) Section 3.5.7 (Emergency Reporting)

45CSR30-5.1.c.3, R30-05100005-2019 (MM01) Section 3.5.8 (Deviation Reports)

45CSR30-4.3.h.1.B, R30-05100005-2019 (MM01) 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**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
	05/12/2004	PD04-042: No permit needed for SCR
	08/05/2004	PD04-064: No permit needed for FGD system
	08/24/2005	PD04-073: No permit needed for urea handling
R13-2608E	05/12/2014	Reg 13 Permit for FGD support equipment, Dry Fly Ash and Ash Landfill project, and Aux. Boiler rebuild project/capacity factor limit.
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
R33-3948-2027-6	12/19/2022	Acid Rain Permit
G60-C057A	08/08/2014	Emergency Generator General Permit

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance MM/DD/YYYY	Permit Condition Number
R13-2608 through R13-2608D	Various	Permits were revised and replaced with subsequent versions.
G60-C057	10/11/2013	Permit was revised and replaced with subsequent version.

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	4743.23
Nitrogen Oxides (NO_X)	36332.05
Lead (Pb)	3.643
Particulate Matter ($PM_{2.5}$)[1]	1096.2
Particulate Matter (PM_{10})[1]	3169.0
Total Particulate Matter (TSP)	5423.79
Sulfur Dioxide (SO_2)	89743.04
Volatile Organic Compounds (VOC)	559.82
Hazardous Air Pollutants[2]	Potential Emissions
Hydrogen Chloride	12337
Hydrogen Fluoride	1071
Selenium	48.45
Manganese	3.77
Nickel	1.69
Arsenic	5.62
Mercury Compounds	2.13
Beryllium	13.37
Chromium	2.00
Cobalt	0.74
Lead	3.65
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]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

24. Insignificant Activities (Check all that apply)		
☑	1.	Air compressors and pneumatically operated equipment, including hand tools.
☑	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☑	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.
☑	4.	Bathroom/toilet vent emissions.
☑	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☑	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.
☐	7.	Blacksmith forges.
☑	8.	Boiler water treatment operations, not including cooling towers.
☑	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☑	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☑	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☑	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☑	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☑	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.
☐	17.	Emergency (backup) electrical generators at residential locations.
☑	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, 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. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)		
☐	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:
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☑	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	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.
☑	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☑	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☑	26.	Fire suppression systems.
☑	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☑	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.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☑	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☑	33.	Hydraulic and hydrostatic testing equipment.
☑	34.	Indoor or outdoor kerosene heaters.
☑	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☑	37.	Laundry activities, except for dry-cleaning and steam boilers.
☐	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☑	39.	Oxygen scavenging (de-aeration) of water.
☑	40.	Ozone generators.

24. Insignificant Activities (Check all that apply)		
☑	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.)
☑	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.
☑	43.	Process water filtration systems and demineralizers.
☑	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.
☑	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☑	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☑	50.	Space heaters operating by direct heat transfer.
☑	51.	Steam cleaning operations.
☑	52.	Steam leaks.
☐	53.	Steam sterilizers.
☑	54.	Steam vents and safety relief valves.
☑	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.
☑	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.
☐	57.	Such other sources or activities as the Director may determine.
☑	58.	Tobacco smoking rooms and areas.
☑	59.	Vents from continuous emissions monitors and other analyzers.

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

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
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 **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official as defined in 45CSR§30-2.38.

a. Certification of Truth, Accuracy and Completeness

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.

b. Compliance Certification

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.

Responsible official (type or print)

Name:	Title:
Joshua D. Snodgrass	Plant Manager

Responsible official's signature:

Signature: 5/9/24

Signature Date:

(Must be signed and dated in blue ink or have a valid electronic signature)

Note: Please check all applicable attachments included with this permit application:

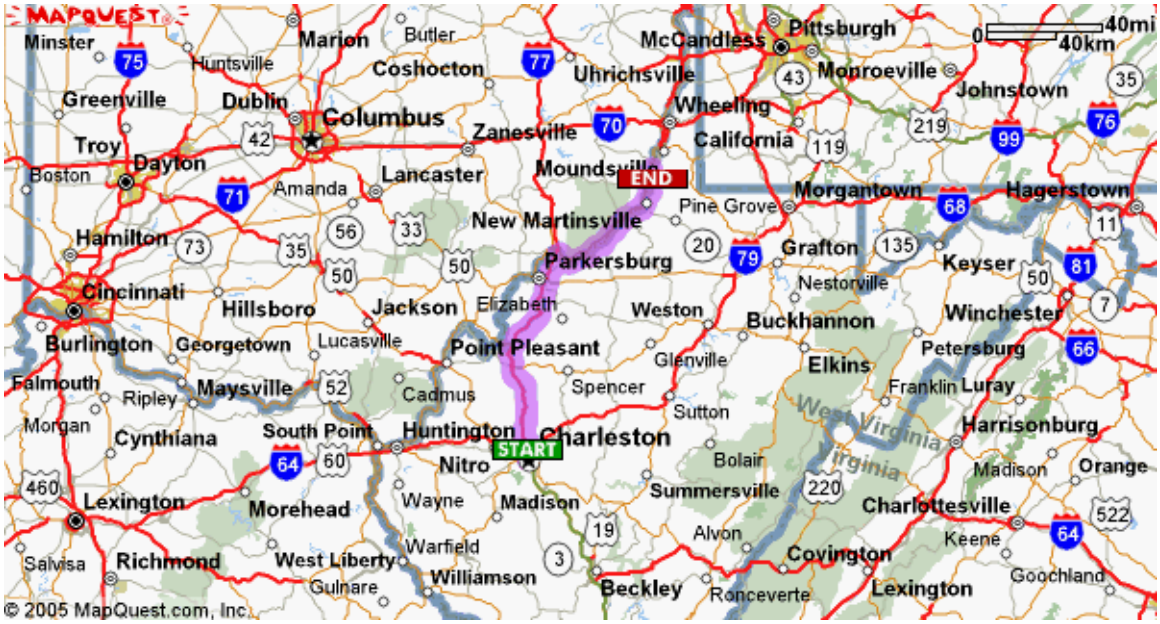
☑	ATTACHMENT A: Area Map
☑	ATTACHMENT B: Plot Plan(s)
☑	ATTACHMENT C: Process Flow Diagram(s)
☑	ATTACHMENT D: Equipment Table
☑	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☑	ATTACHMENT G: Air Pollution Control Device Form(s)
☑	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

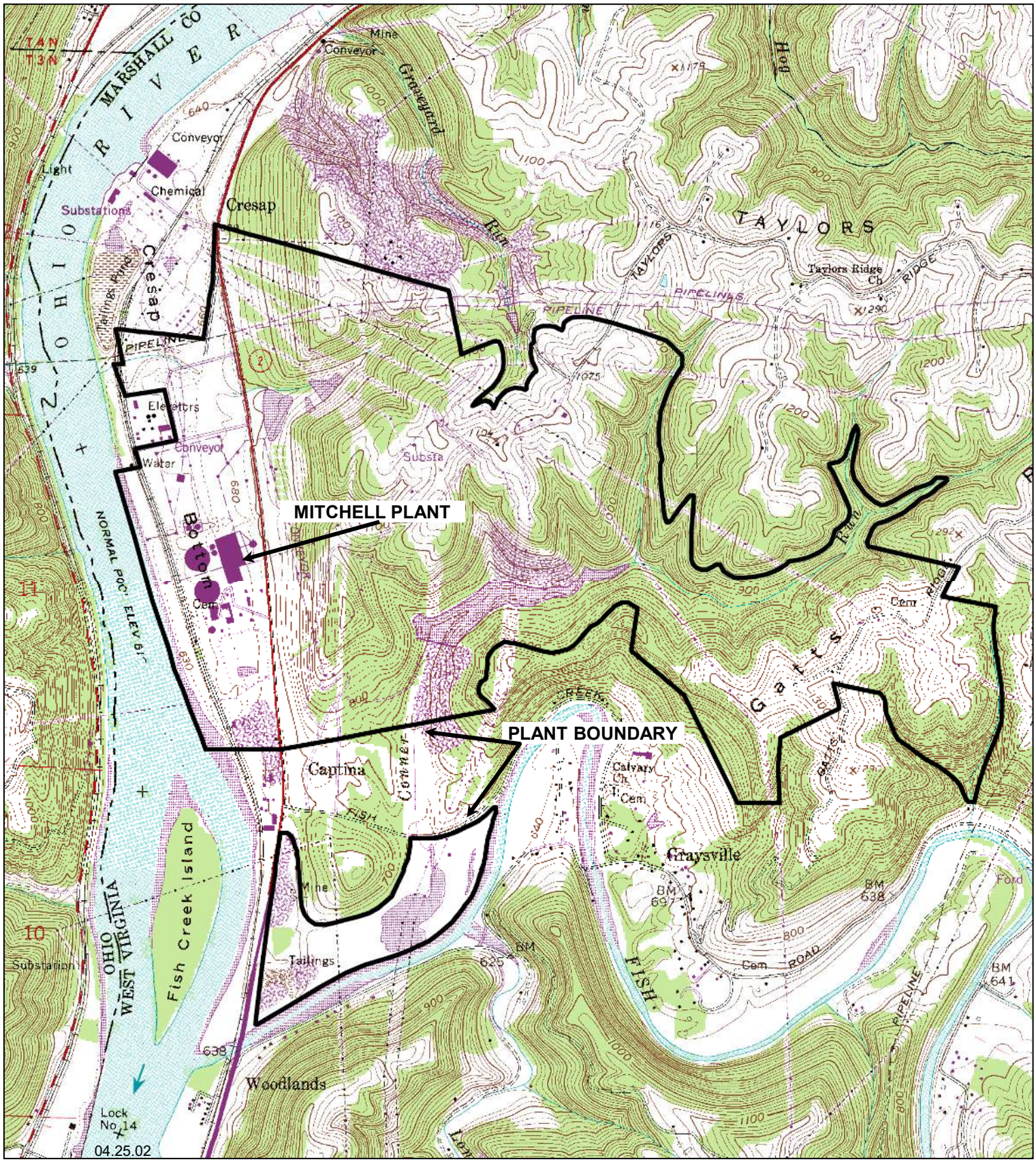
All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Attachment A

Area Map

Driving directions to Mitchell Plant: From Charleston, take Interstate 77 North to Exit 179. Travel north on State Route 2 approximately 70 miles to Cresap. Facility is located on Route 2 approximately nine miles south of Moundsville, WV.





N

Powhatan Point, W.VA. - OH Quadrangle

USGS Topographic Map

0 ½ 1mi

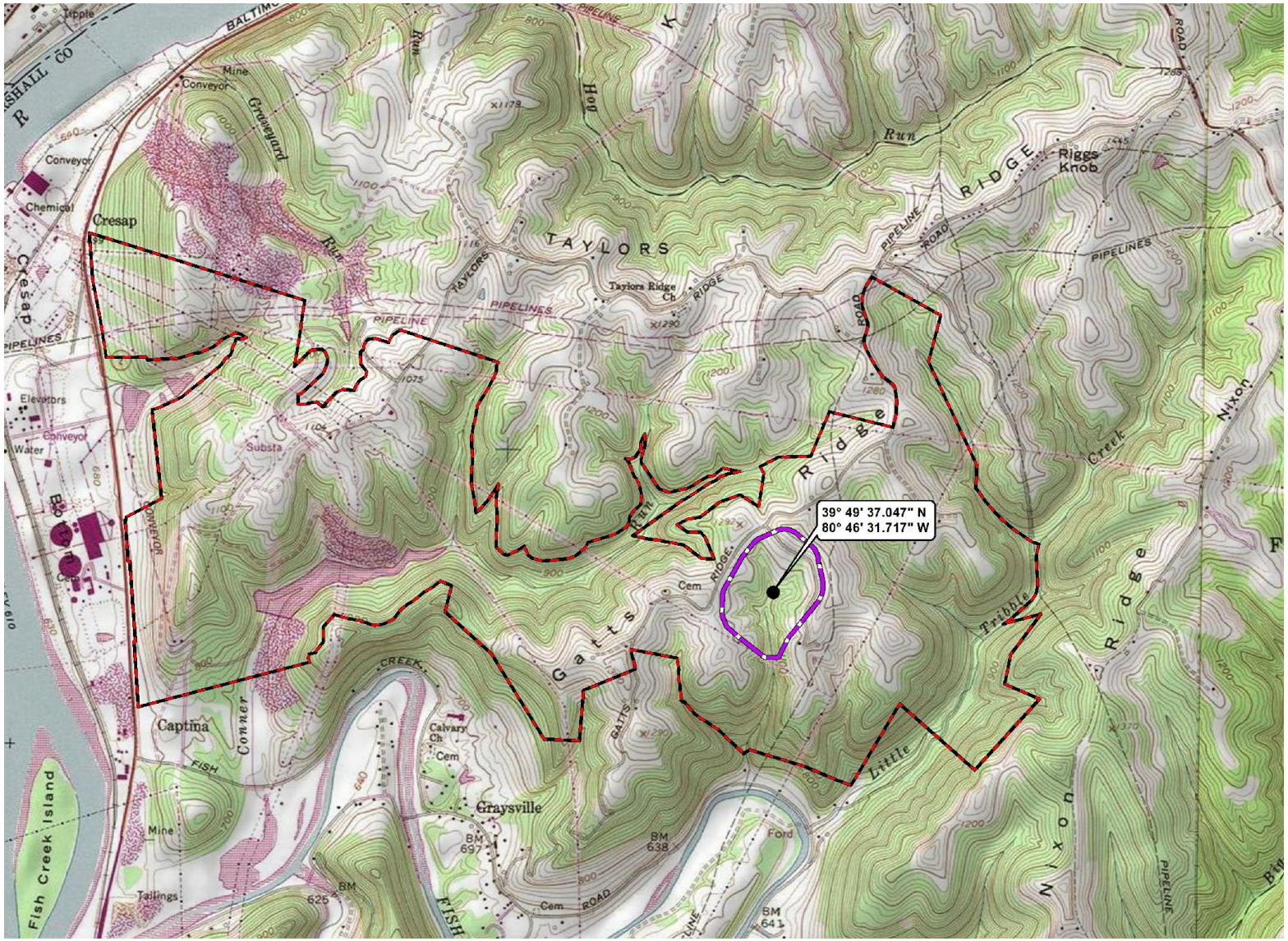
Plant Latitude 39° 49' 45"
Plant Longitude 80° 48' 59"

Wheeling Power Company
Mitchell Plant

Facility Boundary

Air Quality Services AEP

Mitchell Plant Dry Fly Ash Landfill Boundary

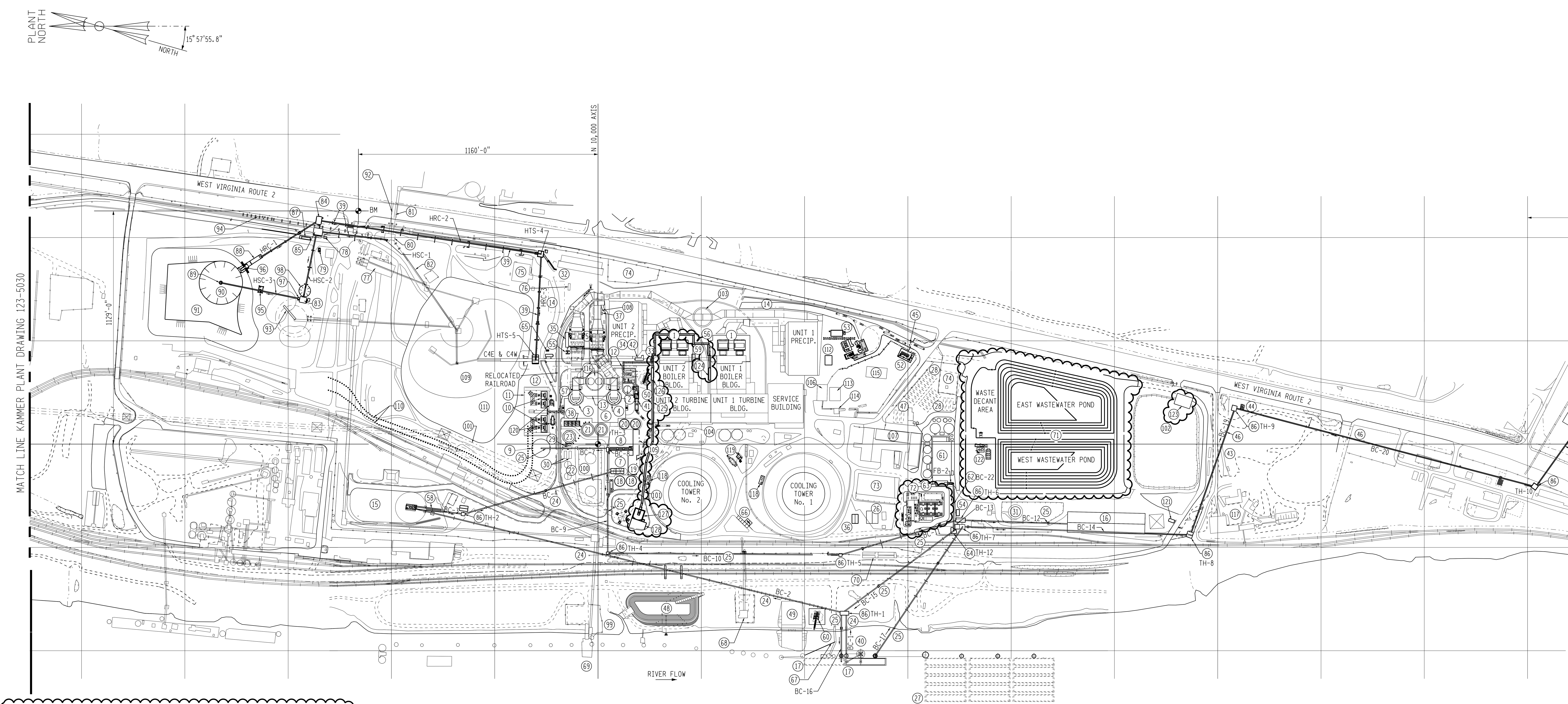


Attachment B

Plot Plan

GENERAL NOTES

1. WORK THIS DRAWING WITH KAMMER PLANT DRAWING 1-5030.



FOR CHANGES RELATED TO THE CCR AND ELG PROJECT, WORK THIS DRAWING WITH THE FOLLOWING REFERENCES:

12-507201	GENERAL ARRANGMENT POND AREA PLAN	1-507200	EQUIPMENT SETTING PLAN UNIT 1 BOTTOM ASH AREA
12-508200	GENERAL ARRANGMENT WASTEWATER TREATMENT BUILDING ENLARGED PLAN	1-507202	EQUIPMENT SETTING PLAN BOTTOM ASH BUNKER AREA
0-300004	POND CLOSURE AND REPURPOSING COVER SHEET AND DRAWING INDEX	2-507200	EQUIPMENT SETTING PLAN UNIT 2 BOTTOM ASH AREA

NOTES:

1. BACKGROUND SHOWN IS FROM EXISTING AERIAL SURVEY GEO ONE DRAWING 01-0340, SHEET 1 OF 1, DATED 4-13-01, TITLED AEP MITCHELL PLANT.

LEGEND:

1 SCR REACTORS
2 UREA TO AMMONIA SYSTEM
3 UNIT 1 FGD ABSORBER
4 UNIT 2 FGD ABSORBER
5 ID FANS
6 FGD BUILDING
7 LIMESTONE PREPARATION BUILDING
8 GYPSUM DEWATERING BUILDING
9 GYPSUM EMERGENCY STACKOUT PILE
10 FGD AUXILIARY TRANSFORMERS
11 FGD SUBSTATION
12 ELEVATED WET PRECIPITATORS (FUTURE)
13 CEMS BUILDINGS (IN STACK UNDER FLUES)
14 FUTURE MERCURY REMOVAL BAGHOUSE & BOOSTER FANS
15 LIMESTONE PILE
16 GYPSUM STORAGE BUILDING
17 1500 DWT BARGE
18 LIMESTONE SLURRY TANKS
19 LIMESTONE SILOS
20 RECLAIM WATER TANKS
21 HYDROCLONE FEED TANKS
22 SERVICE WATER TANKS
23 MAINTENANCE SLURRY STORAGE TANK
24 LIMESTONE CONVEYOR
25 GYPSUM CONVEYOR
26 RELOCATED WAREHOUSE (REPLACES EXISTING WAREHOUSE)
27 ADDITIONAL BARGE CELLS
28 OUTAGE TRAILERS AS REQUIRED
29 MAINTENANCE SLURRY BUILDING
30 EMERGENCY QUENCH PUMPS
31 METAL CLEANING TANK (EXISTING)
32 CONSTRUCTION FACILITIES BUILDING
33 PIPE BRIDGE TO UREA AREA
34 SCR SUBSTATION
35 ID FAN ELECTRICAL BUILDING
36 RELOCATED OIL STORAGE
37 RELOCATED ASKAREL COLLECTION TANK
38 FGD STATION SERVICE TRANSFORMERS
39 COAL BLENDING CONVEYOR
40 BARGE UNLOADING/LOADING FACILITY
41 UREA UNLOADING BUILDING
42 UREA ELECTRICAL BUILDING
43 TRUCK WEIGH SCALE (REED MINERALS)
44 LEACH FIELD
45 NEW TRUCK DELIVERY GATE-REMOTELY OPERATED FROM EXISTING GATE HOUSE
46 BELT CONVEYOR
47 OUTAGE TRAILER AREA SHOWER & RESTROOMS
48 CONTAINMENT POND
49 BARGE UNLOADING RAMP
50 BOILER MAINTENANCE CRANE
51 GYPSUM WALLBOARD STORAGE BUILDING
52 SPARE TRANSFORMERS
53 DRY S03 SORBENT INJECTION SYSTEM
54 MATERIALS HANDLING SUB-STATION #2
55 ID FAN OUTLET DUCT DAMPER SEAL AIR FANS
56 AUXILIARY BOILER STACK
57 13.5 kV BRIDGE
58 LIMESTONE RECLAIM TUNNEL
59 BOILER MODS OUTDOOR MCC
60 TEMPORARY CRANE FOR BARGE UNLOADING
61 CPS TREATMENT FACILITY
62 CPS WASTE CONVEYOR
63 CPS WASTE PILE & PAD
64 CPS WASTE TRANSFER HOUSE
65 CONVEYOR 4EW TUNNEL HEATING OIL TANK
66 HYDROGEN BULK STORAGE AND UNLOADING
67 EXISTING FUEL OIL UNLOADING
68 RIVER WATER MAKE-UP PUMP HOUSE
69 EXISTING COAL BARGE UNLOADER
70 EXISTING SEWAGE PLANT
71 WASTEWATER PONDS
72 WASTEWATER TREATMENT BUILDING
73 PRECIPITATOR PARTS WAREHOUSE
74 69KV FISH CREEK SUB-STATION
75 TRACTOR SHED
76 EXISTING DIESEL FUEL STORAGE TANK (BURIED)
77 HEAVY EQUIPMENT STORAGE BUILDING
78 DELUGE VALVE BUILDING
79 COAL BLENDING SYSTEM ELECTRICAL VAULT
80 EXISTING CONSOL TRANSFER STATION #1
81 EXISTING CONSOL CONVEYOR 31 (NOT IN USE)
82 EXISTING CONVEYOR 1 (NOT IN USE)
83 STATION HTS-3
84 STATION HTS-2B
85 STATION HTS-2A
86 TRANSFER HOUSE
87 COAL BLENDING SYSTEM ELECTRICAL ROOM
88 RECLAIM TUNNEL
89 ST-1 STACKING TUBE
90 HIGH SULFUR COAL SHORT-TERM ACTIVE PILE
91 HIGH SULFUR COAL LONG-TERM STORAGE
92 EXISTING CONSOL CONVEYOR C-3100
93 R-9 RADIAL STACKER
94 EXISTING CONVEYOR #64 TO KAMMER
95 HSC-3 DRIVE/ GTU TOWER
96 HFB-1 FEEDER/ BREAKER
97 FEED RECEIVER HOPPER
98 SCALE TEST PILE
99 STA. R1
100 FUEL OIL STORAGE TANKS
101 345 KV OVERHEAD LINES AND UNIT 2 TOWER
102 CLEARWELL POND
103 EXISTING STACK
104 CONDENSATE TANKS
105 FUTURE EXPANSION
106 UTILITY SHOWER BLDG.
107 WAREHOUSES
108 UNIT 2 OVERFLOW SUMP
109 ACTIVE COAL PILE
110 138 KV UNDERGROUND LINES FROM KAMMER
111 LOW SULFUR COAL LONG TERM STORAGE
112 UNIT 1 OVERFLOW SUMP
113 TRAINING CENTER
114 MAIN GATE HOUSE (GATE 3)
115 CONTROL ROOM SIMULATOR BUILDING
116 FGD STACK - ℄ @ N 10,015, E 10,304
117 BLACK BEAUTY PLANT
118 COOLING TOWER CHEMICAL INJECTION TANKS & PUMPS
119 UNIT 1&2 BLACK START DIESEL GENERATOR AND PDC BUILDING
120 FGD BLACK START DIESEL GENERATOR AND PDC BUILDING
121 GATE 4 GUARD HOUSE
122 POND ENHANCEMENT AREA
123 TEMPORARY TREATMENT AREA
124 UNIT 1 TRANSFER TOWER
125 UNIT 12 COMMON SICON CONVEYOR
126 UNIT 2 TRANSFER TOWER
127 UNIT 12 BOTTOM ASH BUNKER
128 UNIT 12 BOTTOM ASH BUNKER LOADING PAD

ISSUED FOR REVIEW
UPDATED FOR CCR/ELG PROJECT
(A6-C7, E8, F3-F5, H5-K4, J8)

REV	DATE	DRAWN	CHECKED	REVIEWED	LEAD DESIGNER	ENGINEER/ TECH SPEC	LEAD DISC ENGINEER	PROJ ENGR MANAGER
20B	11/18/21	MTM		CLS	MSC	KL	CLS	TMM

THIS REVISION BY WORLEY

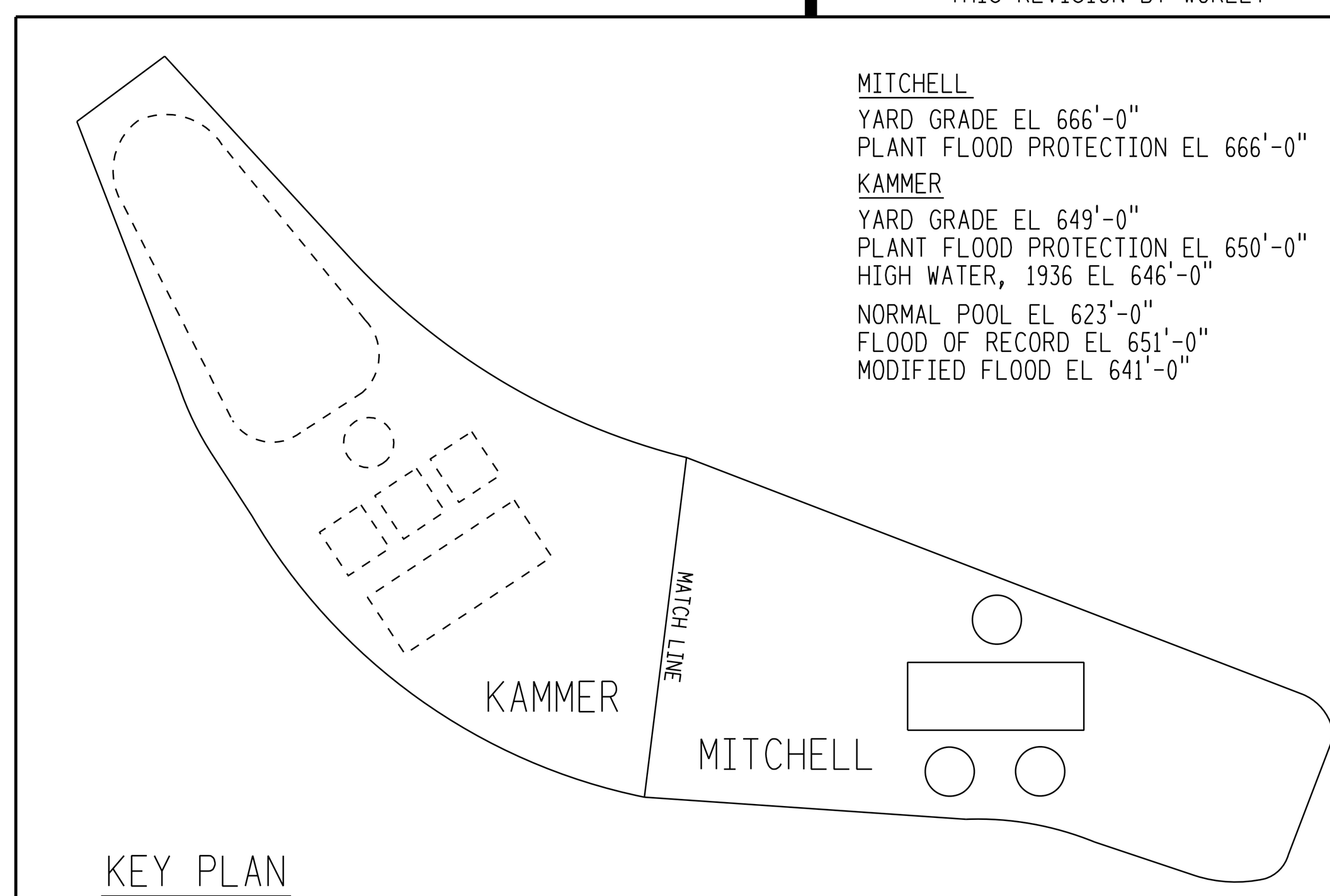
DATE	NO.	DESCRIPTION	APPD.
	19	PER PROJECT ID MLP-0-MDI-16-103183: ADDED GATE 4 GUARD HOUSE (H, J9) (K5). QA/QC NO. MI-012017 TRA	TRA KFB DDS JAR TVR

REVISIONS

MITCHELL
YARD GRADE EL 666'-0"
PLANT FLOOD PROTECTION EL 666'-0"

KAMMER
YARD GRADE EL 649'-0"
PLANT FLOOD PROTECTION EL 650'-0"
HIGH WATER, 1936 EL 646'-0"

NORMAL POOL EL 623'-0"
FLOOD OF RECORD EL 651'-0"
MODIFIED FLOOD EL 641'-0"



KEY PLAN

OHIO POWER COMPANY

MITCHELL PLANT

CRESAP WEST VIRGINIA

GENERAL ARRANGEMENT

PLOT PLAN
MITCHELL SITE

UNIT:	DRAWING NUMBER:	REV:
12	5030	20B

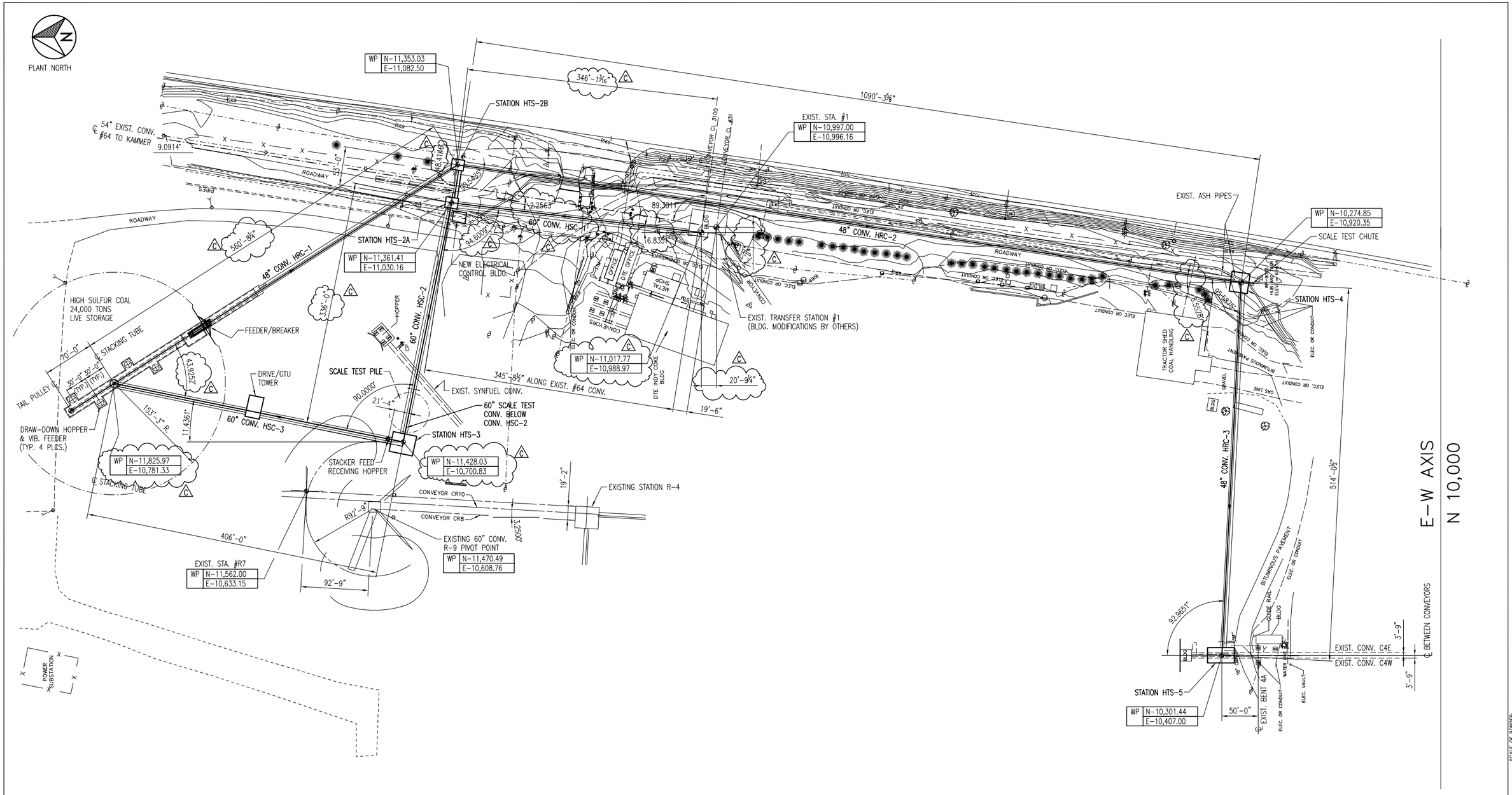
SCALE: 1"=200'-0"
MECHANICAL ENGINEERING
DR: —
CH: —
SUP: —
ENG: —
DATE: 8-31-67
APPROVED BY

AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

PLOT DATE: 11/23/2021
PLOT TIME: 1:29:59 PM
BY: Marc.Miravalles

CROSS REFS:



FOR REVIEW

L-003	DESIGN CRITERIA & GENERAL NOTES
L-002	FLOW DIAGRAM
L-000	TITLE SHEET & DRAWING LIST
DWG. NO.	REFERENCE DRAWING

AMERICAN ELECTRIC POWER
MITCHELL PLANT UNIT 1 & 2
CRESAP, WV.
COAL BLENDING SYSTEM
PARSONS E & C SPECIFICATION AEPM-O-SP-092603
AEP P.O. 849133X181

DATE	No.	REVISION	BY
9/2/05	C	REVISED PER SITE VISIT 8/16/05 FOR FINAL CLIENT REVIEW	JLB
8/4/05	B	REVISED LAYOUT PER SITE VISIT	JLB
7/18/01	A	ISSUED FOR CLIENT REVIEW	JLB

JOB NO. 05-7680

RECORD	DATE
TO APPROVAL	7/18/01
TO SHOP	
TO FIELD	
DWN. BY: GLS	7/25/05
CHK. BY: CJS	7/26/05
APP. BY:	

DEARBORN MID-WEST CONVEYOR CO.

PLOT PLAN

MITCHELL PLANT UNITS 1 & 2 – COAL BLENDING SYSTEM

SCALE 1"=60'-0" | DWG. NO. L-001 | REV. NO. C

FILE NAME: G:\0521\L-001.dwg

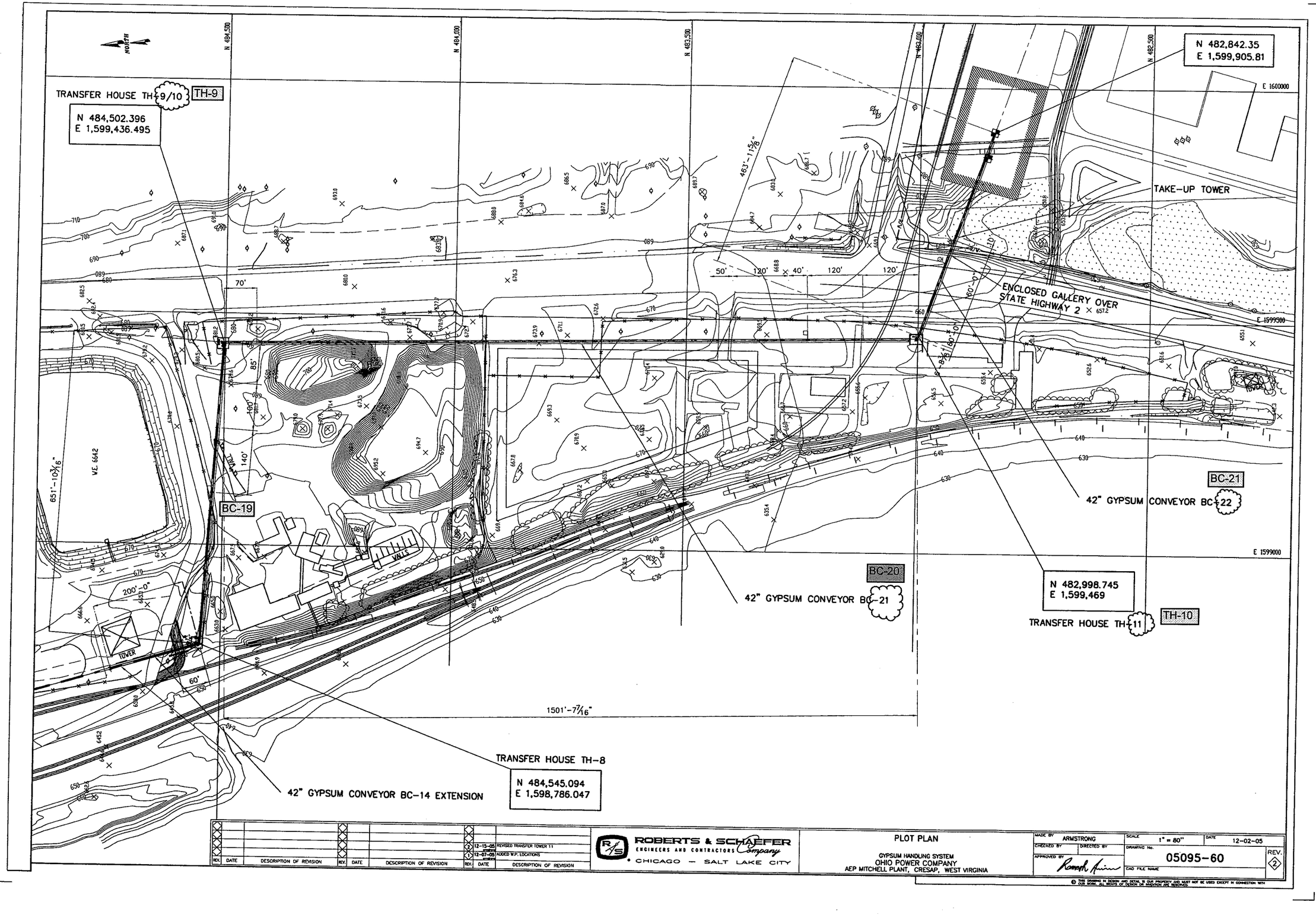
PLOTTED: (JLB) 02-SEP-2005 13:01

PLOT SCALE:

SCALE OF BORDER:

PLOT DATE & TIME:

C.A.D. No.: DWG



REV.	DATE	DESCRIPTION OF REVISION
2	12-15-05	REVISED TRANSFER TOWER 11
1	12-07-05	ADDED W.P. LOCATIONS

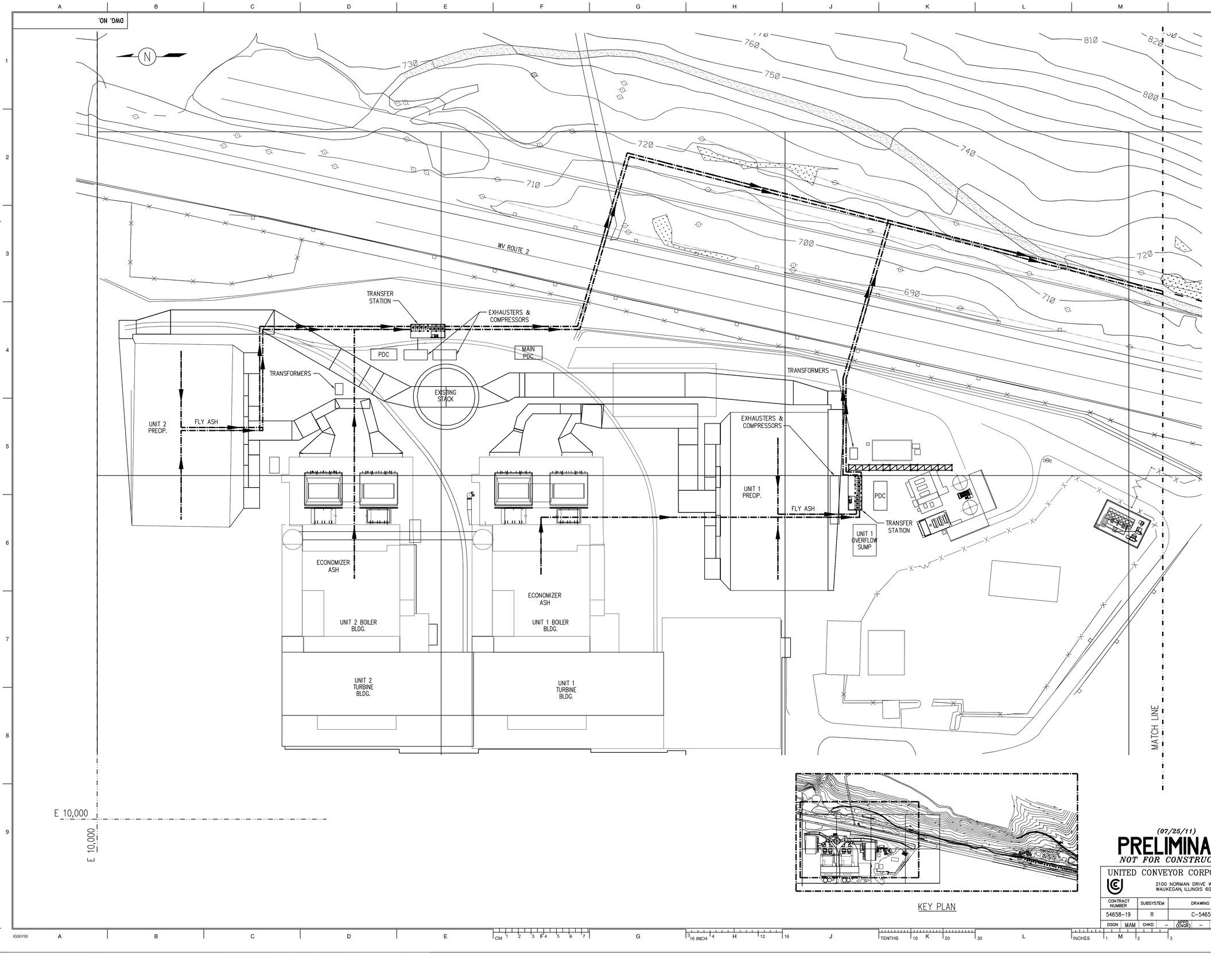
ROBERTS & SCHAEFER COMPANY
ENGINEERS AND CONTRACTORS
CHICAGO — SALT LAKE CITY

PLOT PLAN

GYPSUM HANDLING SYSTEM
OHIO POWER COMPANY
AEP MITCHELL PLANT, CRESAP, WEST VIRGINIA

MADE BY: ARMSTRONG	SCALE: 1" = 80"	DATE: 12-02-05	
CHECKED BY	DIRECTED BY	DRAWING No. 05095-60	REV. 2
APPROVED BY: Kenneth Armstrong	CAD FILE NAME		

DWG. NO.



KEY PLAN

GENERAL NOTES

REFERENCE DRAWINGS

07/25/11	A	ISSUED FOR CONCEPTUAL REVIEW	TMW

REVISIONS

OHIO POWER COMPANY

MITCHELL PLANT

CRESAP WEST VIRGINIA

DRY FLY ASH CONVERSION UNIT 1 & 2 FLY ASH REMOVAL SYSTEM SITE PLAN

DWG. NO.

(07/25/11)

PRELIMINARY

NOT FOR CONSTRUCTION

SCALE: 1/32"=1'-0"	MECHANICAL ENGINEERING DIVISION
DR: MAM	APPROVED BY:
CH:	
ENGR:	
PROJ ENGR:	
DATE: 7/23/2011	

UNITED CONVEYOR CORPORATION
2100 NORMAN DRIVE WEST
WAUKEGAN, ILLINOIS 60085

CONTRACT NUMBER	SUBSYSTEM	DRAWING NUMBER
54658-19	R	C-54658-004

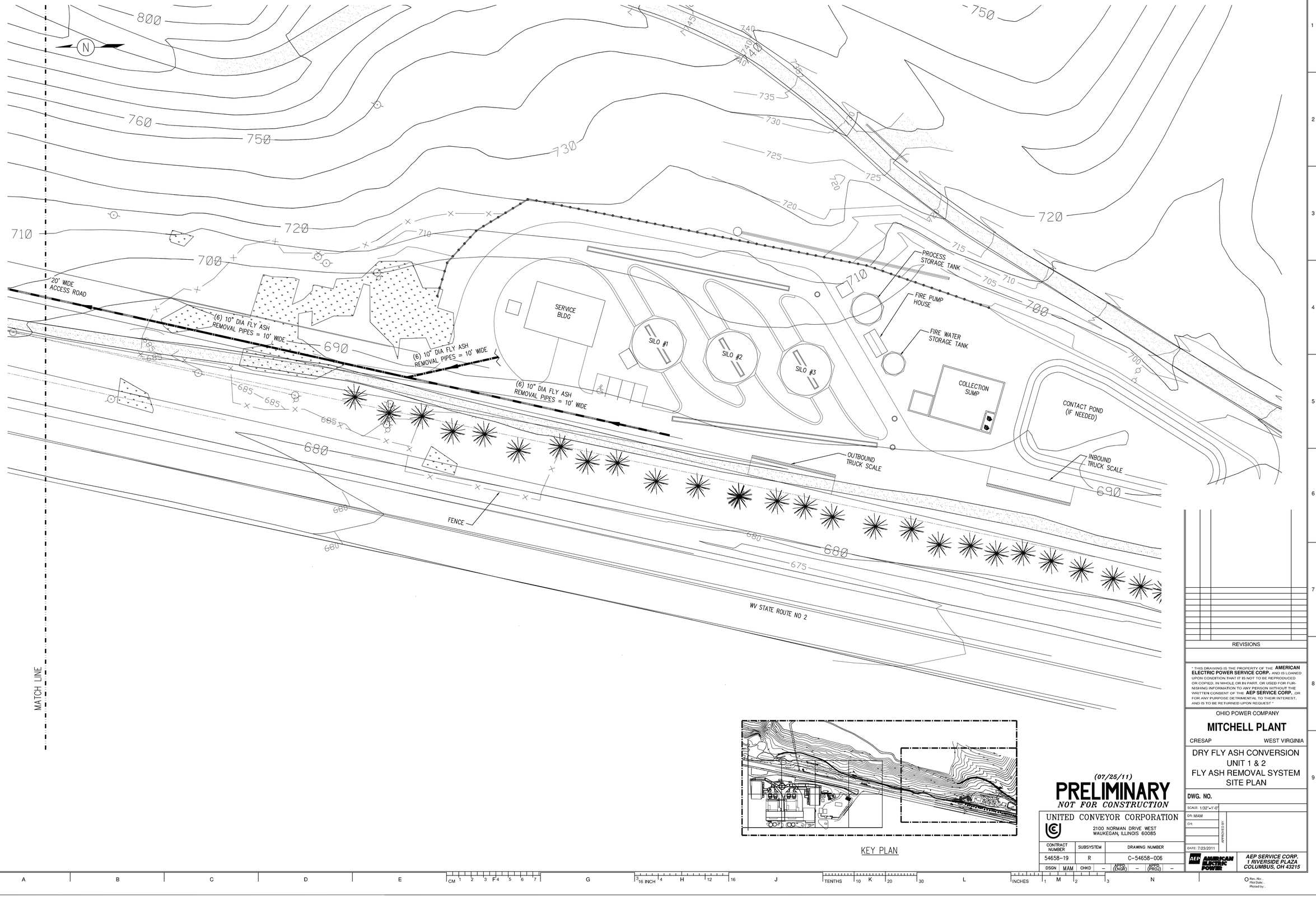
DSGN	MAM	CHKD	–	APPD (ENGR)	–	APPD (PROJ)	–

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

Rev. No: .
Plot Date: .
Plotted by: .

IGS0700

DWG. NO.



KEY PLAN

(07/25/11)

PRELIMINARY

NOT FOR CONSTRUCTION

REVISIONS

OHIO POWER COMPANY

MITCHELL PLANT

CRESAP — WEST VIRGINIA

DRY FLY ASH CONVERSION
UNIT 1 & 2
FLY ASH REMOVAL SYSTEM
SITE PLAN

DWG. NO.

SCALE: 1/32"=1'-0"

DR: MAM

CH:

DATE: 7/23/2011

APPROVED BY

UNITED CONVEYOR CORPORATION
2100 NORMAN DRIVE WEST
WAUKEGAN, ILLINOIS 60085

CONTRACT NUMBER	SUBSYSTEM	DRAWING NUMBER
54658-19	R	C-54658-006

DSGN	MAM	CHKD	–	APPD (ENGR)	–	APPD (PROD)	–

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

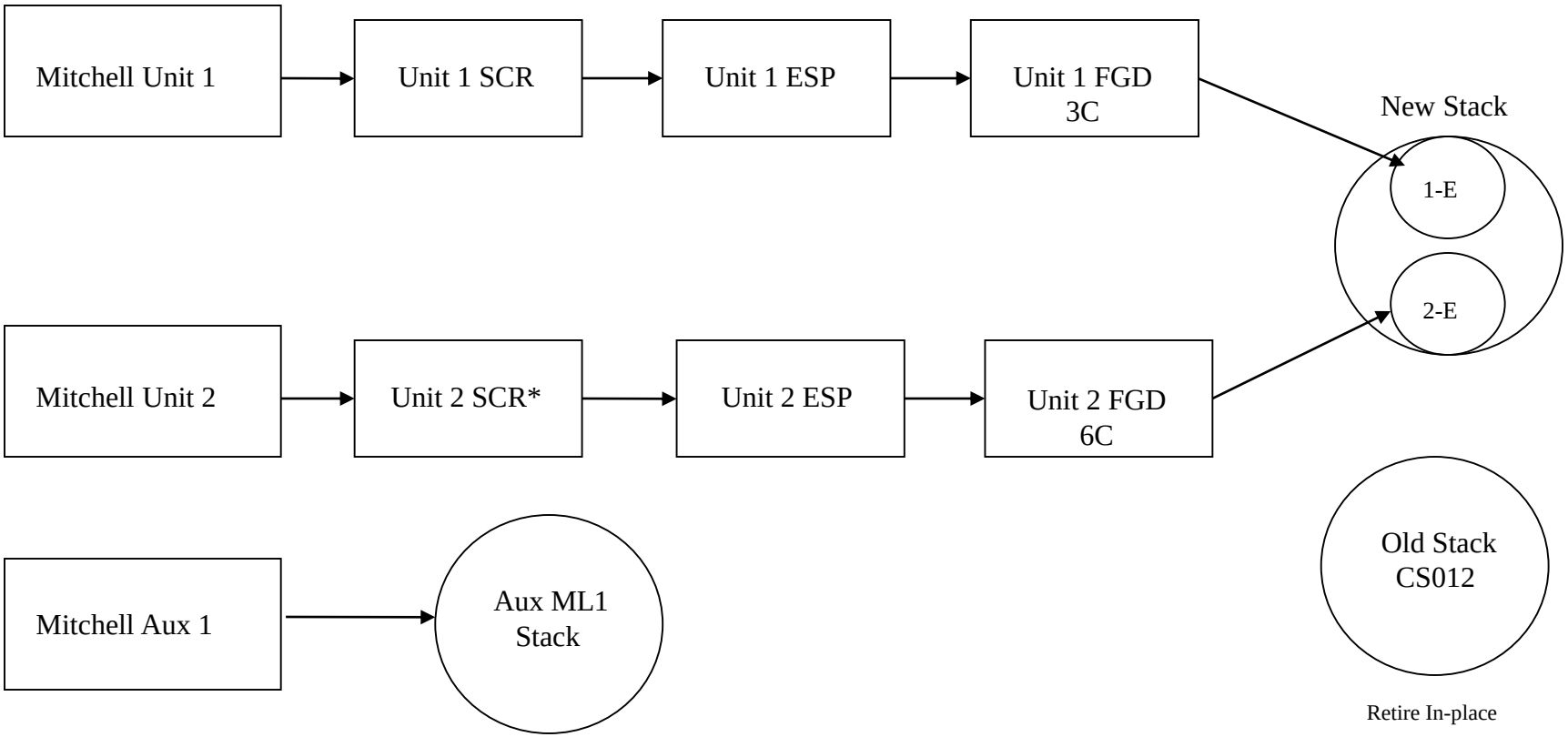
Rev. No: –
Plot Date: –
Plotted by: –

IGS0700

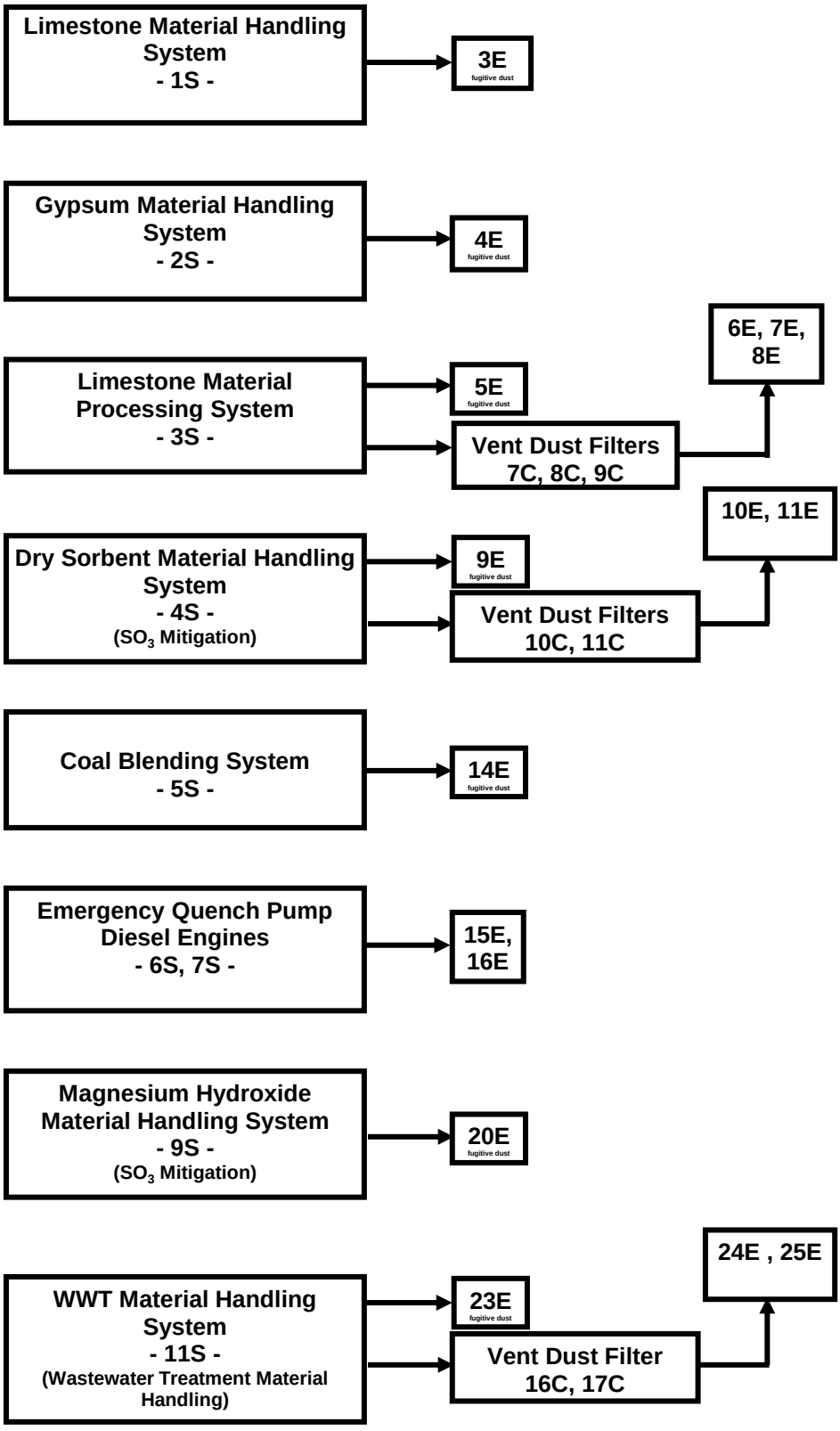
Attachment C

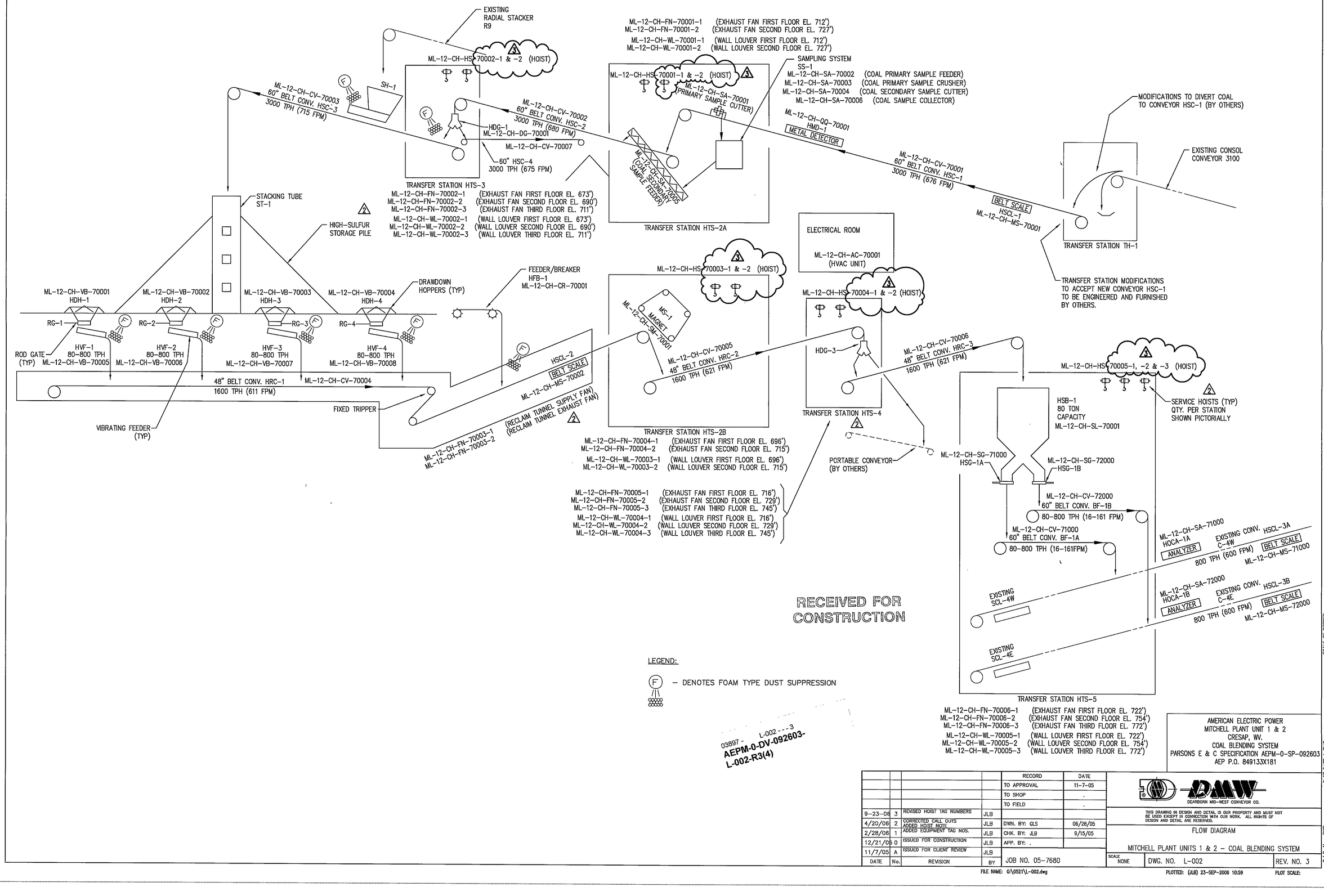
Process Flow Diagrams

Flow Diagram:
Steam Generator and Associated Pollution Control Equipment



Process Flow Diagrams





RECEIVED FOR CONSTRUCTION

LEGEND:

(F) – DENOTES FOAM TYPE DUST SUPPRESSION

03897 - L-002 - - - 3
AEPM-0-DV-092603-
L-002-R3(4)

AMERICAN ELECTRIC POWER
MITCHELL PLANT UNIT 1 & 2
CRESAP, WV.
COAL BLENDING SYSTEM
PARSONS E & C SPECIFICATION AEPM-0-SP-092603
AEP P.O. 849133X181

DATE	No.	REVISION	BY
9-23-06	3	REVISED HOIST TAG NUMBERS	JLB
4/20/06	2	CORRECTED CALL OUTS ADDED HOIST NOTE	JLB
2/28/06	1	ADDED EQUIPMENT TAG NOS.	JLB
12/21/05	0	ISSUED FOR CONSTRUCTION	JLB
11/7/05	A	ISSUED FOR CLIENT REVIEW	JLB

RECORD	DATE
TO APPROVAL	11-7-05
TO SHOP	.
TO FIELD	.
DWN. BY: GLS	06/28/05
CHK. BY: JLB	9/15/05
APP. BY: .	

JOB NO. 05-7680

DEARBORN MID-WEST CONVEYOR CO.

FLOW DIAGRAM

MITCHELL PLANT UNITS 1 & 2 – COAL BLENDING SYSTEM

SCALE: NONE | DWG. NO. L-002 | REV. NO. 3

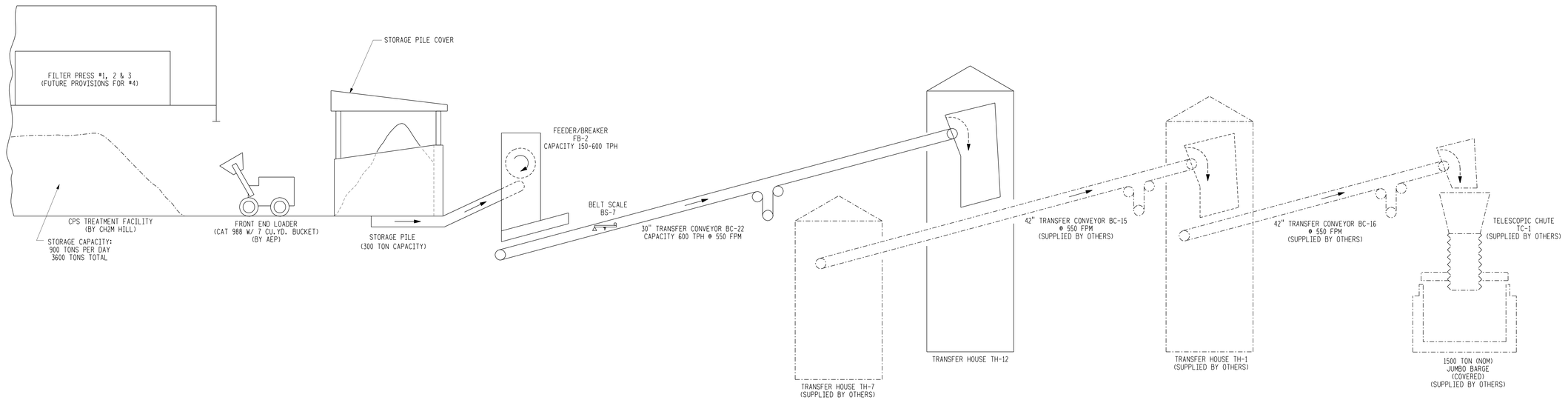
FILE NAME: G:\0521\L-002.dwg

PLOTTED: (JLB) 23-SEP-2006 10:59

PLOT SCALE:

SCALE OF BORDER: . PLOT DATE & TIME: . C.A.D. No.: DWG

DWG. NO. AEPM-12-SK-ZU-302-004



REVISED STORAGE PILE COVER
ISSUED FOR PERMITTING

REV	DATE	DRAWN	CHECKED	LEAD DESIGNER	ENGINEER/ TECH SPEC	LEAD DISC ENGINEER	PROJ. ENGR MANAGER	PROJECT MANAGER
B	01/20/06	CH				TDH	SGW	JFW	CWS
A	12/22/05	MT				TDH	SGW	JFW	CWS

ISSUED FOR PERMITTING

DATE	NO.	DESCRIPTION	APPD.

REVISIONS

PARSONS E&C

PRELIMINARY STATUS LDE SG WAINWRIGHT	DATE 12-22-05	REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
APPROVED STATUS LDE	DATE	REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.

ORIGINATING PERSONNEL	PROFESSIONAL ENGINEER'S SEAL
DRAWN BY MT	
CHECKED BY	
LEAD DESIGNER CC HAGEMEYER	
ENGINEER/TECH SPECIALIST T HAUSCHILD	
PROJECT ENGINEERING MANAGER JF WAGNER	
PROJECT MANAGER CW SAMUELSON	ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF PE:_____ STATE:_____ LIC. NO.:_____ DATE:_____

OHIO POWER COMPANY

MITCHELL PLANT

CRESAP WEST VIRGINIA

FLOW DIAGRAM
CHLORIDE PURGE STREAM
FILTER CAKE HANDLING

DWG. NO. AEPM-12-SK-QW-302-001-B

SCALE: NONE	
DRI JG	
CHI	
	APPROVED BY
DATE:	

DOCUMENT PREPARED BY PARSONS E&C

AEP AMERICAN ELECTRIC POWER

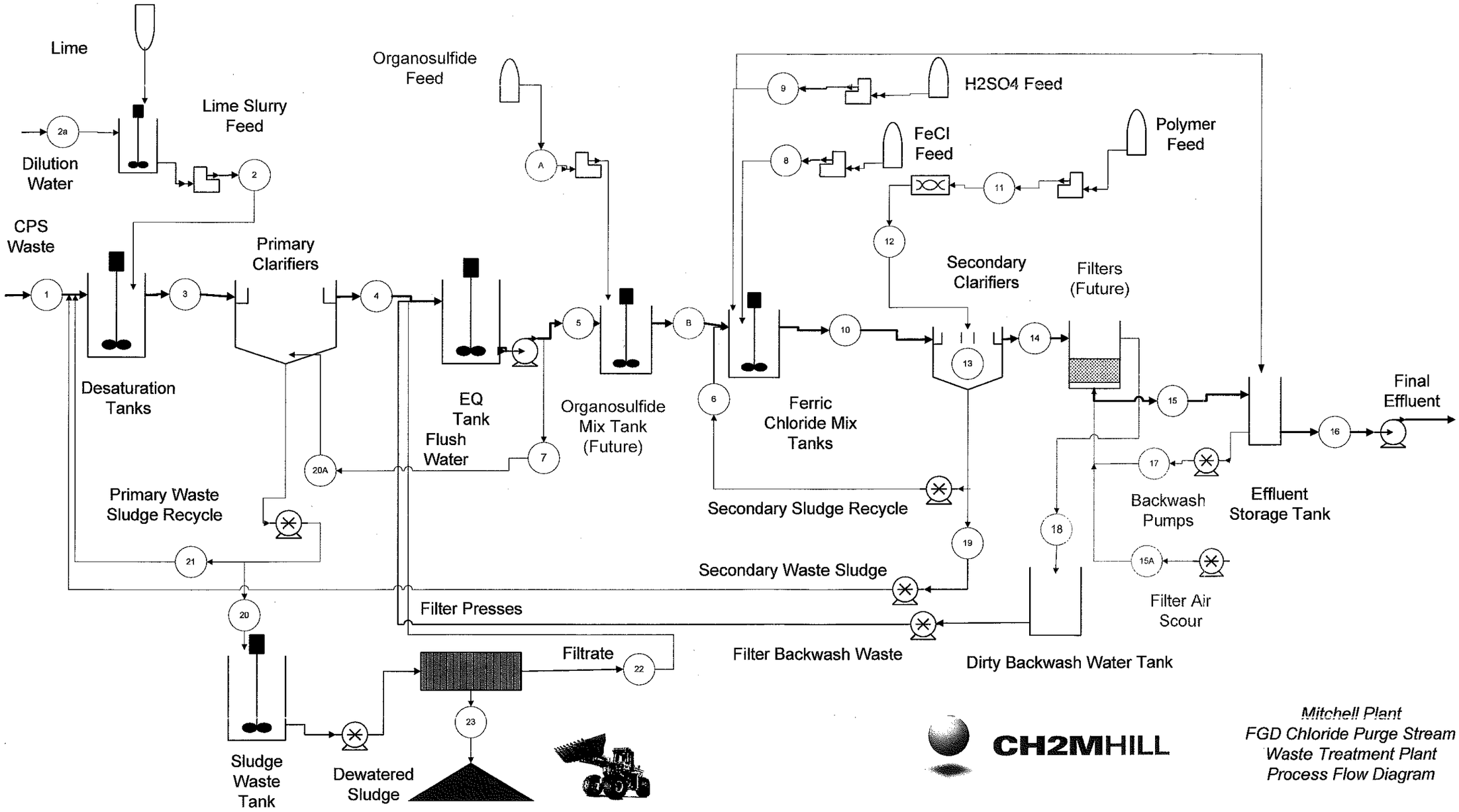
AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

IGS0694

PE&C-FILE: aepm02d.esd
PE&C-DATE: 04-Mar-04 07:55

SYSTEM DATE-DD-MMM-YYYY
SYSTEM TIME-HOUR:MINUTE

Attachment 1. FGD CPS Wastewater Treatment System Process Flow Diagram



CH2MHILL

Mitchell Plant
FGD Chloride Purge Stream
Waste Treatment Plant
Process Flow Diagram

DWG. NO.

(4) EXISTING FLY ASH INTAKE
(1) EXISTING AIR INTAKES VALVE
8"
UNIT 1 ECONOMIZER HOPPERS
8"
(96) EXISTING FLY ASH DIFFUSER FEEDER INTAKE
9"
9" N
10" N
UNIT 1 PRECIPITATOR BOX NO. 1
(16) EXISTING AIR INTAKES VALVE
(1) BRANCH LINE ISOLATION GATE
EIP NEW
10" N
(18) BRANCH LINE ISOLATION GATE
UNIT 1 PRECIPITATOR BOX NO. 2
(16) EXISTING MANUAL BUTTERFLY ISOLATION VALVE
SILENCER
(3) INLET FROM ATMOSPHERE
(3) FLY ASH CONVEYING COMPRESSORS (2 WORKING AND 1 SPARE)
UNIT 1 FLY ASH CONVEYING COMPRESSORS
(5) FLY ASH CONVEYING COMPRESSOR ISOLATION VALVE
(4) SYSTEM RELIEF VALVE
10" STD WT
TO MECHANICAL EXHAUSTER SEE DRAWING M-54658-005
FILTER/ SEPARATOR
TS-1A
UNIT 1 BOX 1 TRANSFER STATION A
TS-1B (spare)
UNIT 1 BOX 1 TRANSFER STATION B
(4) TRANSFER STATION CROSSOVER ISOLATION VALVE
4" STD WT
8"
(4) NUVA FEEDER VENT VALVE
TO NUVA FEEDER PRESSURIZING VALVES
NUVA FEEDER®
12"
12" STD WT
10" SCH 40
(4) CONVEYING LINE CROSSOVER VALVE
TO FLY ASH SILO SYSTEM SEE DRAWING M-54658-005
UNIT 1 BOX 2 TRANSFER STATION C
TS-1C
UNIT 1 BOX 2 TRANSFER STATION D
TS-1D (spare)
TO ALL UCC SUPPLIED COMPRESSED AIR USERS IN THE FLY ASH REMOVAL SYSTEM AREA
EXISTING PLANT COMPRESSED AIR SOURCE

EMISSIONS SKETCH 1

FOR GENERAL NOTES AND REFERENCES SEE DRAWING M-54658-001

GENERAL NOTES

REFERENCE DRAWINGS

DATE	REV.	DESCRIPTION	BY
07/26/11	A	ISSUED FOR CONCEPTUAL REVIEW	TMW

REVISIONS

OHIO POWER COMPANY
MITCHELL PLANT
CRESAP WEST VIRGINIA

DRY FLY ASH CONVERSION
UNIT 1 FLY ASH REMOVAL
KEY PROCESS DIAGRAM

DWG. NO.

(07/26/11)
PRELIMINARY
NOT FOR CONSTRUCTION

UNITED CONVEYOR CORPORATION
2100 NORMAN DRIVE WEST
WAUKEGAN, ILLINOIS 60085

CONTRACT NUMBER	SUBSYSTEM	DRAWING NUMBER
54658-19	-	M-54658-003

DSGN	MRJ	CHKD	TMW	APPD (ENGR)	TMH	APPD (PROD)	TMW

SCALE: NONE
MECHANICAL ENGINEERING DIVISION
APPROVED

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

IGS0700

DWG. NO.

(4) EXISTING FLY ASH INTAKE
(1) EXISTING AIR INTAKES VALVE
8"
UNIT 2 ECONOMIZER HOPPERS
8"
(96) EXISTING FLY ASH DIFFUSER FEEDER INTAKE
9"
9" N
10" N
10" N
UNIT 2 PRECIPITATOR BOX NO. 3
(16) EXISTING AIR INTAKES VALVE
(1) BRANCH LINE ISOLATION GATE
EIP NEW
(18) BRANCH LINE ISOLATION GATE
12" N
(16) EXISTING MANUAL BUTTERFLY ISOLATION VALVE
UNIT 2 PRECIPITATOR BOX NO. 4
SILENCER
INLET FROM ATMOSPHERE (TYP)
(3) FLY ASH CONVEYING COMPRESSORS (2 WORKING AND 1 SPARE)
UNIT 2 FLY ASH CONVEYING COMPRESSORS
(5) FLY ASH CONVEYING COMPRESSOR ISOLATION VALVE

(4) SYSTEM RELIEF VALVE
12" STD WT
TO MECHANICAL EXHAUSTER SEE DRAWING M-54658-005
FILTER/ SEPARATOR
TS-2A
UNIT 2 BOX 3 TRANSFER STATION A
TS-2B (spare)
UNIT 2 BOX 3 TRANSFER STATION B
(4) TRANSFER STATION CROSSOVER ISOLATION VALVE
4" STD WT
(4) NUVA FEEDER VENT VALVE
TO NUVA FEEDER PRESSURIZING VALVES
NUVA FEEDER®
(4) PRESSURE CONVEYING LINE CROSSOVER VALVE
10" SCH 40
TO FLY ASH SILO SYSTEM SEE DRAWING M-54658-005
TS-2C
UNIT 2 BOX 4 TRANSFER STATION C
TS-2D (spare)
UNIT 2 BOX 4 TRANSFER STATION D
TO ALL UCC SUPPLIED COMPRESSED AIR USERS IN THE FLY ASH REMOVAL SYSTEM AREA
EXISTING PLANT COMPRESSED AIR SOURCE

EMISSIONS SKETCH 2

(07/26/11)
PRELIMINARY
NOT FOR CONSTRUCTION

FOR GENERAL NOTES AND REFERENCES SEE DRAWING M-54658-001

GENERAL NOTES

REFERENCE DRAWINGS

7/26/11	A	ISSUED FOR CONCEPTUAL REVIEW	TMW

REVISIONS

OHIO POWER COMPANY
MITCHELL PLANT
CRESAP WEST VIRGINIA

DRY FLY ASH CONVERSION
UNIT 2 FLY ASH REMOVAL
KEY PROCESS DIAGRAM

DWG. NO.

SCALE: NONE	MECHANICAL ENGINEERING DIVISION
DES	
CHK	
ENGR	
PROJ ENGR	
DATE	

UNITED CONVEYOR CORPORATION
2100 NORMAN DRIVE WEST
WAUKEGAN, ILLINOIS 60085

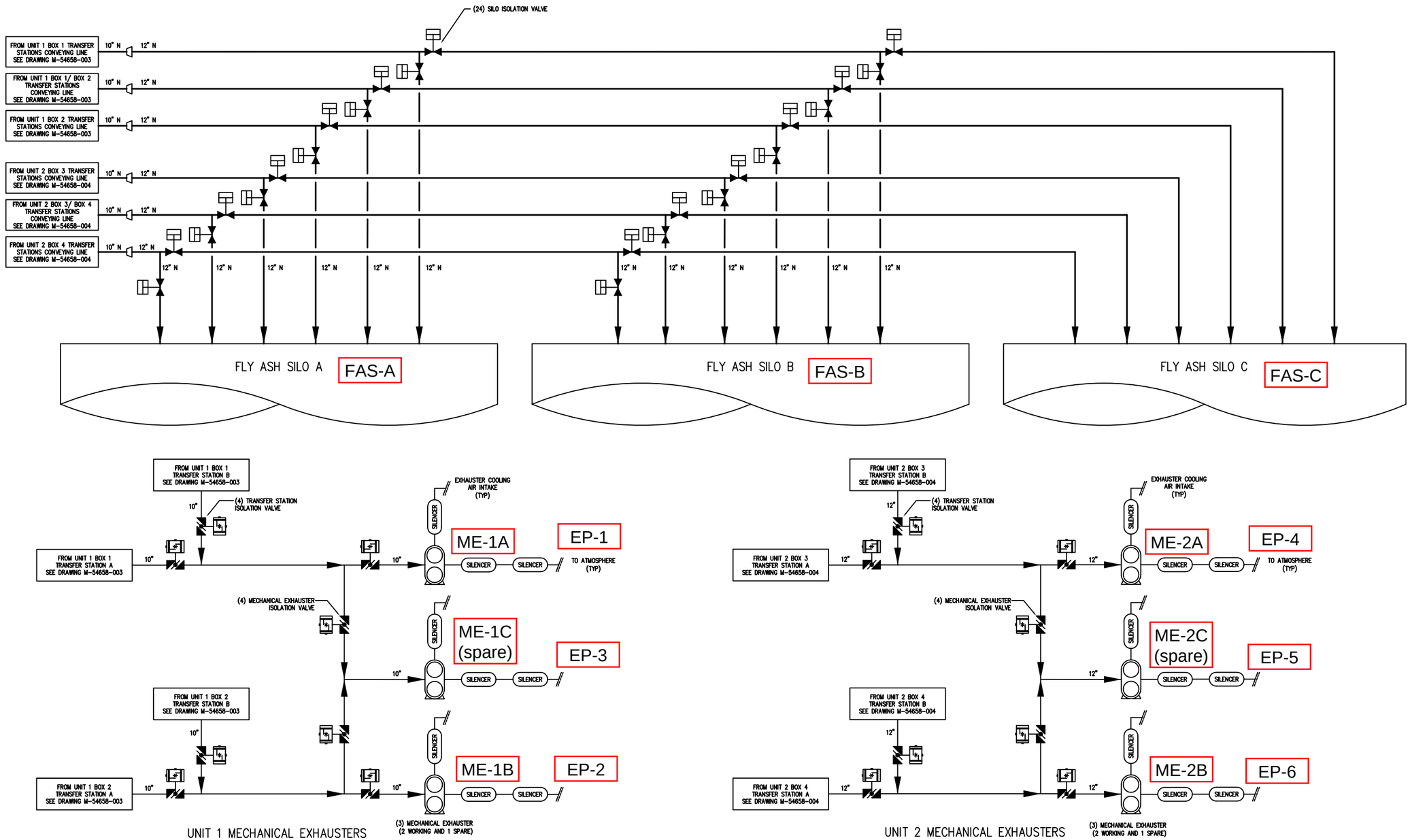
CONTRACT NUMBER	SUBSYSTEM	DRAWING NUMBER
54658-19	–	M-54658-004

DSGN	MRJ	CHKD	TMW	APPD (ENGR)	TMH	APPD (PROJ)	TMW

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

IGS0700

DWG. NO.



LEGEND

EP EMISSION POINT
F FUGITIVE EMISSION POINT

EMISSIONS SKETCH 3

FOR GENERAL NOTES AND REFERENCES SEE DRAWING M-54658-001

GENERAL NOTES

REFERENCE DRAWINGS

07/26/11	A	ISSUED FOR CONCEPTUAL REVIEW

REVISIONS

OHIO POWER COMPANY

MITCHELL PLANT

CRESAP WEST VIRGINIA

DRY FLY ASH CONVERSION
UNITS 1 & 2
FLY ASH REMOVAL
KEY PROCESS DIAGRAM

(07/26/11)
PRELIMINARY
NOT FOR CONSTRUCTION

DWG. NO.

SCALE: NONE | MECHANICAL ENGINEERING DIVISION

UNITED CONVEYOR CORPORATION
2100 NORMAN DRIVE WEST
WAUKEGAN, ILLINOIS 60085

CONTRACT NUMBER	SUBSYSTEM	DRAWING NUMBER
54658-19	-	M-54658-005

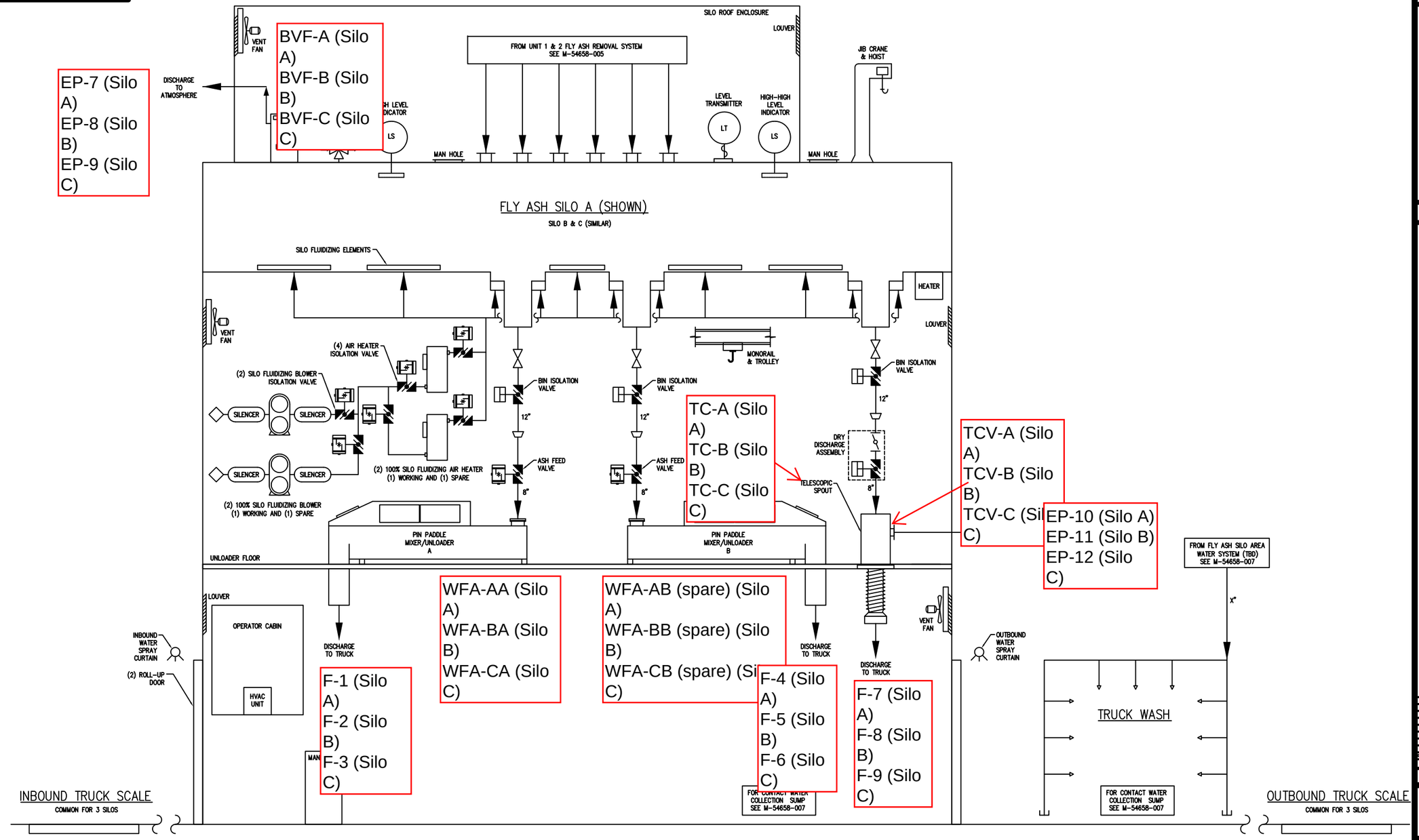
DSGN	MRJ	CHKD	TMW	APVD (ENGR)	TMH	APVD (PROJ)	TMW

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

DWG. NO.

EP-7 (Silo A)
EP-8 (Silo B)
EP-9 (Silo C)

BVF-A (Silo A)
BVF-B (Silo B)
BVF-C (Silo C)



TC-A (Silo A)
TC-B (Silo B)
TC-C (Silo C)

TCV-A (Silo A)
TCV-B (Silo B)
TCV-C (Silo C)

EP-10 (Silo A)
EP-11 (Silo B)
EP-12 (Silo C)

WFA-AA (Silo A)
WFA-BA (Silo B)
WFA-CA (Silo C)

WFA-AB (spare) (Silo A)
WFA-BB (spare) (Silo B)
WFA-CB (spare) (Silo C)

F-1 (Silo A)
F-2 (Silo B)
F-3 (Silo C)

F-4 (Silo A)
F-5 (Silo B)
F-6 (Silo C)

F-7 (Silo A)
F-8 (Silo B)
F-9 (Silo C)

LEGEND

EP EMISSION POINT
F FUGITIVE EMISSION POINT

EMISSIONS SKETCH 4

GENERAL NOTES

REFERENCE DRAWINGS

DATE	BY	REVISIONS
07/26/11	A	ISSUED FOR CONCEPTUAL REVIEW — TMW

OHIO POWER COMPANY

MITCHELL PLANT

CRESAP WEST VIRGINIA

DRY FLY ASH CONVERSION
UNITS 1 & 2
FLY ASH SILO SYSTEM
KEY PROCESS DIAGRAM

DWG. NO.

(07/26/11)
PRELIMINARY
NOT FOR CONSTRUCTION

SCALE: NONE | MECHANICAL ENGINEERING DIVISION

UNITED CONVEYOR CORPORATION
2100 NORMAN DRIVE WEST
WAUKEGAN, ILLINOIS 60085

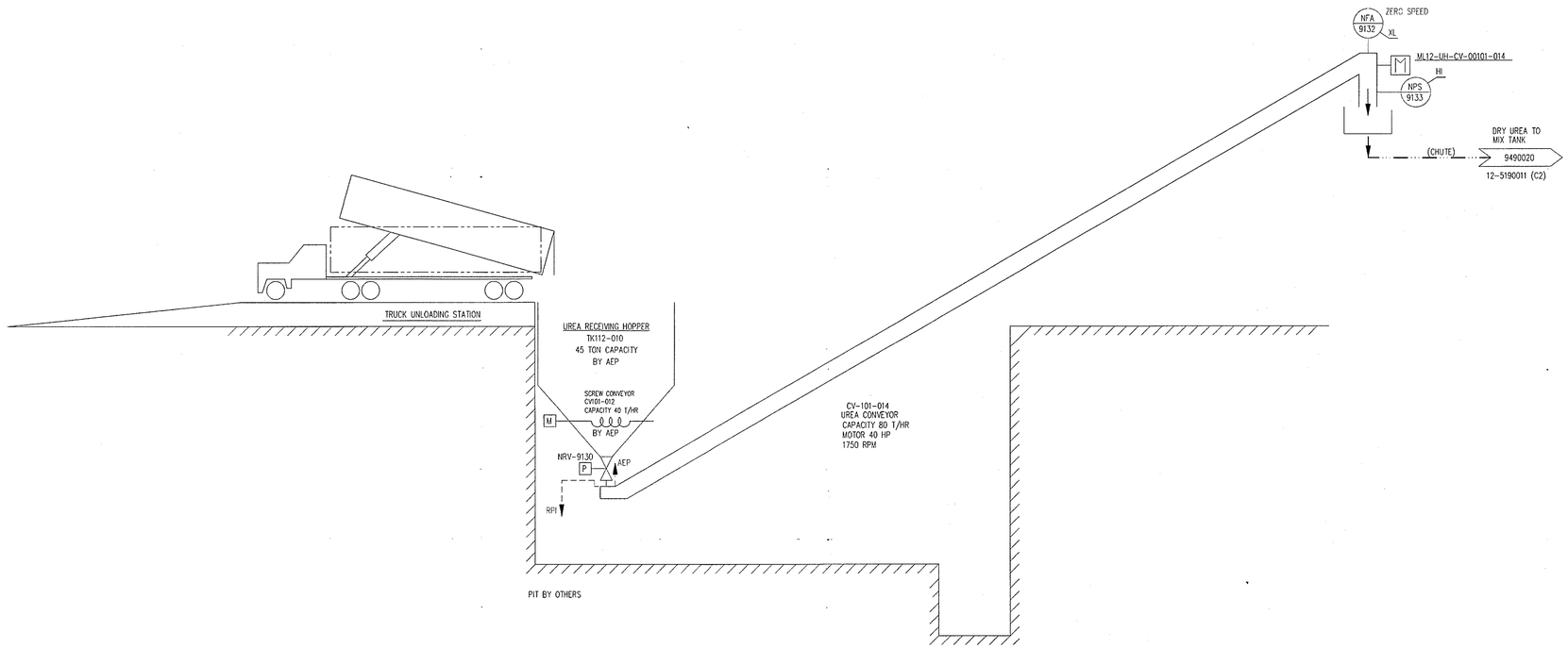
CONTRACT NUMBER	SUBSYSTEM	DRAWING NUMBER
54658-19	-	M-54658-006

DSGN	JAG	CHKD	TMW	APPD (CORP)	TMH	APPD (PROJ)	TMW

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

FOR GENERAL NOTES AND REFERENCES SEE DRAWING M-54658-001

DWG. NO. 100273-9490010



FARSONS E & C
ANTIOCH, PLANT

- V REVIEWED AND ACCEPTED
- REVIEWED AND ACCEPTED AS NOTED (RESUBMIT FOR RECORD)
- NOT ACCEPTED (RESUBMIT FOR REVIEW)
- FOR CERTIFICATION ONLY (REVIEW WAIVED)

THE REVIEW OF THIS SUBMITTAL IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION IN THE CONTRACT. THE SUBMITTAL VENDOR IS SOLELY RESPONSIBLE FOR: FULL CONFORMANCE WITH THE CONTRACT REQUIREMENTS; FOR DIMENSIONS TO BE CORRELATED AND/OR RELATED AUTO THE JOBSITE; FOR INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESS; FOR DESIGNS ORIGINATED BY FARSONS; FOR TECHNIQUES OF CONSTRUCTION AND; FOR COORDINATION OF THE WORK OF ALL TRADES. SUBMITTAL REVIEW DOES NOT CONSTITUTE A CHANGE ORDER AND DOES NOT ALTER ANY CONTRACT TERMS AND CONDITIONS.

DATE 9/1/06 BY

03158 - 12-5190010 - - - 1
AEPM-12-DV-094502-
12-5190010-R1(6)

NOTES:

1. DELETED
2. ALL TAG #'S PREFACED WITH ML12 UNLESS OTHERWISE SPECIFIED.

LEGEND

- STEAM
- AMMONIA VAPOR
- DRY UREA

NO.	BY	CHK	DATE	APP'D	DATE
04	JWL	RJ	03/14/05	CAE	05/20/05
03	JWL	BH	05/20/05	CAE	05/20/05
02	JWL	TN	04/30/05	CAE	05/01/05
01	JWL	TN	04/12/05	BB	04/12/05

ALTERATION

ISSUE FOR CONSTRUCTION
ISSUE FOR CONSTRUCTION
ISSUE FOR APPROVAL
ISSUE FOR CERTIFICATION

THIS PRINT IS THE PROPERTY OF RILEY POWER INC. AND IS NOT TO BE USED IN ANY WAY INJURIOUS TO ITS INTERESTS AND IS TO BE RETURNED UPON REQUEST.

WE ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGE DUE TO THE USE OF DESIGN ON THIS DRAWING OF ANYTHING NOT ACTUALLY FURNISHED BY US WHETHER SO SHOWN OR INDICATED HEREON, AND YOU ARE ALSO NOT RESPONSIBLE FOR THE DESIGN, INSTALLATION OR OPERATION OF ANY PART OF FOUNDATION OR SETTING OR ACCESSORY EQUIPMENT NOT ACTUALLY FURNISHED BY US.

"N" MATERIAL NOT FURNISHED BY
"Y" MATERIAL FURNISHED BY
RILEY POWER INC.

THIS DRAWING IS NOT APPROVED FOR CONSTRUCTION UNLESS CONTRACTUAL DATES AND SIGNATURE OF APPROVAL AND ACCEPTANCE APPEAR HEREON. YOU ARE TO CORRECT ANY ERRORS OR OMISSIONS PRIOR TO ACTUAL START OF WORK.

CLAYTON ERICKSON 05/20/05
RELEASED & APPROVED DATE

DRAWN JWL DATE 03/14/05
CHECKED TN DATE 03/15/05
APP'D RJ DATE 03/15/05

DO NOT SCALE
USE DIMENSIONS ONLY

SCALE NTS IN. = 1 FT.

ES W F ER

FUNCTIONAL REVIEW / APPROVAL

REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE

RILEY POWER INC.

PIPING AND INSTRUMENTATION DIAGRAM
DRY UREA UNLOADING
U2A SYSTEM
MITCHELL PLANT – UNIT #1 & 2
AMERICAN ELECTRIC POWER
CRESAP, WEST VIRGINIA

DWG. NO. 100273-9490010-04

DATE	NO.	DESCRIPTION	APPD.
	1	ISSUE FOR CONSTRUCTION	
	0	ISSUE FOR CONSTRUCTION	

REVISIONS

OHIO POWER COMPANY
MITCHELL PLANT
CRESAP WEST VIRGINIA

FLOW DIAGRAM
DRY UREA HANDLING

DWG. NO. 12-5190010 - 1

SCALE: none
DR:
CH:
DES:
SUPV:
ENGR:
DATE:

APPROVED BY

DOCUMENT PREPARED BY RILEY POWER INC.

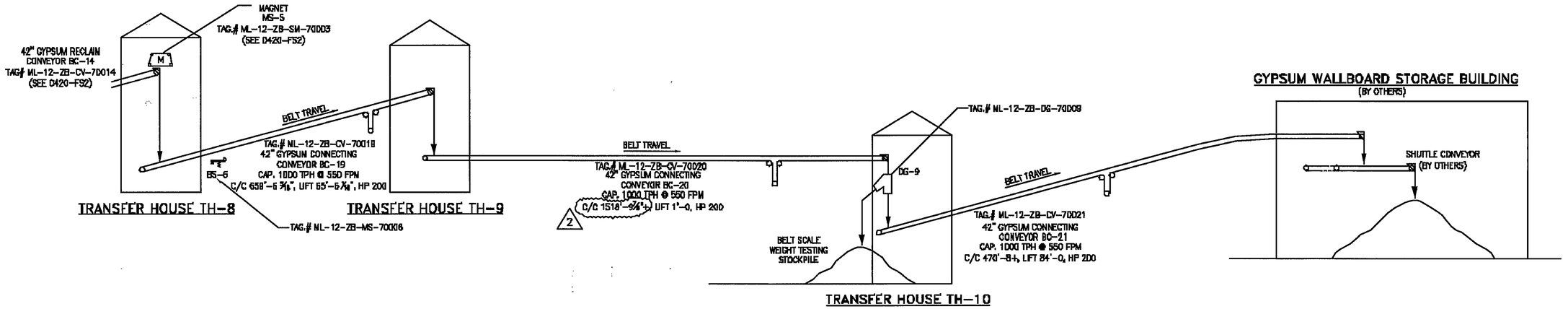
AEP AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

IGS0700

NOMENCLATURE

DG-*	DIVERTER GATE
MS-*	SELF CLEANING MAGNETIC SEPARATOR
BS-*	BELT SCALE
BC-#	BELT CONVEYOR



RECEIVED FOR CONSTRUCTION

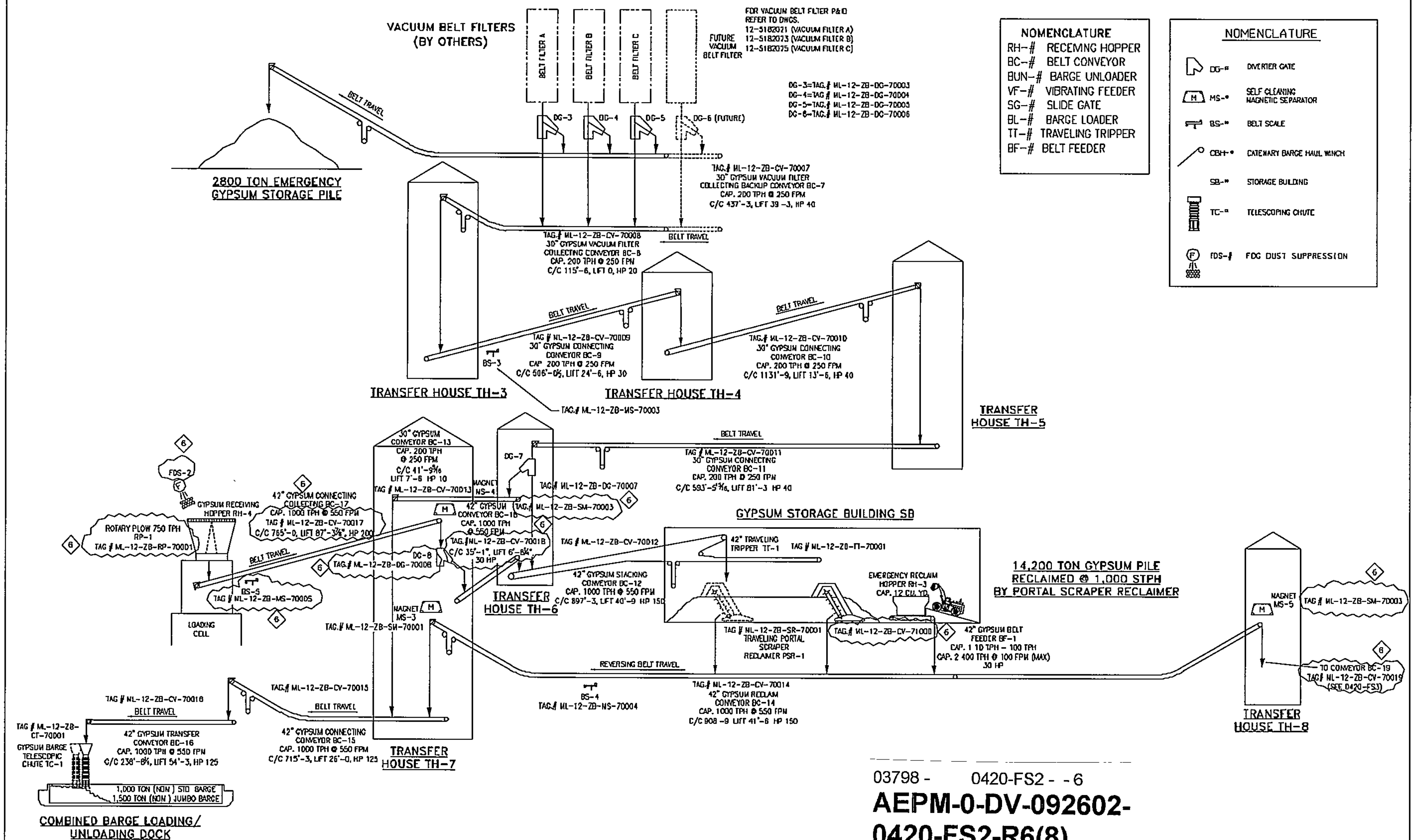
03868 - 0420-FS3 - - - 2
AEPM-0-DV-092604-0420-FS3-R2(3)

NO.	DATE	DESCRIPTION OF REVISION	NO.	DATE	DESCRIPTION OF REVISION	NO.	DATE	DESCRIPTION OF REVISION
						1	8/12/05	REVISED PER CUSTOMER'S COMMENTS
						2	8/25/05	REVISED PER AEP/PARSONS COMMENTS
						3	12-22-05	ISSUED FOR APPROVAL

ROBERTS & SCHAEFER Company
ENGINEERS AND CONTRACTORS
CHICAGO — SALT LAKE CITY

FLOW DIAGRAM
GYPSUM HANDLING SYSTEM
LIMESTONE & GYPSUM HANDLING SYSTEM
OHIO POWER COMPANY
AEP MITCHELL PLANT, UNITS 1 & 2, CRESAP, WEST VIRGINIA

MADE BY: A DYDO	SCALE: NONE	DATE: 12-27-05	
CHECKED BY: PJP	DRAFTED BY: B TURNEY	DRAWING No: 0420-FS3	REV. 2
APPROVED BY:		CAD FILE NAME: 0420-FS3	


VACUUM BELT FILTERS
(BY OTHERS)
BELT FILTER A
BELT FILTER B
BELT FILTER C
FUTURE VACUUM BELT FILTER
FOR VACUUM BELT FILTER P&ID REFER TO DWGS.
12-5182021 (VACUUM FILTER A)
12-5182023 (VACUUM FILTER B)
12-5182025 (VACUUM FILTER C)
DG-3=TAG.# ML-12-ZB-DG-70003
DG-4=TAG.# ML-12-ZB-DG-70004
DG-5=TAG.# ML-12-ZB-DG-70005
DG-6=TAG.# ML-12-ZB-DG-70006
NOMENCLATURE
RH-# RECEIVING HOPPER
BC-# BELT CONVEYOR
BUN-# BARGE UNLOADER
VF-# VIBRATING FEEDER
SG-# SLIDE GATE
BL-# BARGE LOADER
TT-# TRAVELING TRIPPER
BF-# BELT FEEDER
NOMENCLATURE
DG-# DIVERTER GATE
MS-# SELF CLEANING MAGNETIC SEPARATOR
BS-# BELT SCALE
CBH-# CATENARY BARGE HAUL WINCH
SB-# STORAGE BUILDING
TC-# TELESCOPING CHUTE
FDS-# FOG DUST SUPPRESSION
2800 TON EMERGENCY GYPSUM STORAGE PILE
BELT TRAVEL
DG-3
DG-4
DG-5
DG-6 (FUTURE)
TAG.# ML-12-ZB-CV-70007
30" GYPSUM VACUUM FILTER COLLECTING BACKUP CONVEYOR BC-7
CAP. 200 TPH @ 250 FPM
C/C 437'-3, LIFT 39 -3, HP 40
TAG.# ML-12-ZB-CV-70008
30" GYPSUM VACUUM FILTER COLLECTING CONVEYOR BC-8
CAP. 200 TPH @ 250 FPM
C/C 115'-6, LIFT 0, HP 20
TAG.# ML-12-ZB-CV-70009
30" GYPSUM CONNECTING CONVEYOR BC-9
CAP 200 TPH @ 250 FPM
C/C 506'-0½, LIFT 24'-6, HP 30
BS-3
TAG.# ML-12-ZB-MS-70003
TAG.# ML-12-ZB-CV-70010
30" GYPSUM CONNECTING CONVEYOR BC-10
CAP. 200 TPH @ 250 FPM
C/C 1131'-9, LIFT 13'-6, HP 40
TRANSFER HOUSE TH-3
TRANSFER HOUSE TH-4
TRANSFER HOUSE TH-5
TAG.# ML-12-ZB-CV-70011
30" GYPSUM CONNECTING CONVEYOR BC-11
CAP. 200 TPH @ 250 FPM
C/C 593'-5⅜, LIFT 81'-3 HP 40
30" GYPSUM CONVEYOR BC-13
CAP. 200 TPH @ 250 FPM
C/C 41'-9⅜
LIFT 7'-8 HP 10
TAG.# ML-12-ZB-CV-70013
DG-7
TAG.# ML-12-ZB-DG-70007
TAG.# ML-12-ZB-SM-70003
FDS-2
GYPSUM RECEIVING HOPPER RH-4
42" GYPSUM CONNECTING COLLECTING BC-17
CAP. 1000 TPH @ 550 FPM
TAG.# ML-12-ZB-CV-70017
C/C 765'-0, LIFT 87'-3⅞", HP 200
42" GYPSUM CONVEYOR BC-18
CAP. 1000 TPH @ 550 FPM
TAG.# ML-12-ZB-CV-70018
C/C 35'-1", LIFT 6'-8¼"
30 HP
ROTARY PLOW 750 TPH RP-1
TAG.# ML-12-ZB-RP-70001
DG-8
TAG.# ML-12-ZB-DG-70008
BS-5
TAG.# ML-12-ZB-MS-70005
LOADING CELL
MAGNET MS-3
TAG.# ML-12-ZB-SM-70001
TRANSFER HOUSE TH-6
GYPSUM STORAGE BUILDING SB
TAG.# ML-12-ZB-CV-70012
42" GYPSUM STACKING CONVEYOR BC-12
CAP. 1000 TPH @ 550 FPM
C/C 897'-3, LIFT 40'-9 HP 150
42" TRAVELING TRIPPER TT-1
TAG.# ML-12-ZB-TT-70001
EMERGENCY RECLAIM HOPPER RH-3
CAP. 12 CU. YD.
14,200 TON GYPSUM PILE
RECLAIMED @ 1,000 STPH
BY PORTAL SCRAPER RECLAIMER
TAG.# ML-12-ZB-SR-70001
TRAVELING PORTAL SCRAPER RECLAIMER PSR-1
TAG.# ML-12-ZB-CV-71000
42" GYPSUM BELT FEEDER BF-1
CAP. 1 10 TPH - 100 TPH
CAP. 2 400 TPH @ 100 FPM (MAX)
30 HP
MAGNET MS-5
TAG.# ML-12-ZB-SM-70003
TO CONVEYOR BC-19
TAG.# ML-12-ZB-CV-70019
(SEE 0420-FS3)
TRANSFER HOUSE TH-8
REVERSING BELT TRAVEL
TAG.# ML-12-ZB-CV-70014
42" GYPSUM RECLAIM CONVEYOR BC-14
CAP. 1000 TPH @ 550 FPM
C/C 908 -9 LIFT 41'-6 HP 150
BS-4
TAG.# ML-12-ZB-MS-70004
TAG.# ML-12-ZB-CV-70015
42" GYPSUM CONNECTING CONVEYOR BC-15
CAP. 1000 TPH @ 550 FPM
C/C 715'-3, LIFT 26'-0, HP 125
TRANSFER HOUSE TH-7
TAG.# ML-12-ZB-CV-70016
BELT TRAVEL
TAG.# ML-12-ZB-CT-70001
GYPSUM BARGE TELESCOPIC CHUTE TC-1
42" GYPSUM TRANSFER CONVEYOR BC-16
CAP. 1000 TPH @ 550 FPM
C/C 238'-8¾, LIFT 54'-3, HP 125
1,000 TON (NOM) STD BARGE
1,500 TON (NOM) JUMBO BARGE
COMBINED BARGE LOADING/ UNLOADING DOCK

RECEIVED FOR CONSTRUCTION

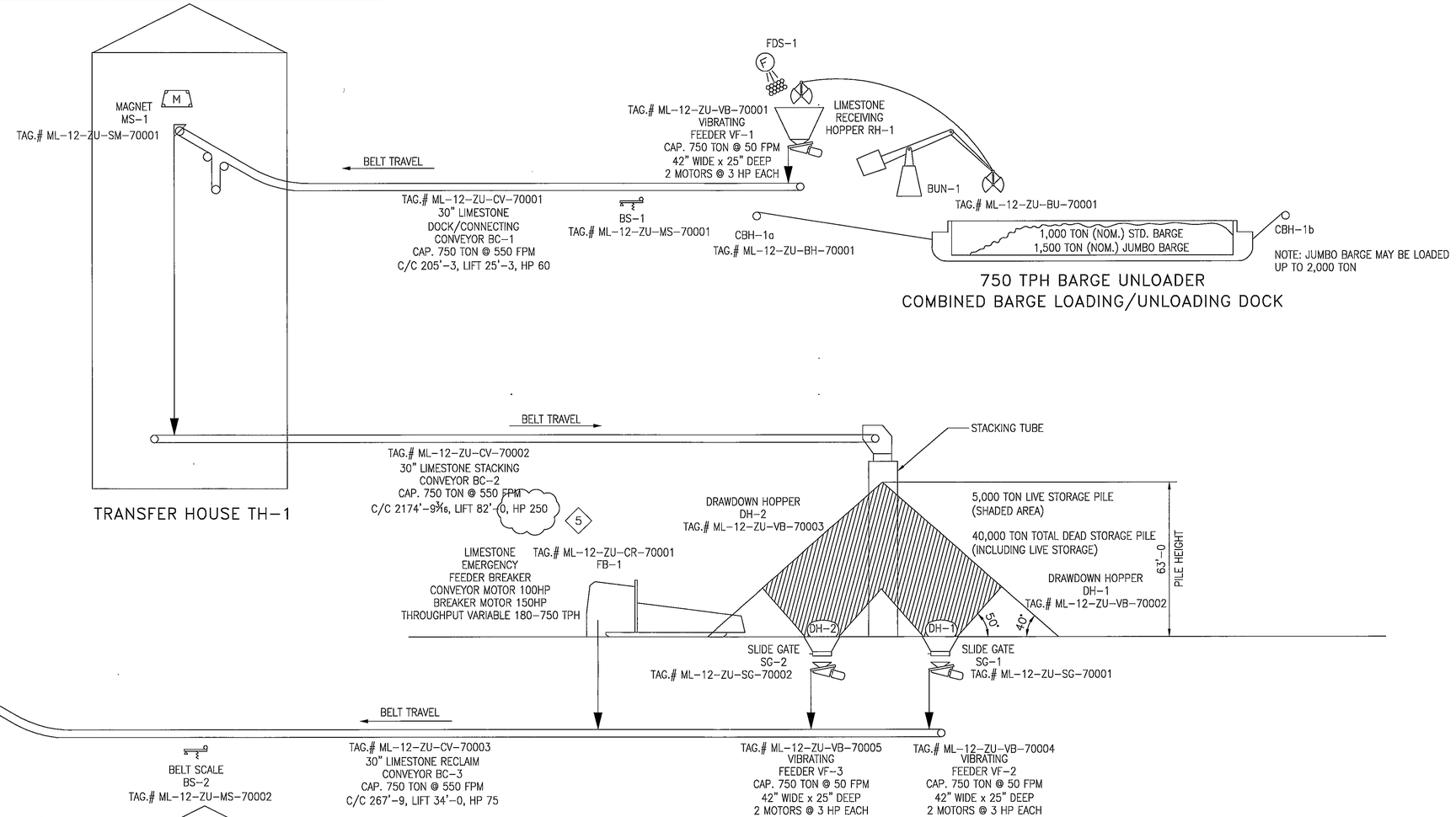
03798 - 0420-FS2 - - 6

AEPM-0-DV-092602-0420-FS2-R6(8)

ROBERTS & SCHAEFER Company
ENGINEERS AND CONTRACTORS
CHICAGO — SALT LAKE CITY

FLOW DIAGRAM
GYPSUM HANDLING SYSTEM
LIMESTONE & GYPSUM HANDLING SYSTEM
OHIO POWER COMPANY
AEP MITCHELL PLANT, UNITS 1 & 2, CRESAP, WEST VIRGINIA

MADE BY	D.AMIN
CHECKED BY	APD
DIRECTED BY	RP
SCALE	NONE
DATE	12-3-04
DRAWING No.	0420-FS2
CAD FILE NAME	0420-FS2
REV.	6



NOMENCLATURE

RH–#	RECEIVING HOPPER
BC–#	BELT CONVEYOR
BUN–#	BARGE UNLOADER
VF–#	VIBRATING FEEDER
SG–#	SLIDE GATE
BL–#	BARGE LOADER
TT–#	TRAVELING TRIPPER
FB–#	FEEDER/BREAKER
FDS–#	FOG DUST SUPPRESSION

NOMENCLATURE

DG–#	DIVERTER GATE
MS–#	SELF CLEANING MAGNETIC SEPARATOR
BS–#	BELT SCALE
CBH–#	CATENARY BARGE HAUL WINCH
FDS–#	FOG DUST SUPPRESSION

02215 - 0420-FS1 - - 5

AEPM-0-DV-092602-0420-FS1-R5(8)

PARSONS E & C
MITCHELL PLANT
X REVIEWED AND ACCEPTED
— REVIEWED AND ACCEPTED AS NOTED (RESUBMIT FOR RECORD)
— NOT ACCEPTED (RESUBMIT FOR REVIEW)
— FOR INFORMATION ONLY (REVIEW WAIVED)
—

THE REVIEW OF THIS SUBMITTAL IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION IN THE CONTRACT. THE SUBMITTAL VENDOR IS FULLY RESPONSIBLE FOR: FULL COMPLIANCE WITH THE PROJECT REQUIREMENTS; FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT JOBSITE; FOR INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESS; FOR DESIGNS ORIGINATED BY HIMSELF; FOR TECHNIQUES OF CONSTRUCTION AND; FOR COORDINATION OF THE WORK OF ALL TRADES. SUBMITTAL REVIEW DOES NOT CONSTITUTE A CHANGE ORDER AND DOES NOT ALTER ANY CONTRACT TERMS OR CONDITIONS.

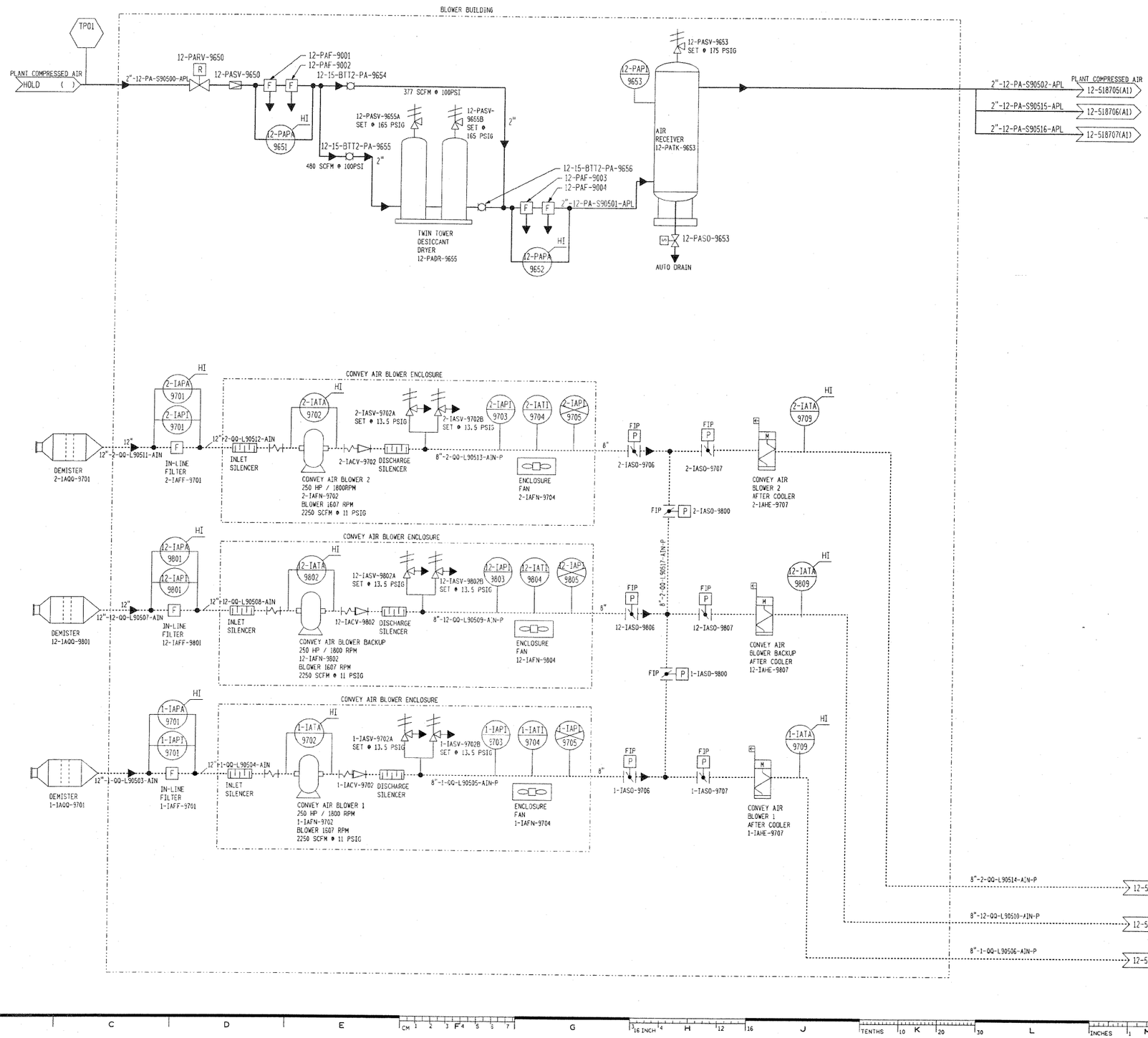
DATE 12/9/05 BY

REV	DATE	DESCRIPTION OF REVISION
5	10-28-05	REVISED PER AEP/PARSONS COMMENTS
4	5-20-05	REVISED PER AEP/PARSONS COMMENTS ADDED BREAKER R.T.O.
3	3-22-05	ADDED VIBRATING FEEDER & DRAWDOWN HOPPER TAG NUMBERS
2	2-25-05	ISSUED FOR AEP DESIGN FREEZE AND AEP/PARSONS COMMENTS
1	12-28-04	FINAL VARIOUS SHEET DRAWINGS & ISSUED FOR PROCUREMENT TO ADD3A & ADD3A
0	12-3-04	FINAL PROJECT DRAWINGS ISSUED FOR PROCUREMENT TO ADD3A

ROBERTS & SCHAEFER Company
ENGINEERS AND CONTRACTORS
CHICAGO — SALT LAKE CITY

FLOW DIAGRAM
LIMESTONE HANDLING SYSTEM
LIMESTONE & GYPSUM HANDLING SYSTEM
OHIO POWER COMPANY
AEP MITCHELL PLANT, UNITS 1 & 2, CRESAP, WEST VIRGINIA

MADE BY D.AMIN, CHECKED BY APD, DESIGNED BY RP, APPROVED BY
SCALE NONE, DATE 12-3-04
DRAWING No 0420-FS1, REV 5
CAD FILE NAME 0420-FS1



LEGEND

- DSI SUPPLY
- DSI CHUTE WORK
- VENT PIPING
- COMPRESSED AIR
- GLYCOL SYSTEM
- AIR BLOWER LINES
- HYDRAULIC FLUID
- HAMMERTEK ELBOW
- LONG RADIUS ELBOW

NOTES

(1) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7063329 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS -------- 5004D 5004E 5004

REFERENCE PROJECT PROCEDURE

PE-FL-EN-0001

DATE	NO.	DESCRIPTION	APPD.
06/21/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSmidth
2040 AVENUE C
BETHLEHEM, PA 18017

o:/et1/1flow_diagram/518703.dgn

BERNARD J. ZAVATONE REGISTERED 16661 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
6/28/06

AMERICAN ELECTRIC POWER
MITCHELL PLANT
CRESAP WEST VIRGINIA

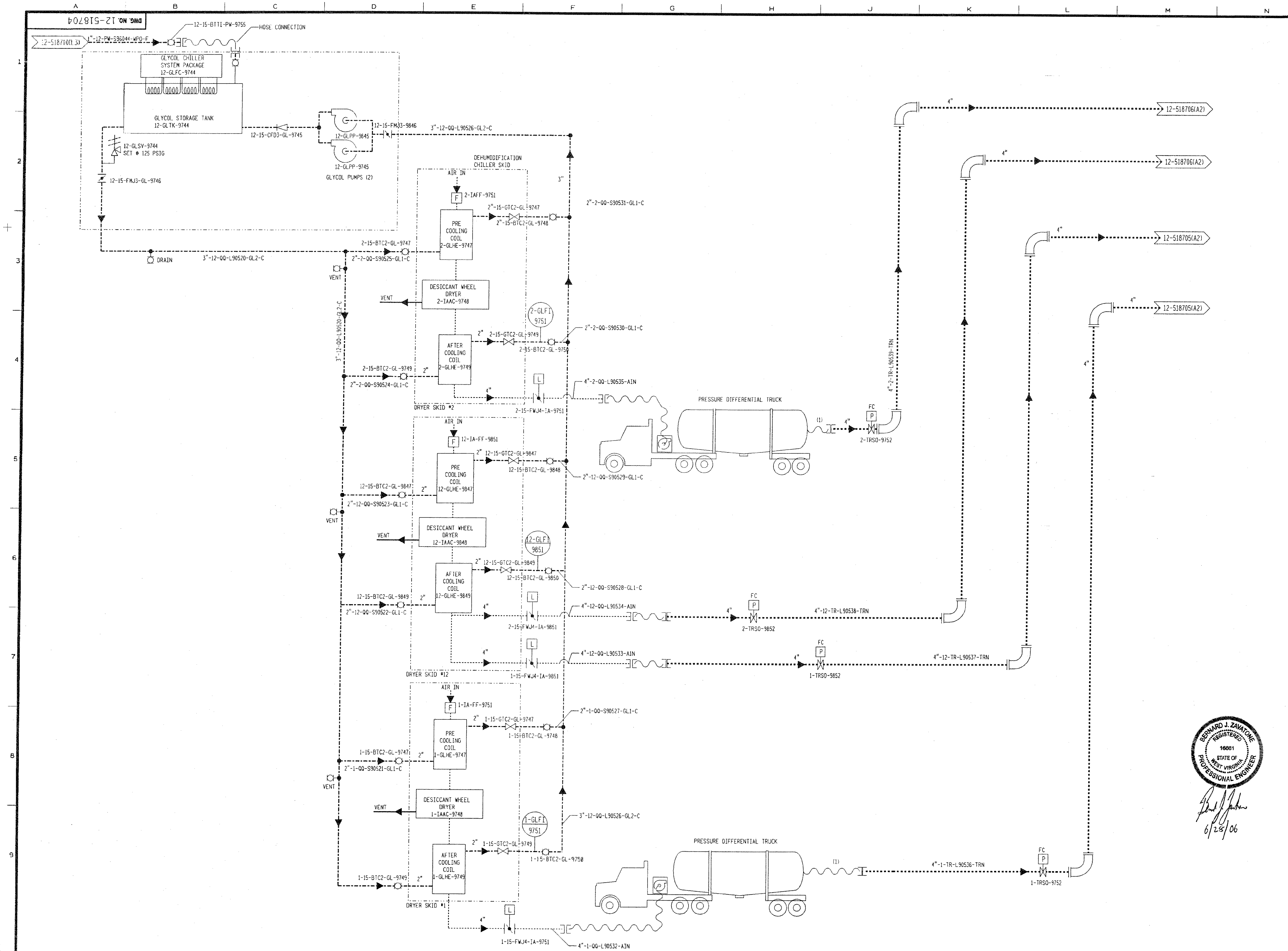
DSI SYSTEM COMPRESSED AIR & PD BLOWERS FLOW DIAGRAM

DWG. NO. 12-518703-0

SCALE: NONE
DR: MB
CH:
DATE:
APPROVED BY

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

SYSTEM DATE: 6/27/2006
SYSTEM TIME: 11:09:54 PM



LEGEND

- DSI SUPPLY
- DSI CHUTE WORK
- VENT PIPING
- COMPRESSED AIR
- GLYCOL SYSTEM
- AIR BLOWER LINES
- HYDRAULIC FLUID
- HAMMERTEK ELBOW
- LONG RADIUS ELBOW

NOTES

(1) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003029 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS -------- 5004D
5004E
5004

REFRENCE PROJECT PROCEDURE

PE-FL-EV-0001

DATE	NO.	DESCRIPTION	APPD.
06/21/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSMIDTH 2040 AVENUE C BETHLEHEM, PA 18017

st/at/1/flow_diagram/518701.dgn

AMERICAN ELECTRIC POWER
MITCHELL PLANT
CRESAP WEST VIRGINIA

DSI SYSTEM CHILLER & DEHUMIDIFICATION FLOW DIAGRAM

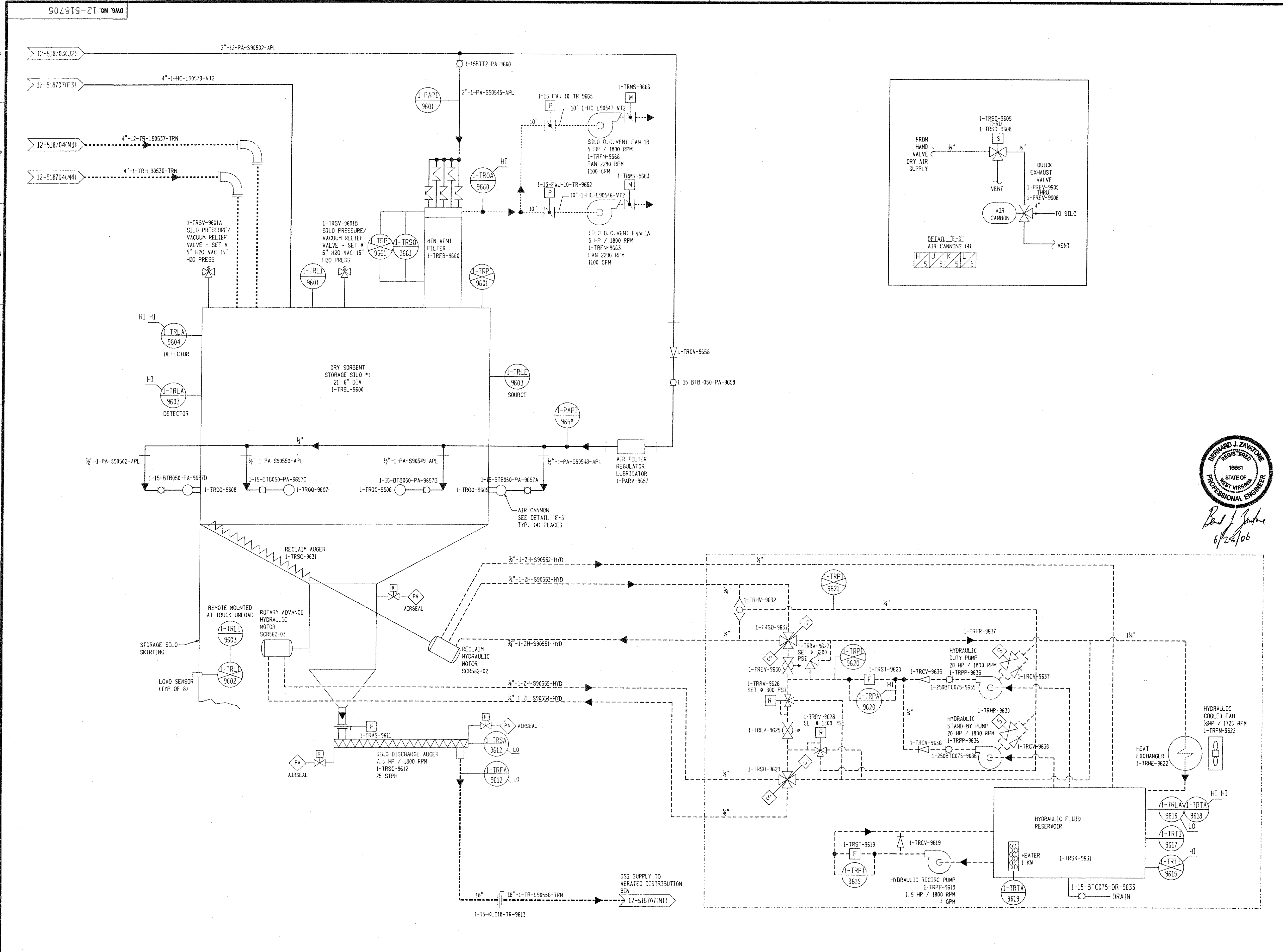
DWG. NO. 12-518704-0

SCALE: NONE
DRN: RDS
CHK:
DATE:
APPROVED BY

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

BERNARD J. ZAVATONE REGISTERED 16661 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
6/28/06

SYSTEM DATE- 6/21/2006
SYSTEM TIME- 4:06:57 PM


DWG. NO. 12-518705
12-518703(J2)
2"-12-PA-S90502-APL
12-518707(F3)
4"-1-HC-L90579-VT2
12-518704(M3)
4"-12-TR-L90537-TRN
12-518704(M4)
4"-1-TR-L90536-TRN
1-15BTT2-PA-9660
2"-1-PA-S90545-APL
1-PAPI 9601
1-TRQA 9660
BIN VENT FILTER 1-TRFB-9660
SILO D.C. VENT FAN 1B 5 HP / 1800 RPM 1-TRFN-9666 FAN 2290 RPM 1100 CFM
SILO D.C. VENT FAN 1A 5 HP / 1800 RPM 1-TRFN-9663 FAN 2290 RPM 1100 CFM
1-TRSV-9601A SILO PRESSURE/ VACUUM RELIEF VALVE - SET @ 5" H2O VAC 15" H2O PRESS
1-TRSV-9601B SILO PRESSURE/ VACUUM RELIEF VALVE - SET @ 5" H2O VAC 15" H2O PRESS
DRY SORBENT STORAGE SILO #1 21'-6" DIA 1-TRSL-9600
1-TRLA 9604 DETECTOR
1-TRLA 9603 DETECTOR
1-TRLE 9603 SOURCE
1-TRCV-9658
1-15-BTB-050-PA-9658
1-PAPI 9658
AIR FILTER REGULATOR LUBRICATOR 1-PARV-9657
AIR CANNON SEE DETAIL "E-3" TYP. (4) PLACES
RECLAIM AUGER 1-TRSC-9631
REMOTE MOUNTED AT TRUCK UNLOAD
ROTARY ADVANCE HYDRAULIC MOTOR SCR562-03
STORAGE SILO SKIRTING
LOAD SENSOR (TYP OF 8)
RECLAIM HYDRAULIC MOTOR SCR562-02
SILO DISCHARGE AUGER 7.5 HP / 1800 RPM 1-TRSC-9612 25 STPH
DSI SUPPLY TO AERATED DISTRIBUTION BIN
12-518707(N1)
1-15-KLC18-TR-9613
DETAIL "E-3" AIR CANNONS (4)
FROM HAND VALVE DRY AIR SUPPLY
QUICK EXHAUST VALVE 1-PREV-9605 THRU 1-PREV-9608
AIR CANNON
TO SILO
VENT
HYDRAULIC DUTY PUMP 20 HP / 1800 RPM 1-TRPP-9635
HYDRAULIC STAND-BY PUMP 20 HP / 1800 RPM 1-TRPP-9636
HYDRAULIC COOLER FAN ½HP / 1725 RPM 1-TRFN-9622
HEAT EXCHANGER 1-TRHE-9622
HYDRAULIC FLUID RESERVOIR
HEATER 1 KW
1-TRSK-9631
HYDRAULIC RECIRC PUMP 1-TRPP-9619 1.5 HP / 1800 RPM 4 GPM
1-15-BTC075-DR-9633
DRAIN

LEGEND

DSI SUPPLY
DSI CHUTE WORK
VENT PIPING
COMPRESSED AIR
GLYCOL SYSTEM
AIR BLOWER LINES
HYDRAULIC FLUID
HAMMERTEK ELBOW
LONG RADIUS ELBOW
PLANT AIR

NOTES

(1) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003029 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS -------- 5004D 5004E 5004

BERNARD J. ZAVATONE REGISTERED 16661 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

6/28/06

DATE	NO.	DESCRIPTION	APPD.
05/25/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSMIDTH 2040 AVENUE C BETHLEHEM, PA 18017

s:/mt/1/flow_diagram/518701.dgn

AMERICAN ELECTRIC POWER
MITCHELL PLANT
CRESAP WEST VIRGINIA

DSI SYSTEM SILO 1 & RECLAIM FLOW DIAGRAM

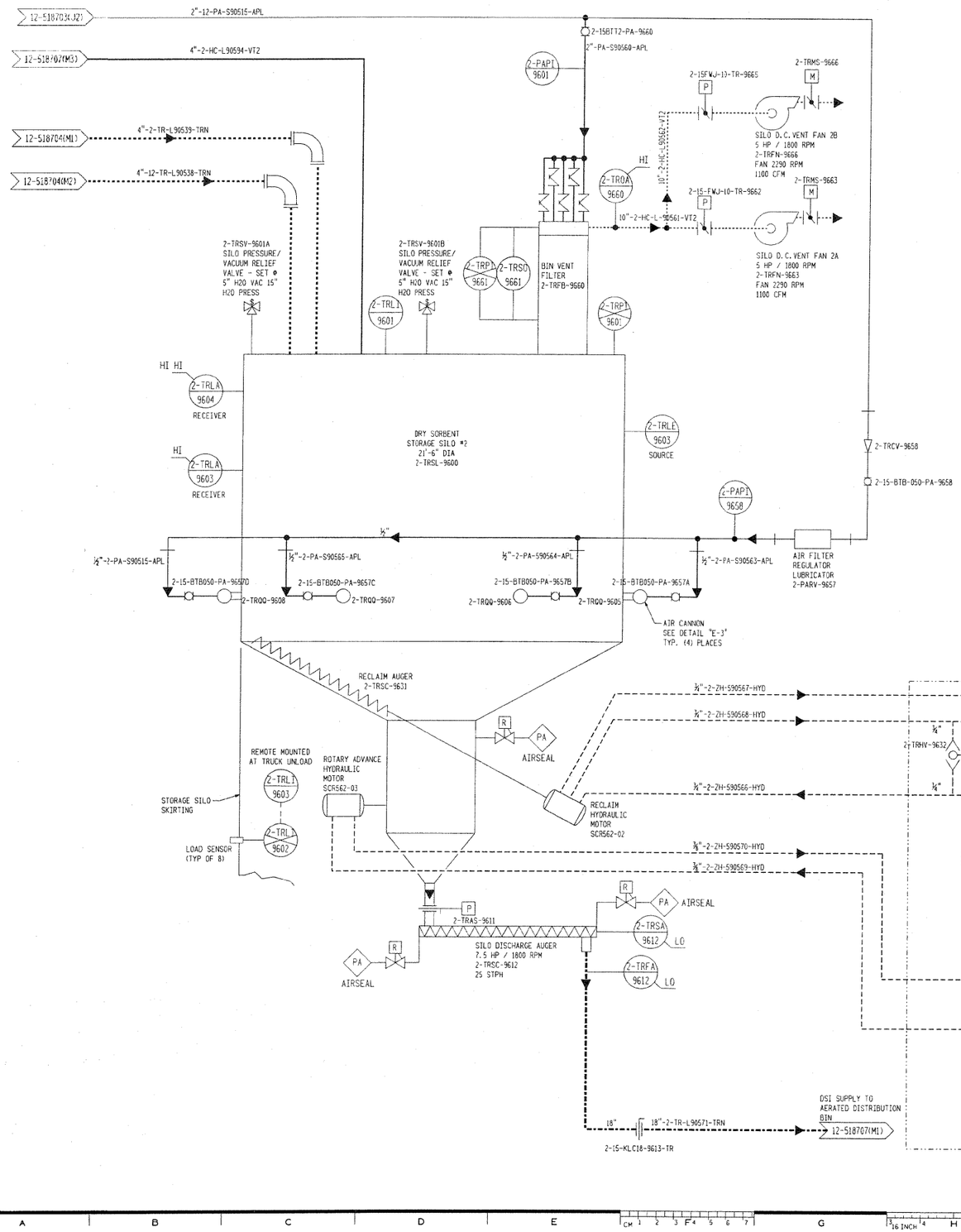
DWG. NO. 12-518705-0

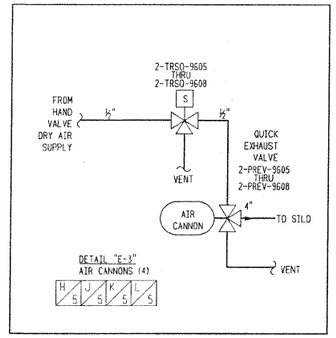
SCALE: NONE
DR: RDS
CH:
APPROVED BY
DATE:

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

SYSTEM DATE- 6/21/2006
SYSTEM TIME- 1:07:00 PM

DWG. NO. 12-518706





LEGEND

- DSI SUPPLY
- DSI CHUTE WORK
- VENT PIPING
- COMPRESSED AIR
- GLYCOL SYSTEM
- AIR BLOWER LINES
- HYDRAULIC FLUID
- HAMMERTEK ELBOW
- LONG RADIUS ELBOW
- PA — PLANT AIR

NOTES

(1) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003029 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS ---------- 5004D
5004E
5004

BERNARD J. ZAVATONE
REGISTERED
16661
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
6/28/06

DATE	NO.	DESCRIPTION	APPR.
05/25/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSmidth
2040 AVENUE C
BETHLEHEM, PA 18017

g:/el/1/flow_diagram/518701.dgn

AMERICAN ELECTRIC POWER

MITCHELL PLANT

CRESAP WEST VIRGINIA

DSI SYSTEM SILO 2 & RECLAIM FLOW DIAGRAM

DWG. NO. 12-518706-0

SCALE: NONE
DR: NJE
CH:
APPROVED BY:
DATE:

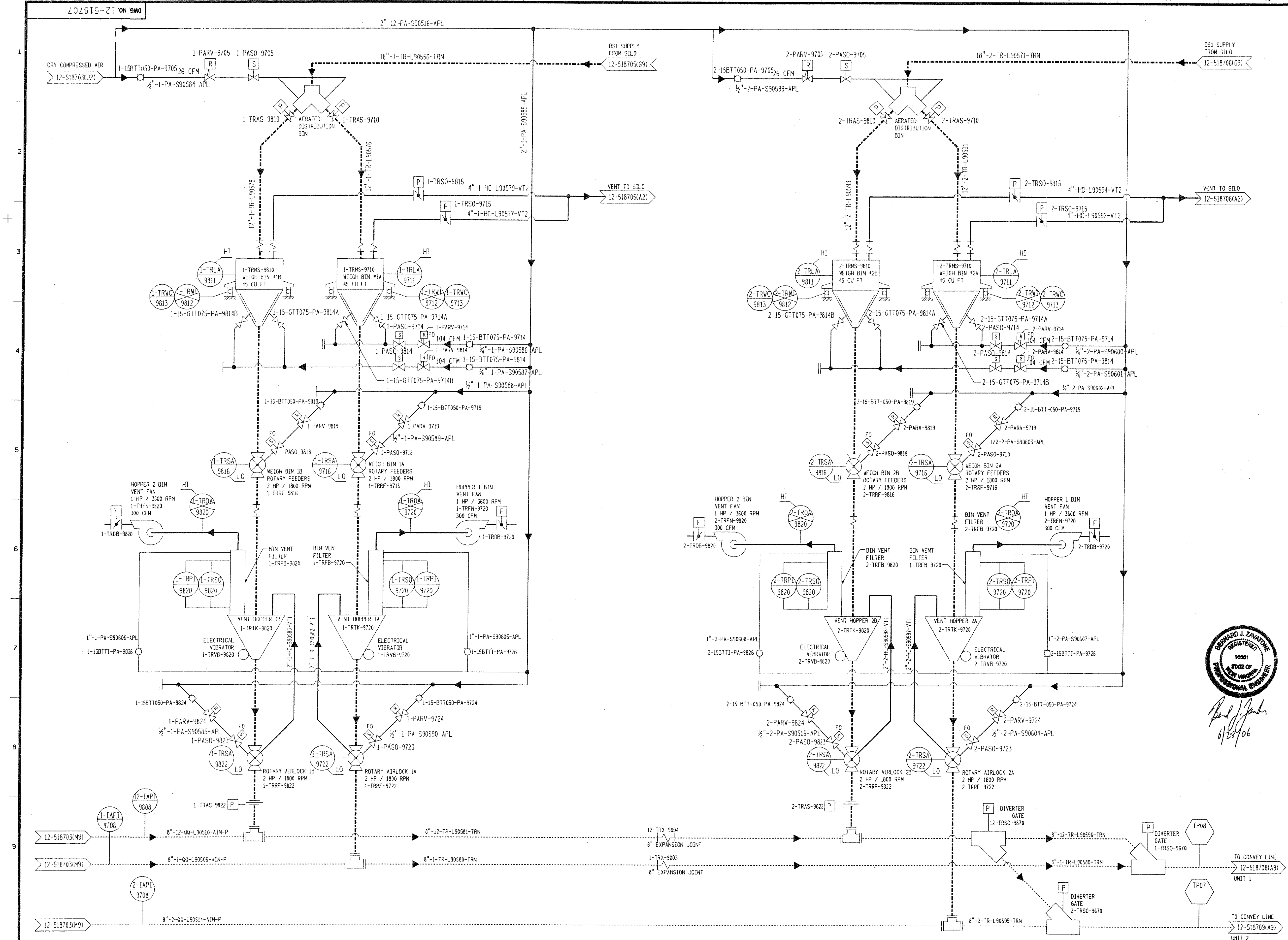
AEP AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43216

SYSTEM DATE- 6/21/2006
SYSTEM TIME- 4:01:03 PM

10S4694

DWG NO. 12-518707



LEGEND

············	DSI SUPPLY
·-·-·-·-·-·	DSI CHUTE WORK
————	VENT PIPING
————	COMPRESSED AIR
-·-·-·-·-	GLYCOL SYSTEM
···········	AIR BLOWER LINES
- - - - -	HYDRAULIC FLUID
	HAMMERTEK ELBOW
	LONG RADIUS ELBOW

NOTES

(I) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003029 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS -------- 5004D
5004E
5004

REFERENCE PROJECT PROCEDURE

PE-FL-EN-0001

DATE	NO.	DESCRIPTION	APPD.
06/21/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSMIDTH 2040 AVENUE C BETHLEHEM, PA 18017

g:/mt/1/flow_diagram/517802.dgn

AMERICAN ELECTRIC POWER

MITCHELL PLANT

CRESAP WEST VIRGINIA

DSI SYSTEM LIW FEEDERS & TRANSPORT LINE FLOW DIAGRAM

DWG. NO. 12-518707-0

SCALE: NONE
DR: RDS
CHK
DATE:
APPROVED BY

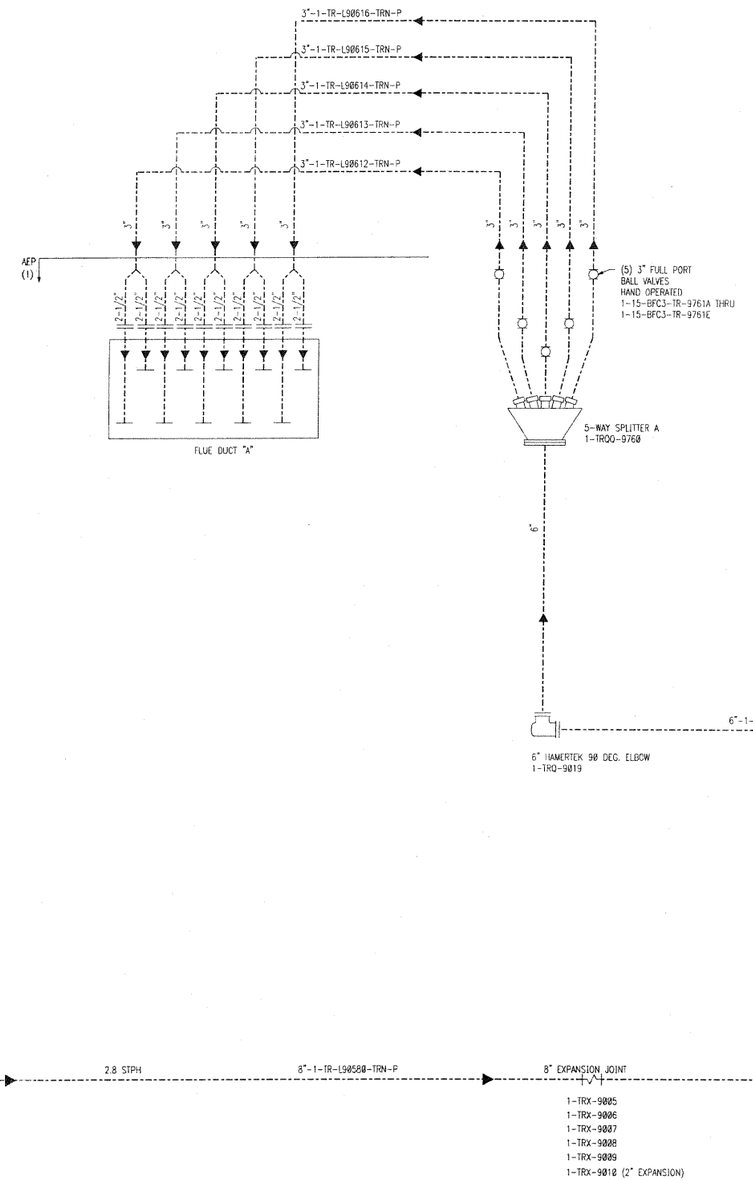
AMERICAN ELECTRIC POWER — AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215

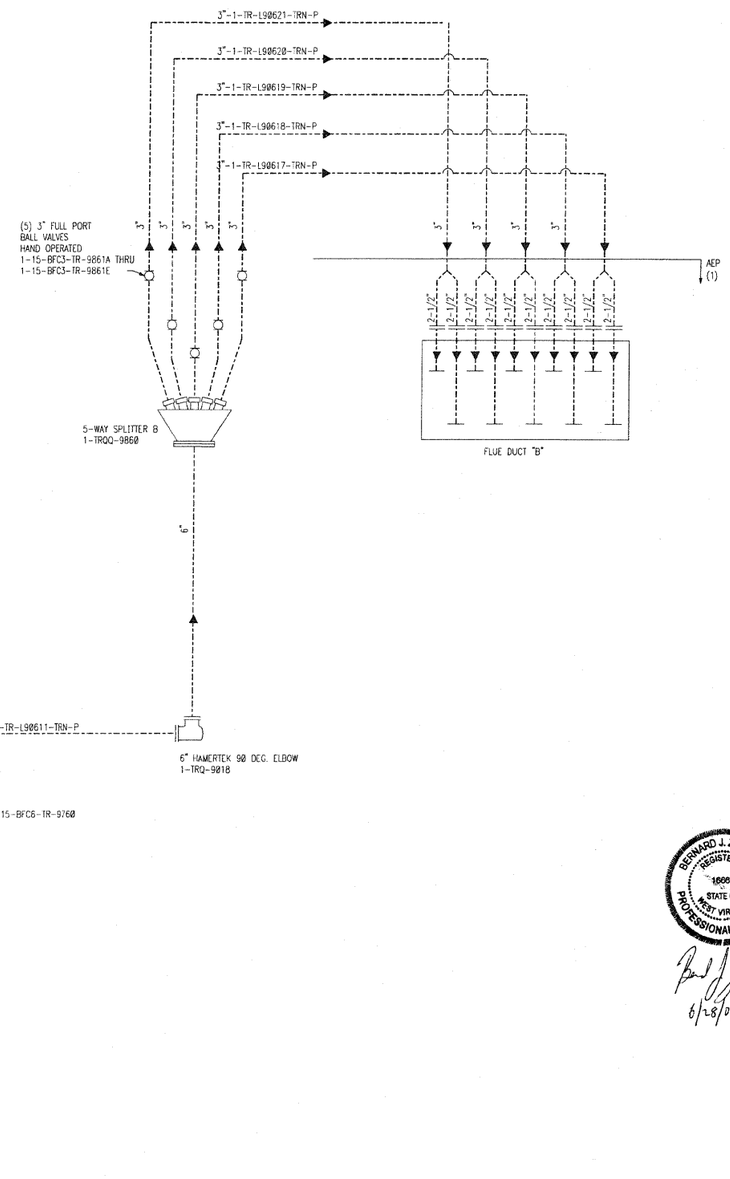
BERNARD J. ZAVATONE REGISTERED 16601 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

6/28/06

SYSTEM DATE-5/21/2006
SYSTEM TIME-4:6:07 PM

DWG. NO. 12-518708





LEGEND

- DSI SUPPLY
- DSI CHUTE WORK
- VENT PIPING
- COMPRESSED AIR
- GLYCOL SYSTEM
- AIR BLOWER LINES
- HYDRAULIC FLUID
- HAMMERTEK ELBOW
- LONG RADIUS ELBOW

NOTES

(1) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003029 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS ---------- 5004D
5004E
5004

REFERENCE PROJECT PROCEDURE

PE-FL-EN-0001

DATE	NO.	DESCRIPTION	APPD.
05/25/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSmidth — 2040 AVENUE C, BETHLEHEM, PA 18017

s:/et/1/flow_diagram/518701.dgn

BERNARD J. ZAVATONE — REGISTERED — 16661 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER

6/28/06

AMERICAN ELECTRIC POWER

MITCHELL PLANT

CRESAP WEST VIRGINIA

DSI SYSTEM UNIT 1 DUCT INJECTION FLOW DIAGRAM

DWG. NO. 12-518708-0

SCALE: NONE

DRN: RDS

CHK:

APPROVED BY:

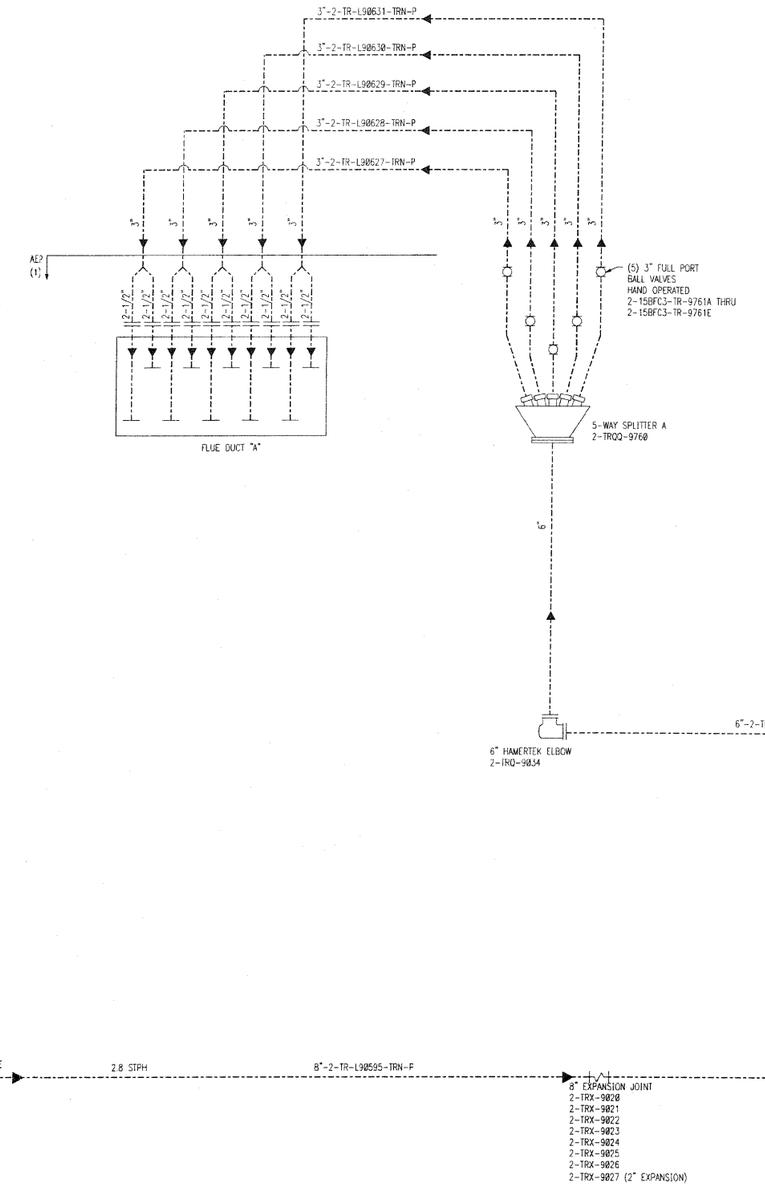
DATE:

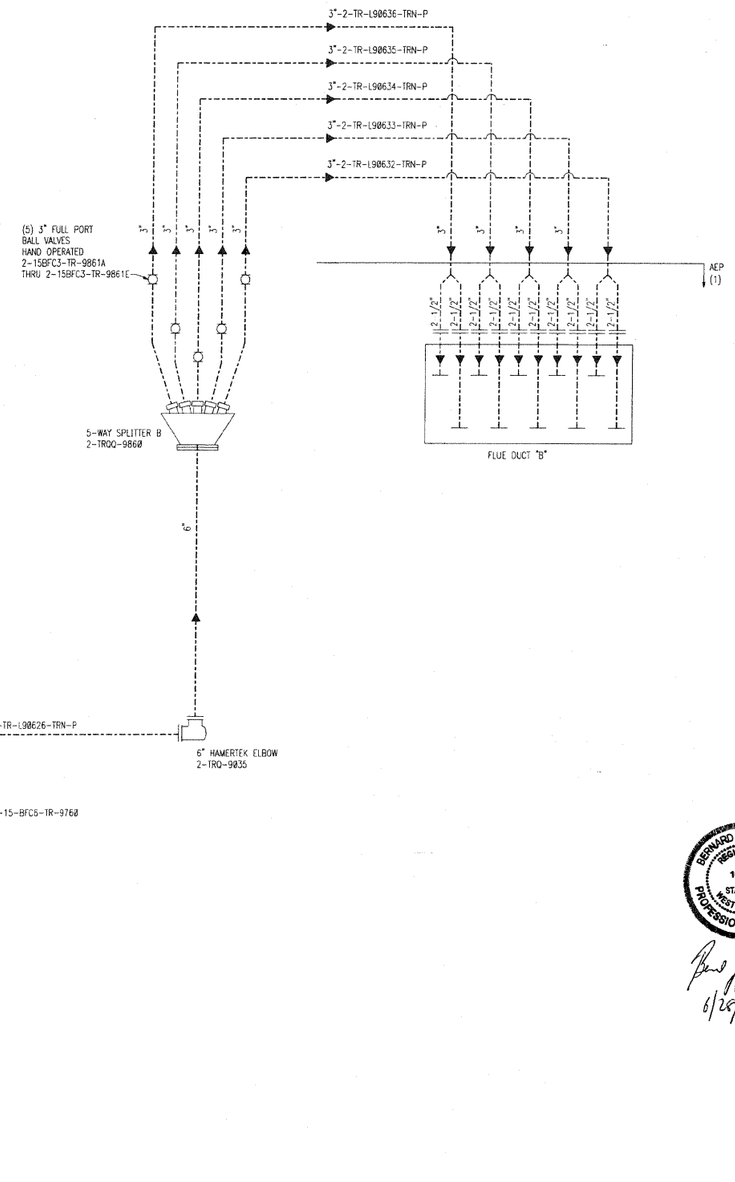
AEP AMERICAN ELECTRIC POWER — AEP SERVICE CORP. 1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

10306694

SYSTEM DATE = 6/27/2006
SYSTEM TIME = 11:07:16 PM

DWG. NO. 12-518709





LEGEND

- DSI SUPPLY
- DSI CHUTE WORK
- VENT PIPING
- COMPRESSED AIR
- GLYCOL SYSTEM
- AIR BLOWER LINES
- HYDRAULIC FLUID
- HAMMERTEK ELBOW
- LONG RADIUS ELBOW

NOTES

(1) DENOTES PIPE & VALVES BY AEP

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003029 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS -------- 5004D
5004E
5004

REFERENCE PROJECT PROCEDURE

PE-FL-EN-0001

DATE	NO.	DESCRIPTION	APPD.
05/25/06	0	ISSUED FOR CONSTRUCTION.	

REVISIONS

FLSmidth 2640 AVENUE C BETHLEHEM, PA 18017

s:/et/1/flow_diagram/518701.dgn

BERNARD J. ZAVATONE REGISTERED 16661 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

6/26/06

AMERICAN ELECTRIC POWER

MITCHELL PLANT

CRESAP WEST VIRGINIA

DSI SYSTEM UNIT 2 DUCT INSERTION FLOW DIAGRAM

DWG. NO. 12-518709-0

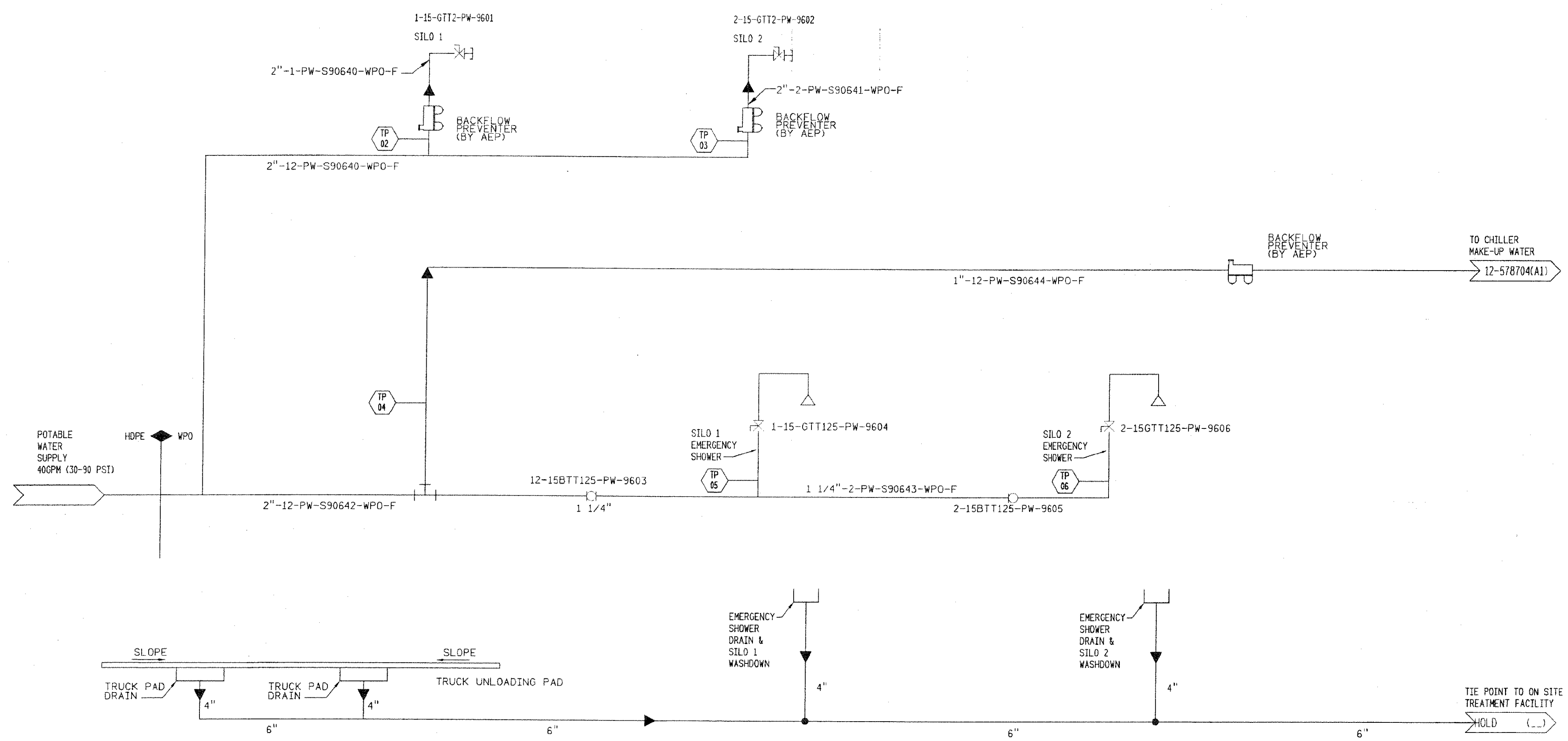
SCALE: NONE
DR: KB
CH:
DATE:
APPROVED BY:

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

1050694

SYSTEM DATE=6/21/2006
SYSTEM TIME=4:07:12 PM

DWG. NO.12-518710



(1) DENOTES PIPE & VALVES BY AEP

NOTES

FOR GENERAL NOTES SEE DRAWING 1-518701

1. ALL EQUIPMENT BY F.L. SMIDTH, UNLESS NOTED.
2. REFER TO F.L.S. DOCUMENT NO. 7003023 FOR PIPE MATERIAL SPECIFICATIONS.
3. ALL TAG NAMES ARE PRECEDED BY ML- UNLESS NOTED.

REFERENCE DRAWINGS

STANDARD SYMBOLS -------- 5004D
5004E
5004

REFERENCE PROJECT PROCEDURE

DATE	NO.	DESCRIPTION	APPD.
05/25/06	0	ISSUED FOR CONSTRUCTION	

REVISIONS

BERNARD J. ZAVATONE REGISTERED 16661 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

6/28/06

APPALACHIAN POWER COMPANY

MITCHELL PLANT

CRESAP WEST VIRGINIA

DSI SYSTEM
SERVICE WATER
& POTABLE WATER
FLOW DIAGRAM

DWG. NO.12-518710-0

SCALE: NONE | MECHANICAL ENGINEERING DIVISION

DR: JF
CH:
DES SUPV:
PROJ ENGR:
DATE: 03/01/06
APPROVED BY

RIVER CONSULTING — New Orleans - Columbus - Pittsburgh, Salt Lake City - Houston

FLSmidth

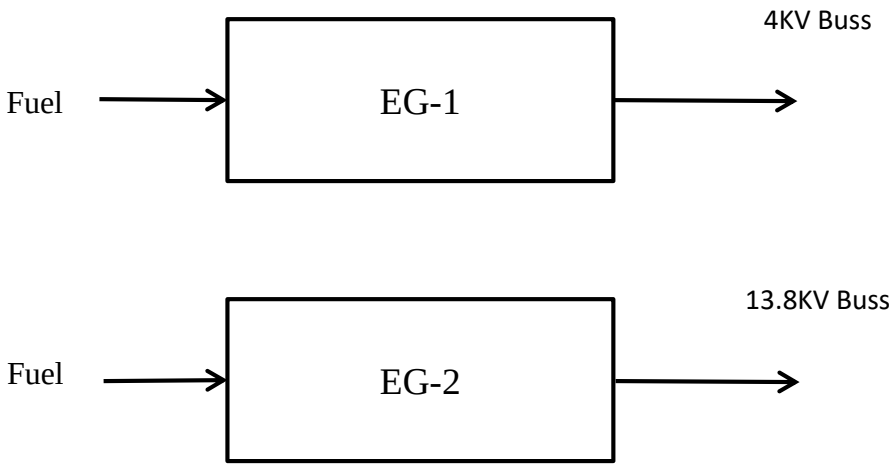
AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

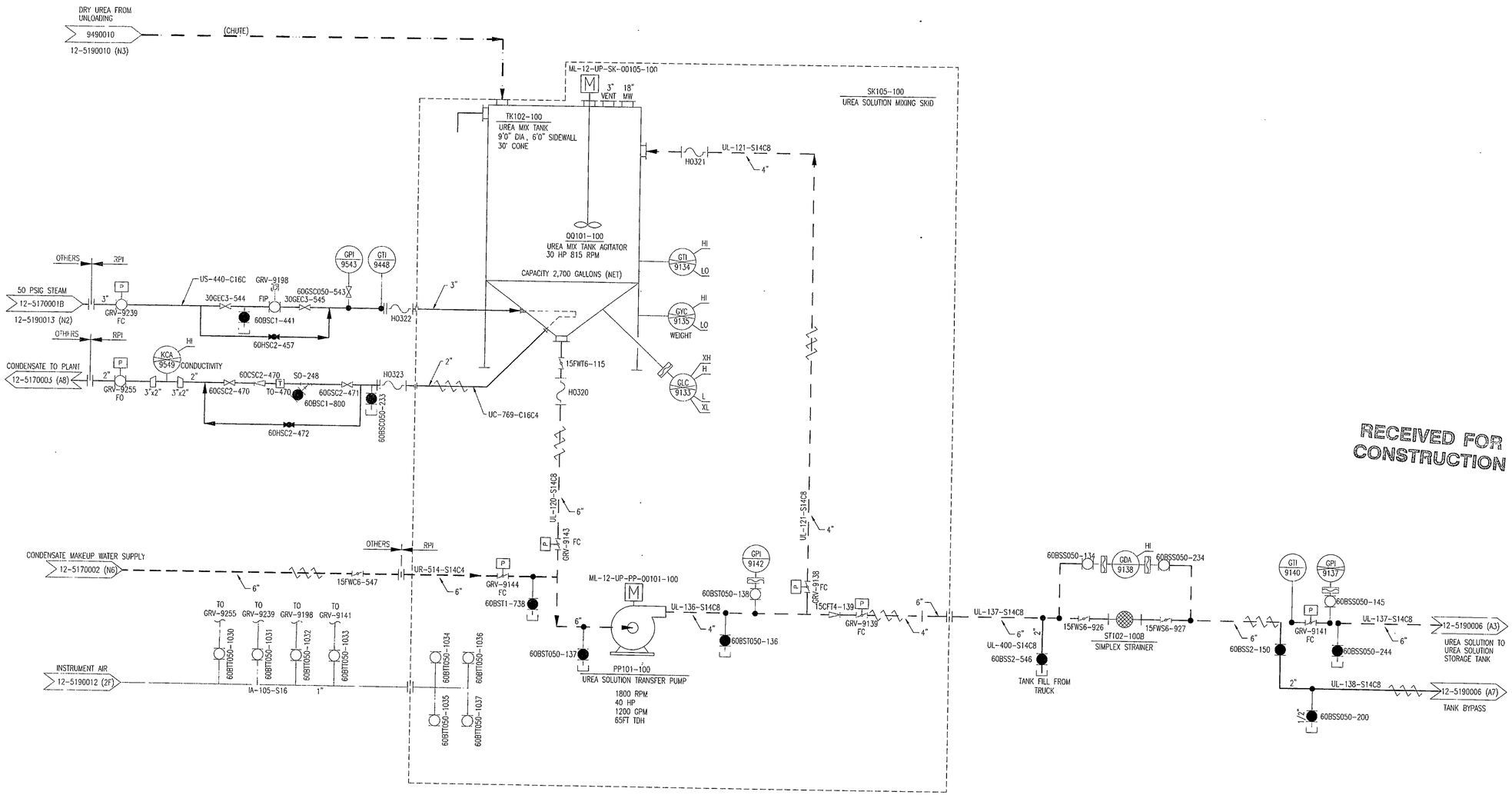
0 Rev. No:
Plot Date:
Plotted by:

Flow Diagram

Coping Power Diesel Driven Emergency Generators



DWG. NO. 100273-9490020



RECEIVED FOR CONSTRUCTION

NOTES:

1. DELETED
2. ALL TAG #'S PREFACED WITH ML12 UNLESS OTHERWISE SPECIFIED

LEGEND

- DRY UREA
- UREA SOLUTION
- MAKE-UP WATER
- AUX PIPING

NO	DATE	DESCRIPTION	APPD
2		CORRECT ARROW REFS, DELETED LINE TO SUMP, ADDED DRAIN VALVE, RELOCATED DRAIN VALVE, ADDED TRAP STRAINER TAG & DRAIN LINE TAG	
1		RE-ISSUE FOR CONSTRUCTION	
0		ISSUE FOR CONSTRUCTION	

REVISIONS

ALTERATION	NO	BY	CHK	DATE	APP'D	DATE
CORRECT ARROW REFS, DELETED LINE TO SUMP, ADDED DRAIN VALVE, RELOCATED DRAIN VALVE, ADDED TRAP STRAINER TAG & DRAIN LINE TAG	05	LKT	JWL	5/5/06	CAE	5/11/06
RE-ISSUE FOR CONSTRUCTION	04	JWL	RB	11/17/05	CAE	11/18/05
ISSUE FOR CONSTRUCTION	03	JWL	BH	05/20/05	CAE	05/20/05
RELEASED FOR APPROVAL	02	JWL	TN	04/30/05	CAE	05/01/05
RELEASED FOR CERTIFICATION	01	JWL	TN	04/12/05	BH	04/12/05

		FUNCTIONAL REVIEW / APPROVAL	
DRAWN	JWL	REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
DATE	04/28/05	RB 11/17/05	
CHECKED	RH	REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
DATE	03/17/05	RHF 11/18/05	
APP'D	RJ	REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
DATE	03/17/05	C.ERICKSON 11/18/05	
		REVIEWED & APP'D / DATE	REVIEWED & APP'D / DATE
		B BASILE 11/18/05	

DO NOT SCALE USE DIMENSIONS ONLY

SCALE NTS IN = 1 FT. ES W F ER

RILEY POWER INC.

PIPING AND INSTRUMENTATION DIAGRAM
UREA MIX TANK
U2A SYSTEM
MITCHELL PLANT – UNITS #1 & 2
AMERICAN ELECTRIC POWER
CRESAP, WEST VIRGINIA

DWG. NO. 100273-9490020-05

03389 - 12-5190011 - - - 2
AEPM-12-DV-094502-12-5190011-R2(6)

OHIO POWER COMPANY
MITCHELL PLANT
CRESAP WEST VIRGINIA

FLOW DIAGRAM
UREA MIX TANK
U2A SYSTEM

DWG. NO. 12-5190011 -2

SCALE: none
DR.
CH.
DES. SUPV.
ENGR.
DATE.

APPROVED BY

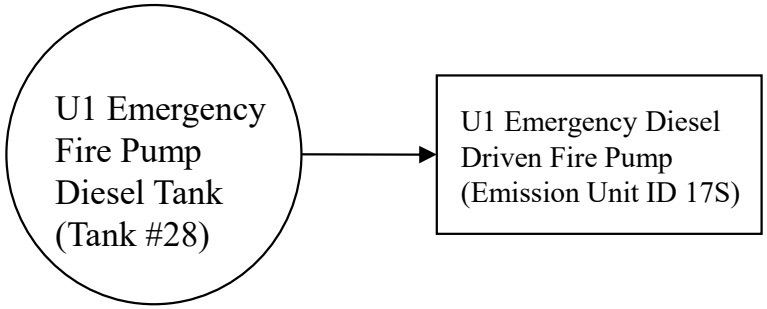
DOCUMENT PREPARED BY RILEY POWER INC.

AEP AMERICAN ELECTRIC

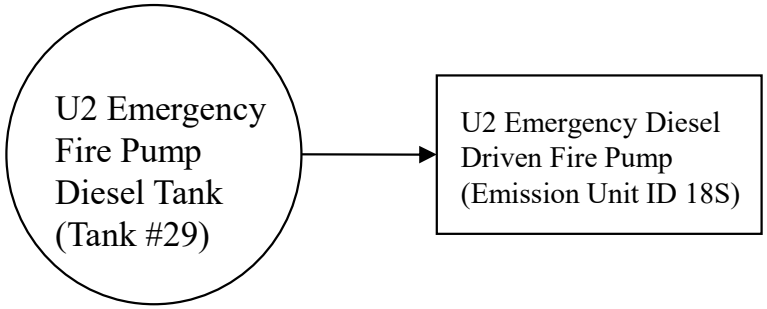
AEP SERVICE CORP.
1 RIVERSIDE PLAZA

IGS0700

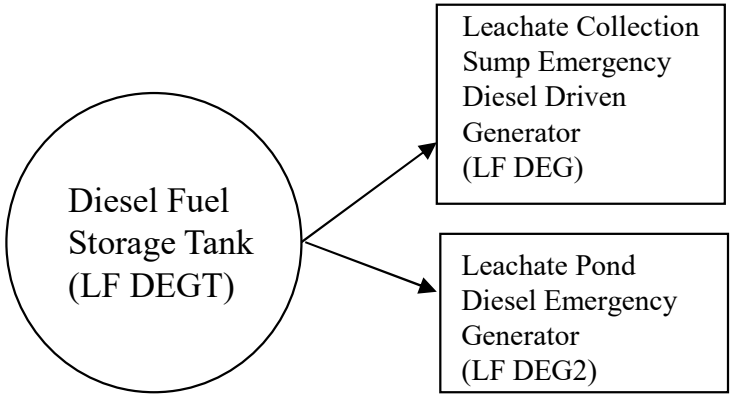
Attachment C:
Mitchell Plant Unit 1 Emergency Diesel Driven Fire Pump



Attachment C:
Mitchell Plant Unit 2 Emergency Diesel Driven Fire Pump



Attachment C:
Mitchell Plant Diesel Driven Emergency Generators Located at Landfill Leachate Collection Sump and Leachate Pond



Attachment D

Title V Equipment Table

ATTACHMENT D - Title V Equipment Table

(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[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
Boiler & Associated Equipment					
Unit 1	High efficiency	1E	Boiler: Foster Wheeler, Model # 2-85-303	7020 mmBtu/hr	1971
Unit 2	High efficiency	2E	Boiler: Foster Wheeler, Model # 2-85-304	7020 mmBtu/hr	1971
Aux 1	N/A	Aux ML1	Boiler: Foster Wheeler, Model # SD- 25	663 mmBtu/hr	1970, Reconstructed in 2012
17E	None	17S	Unit 1 Emergency Diesel Driven Fire Pump	249 HP	~1971, Replaced in 2023
18E	None	18S	Unit 2 Emergency Diesel Driven Fire Pump	249 HP	~1971, Replaced in 2024
EG-1	None	EG-1	CAT® C175-16 (Compression Ignition (CI) Engine) Certificate No. ECPXL106.NZS-011 Engine ECPXL106.NZS	3,717-bhp@ 1,800rpm	2014
EG-2	None	EG-2	CAT® 3516C-HD TA (CI Engine) Certificate No. ECPXL78.1NZS-024 Engine ECPXL78.1NZS	3,004-bhp@ 1,800rpm	2014
LF DEG	None	LF DEG	Landfill Leachate Collection Sump Emergency Diesel Driven Generator, 2019 Cummins C300DQDAC model	464 bhp 300kW	2020
LF DEG2	None	LF DEG2	Landfill Leachate Pond Diesel Emergency Generator, 2023 Cummins QSG12 model	513 bhp 400kW	2023
LF DEGT	None	LF DEGT	Diesel Fuel Storage Tank for LF DEG	600 gallons	2020
LF DEGT2	None	LF DEGT2	Diesel Fuel Storage Tank for LF DEG2	600 gallons	2023
EGT01	None	EGT01	Diesel Fuel Storage Tank for EG-1	4,800 gallons	2014
EGT02	None	EGT02	Diesel Fuel Storage Tank for EG-2	4,800 gallons	2014
Coal Handling					
BU	WS, PE, MC	BU	Barge Unloader (unload barge onto Conveyor R1	4,000 TPH	1971
Station R1	FE, MC	Sta-R1	Conveyor R1 and drop points to Conveyor R2	3,000 TPH	1971
C-R2	WS, PE, MC	C-R2	Conveyor R2 (transfer to Station R2)	3,000 TPH	1971
RCU	WS, MC	RCU	Rail Car Unloader (unload rail cars to feeders R6-1, R6-2 and R6-3)	3,000 TPH	April, 1974
R6-1, R6-2, R6-3	PE, MC	R6-1, R6-2, R6-3	Feeders R6-1, R6-2, R6-3 (transfer points to Conveyor R7)	1,400 TPH	April 1974
C-R7	WS, PE, MC	C-R7	Conveyor R7 (transfer to Station R2)	3,000 TPH	April 1974
Station R2	FE, MC	Sta-R2	Drop point to coal crusher or conveyor R3	N/A	April 1974
CR-R2	FE, MC	CR-R2	Coal Crusher	2,500 TPH	1971

C-R3	PE, MC	C-R3	Conveyor R3 (transfer to Station R3)	3,000 TPH	1971
Station R3	FE, MC	Sta-R3	Drop point to conveyor R4 or R1 1	N/A	1971
C-R1 1	PE, MC	C-R1 1	Conveyor R1 1 (transfer to radial portable Conveyor R12)	3,000 TPH	1971
C-R12	MC	C-R12	Radial Portable Conveyor R12 (transfer to temporary storage pile)	3,000 TPH	1971
C-R4	PE, MC	C-R4	Conveyor R4 (transfer to Station R4)	3,000 TPH	1971
Station R4	FE, MC	Sta-R4	Drop point to Sample System and Conveyor R5; and/or Conveyor R8	N/A	1971
C-R8	PE, MC	C-R8	Conveyor R8 (transfer to Radial Stacker Conveyor R9)	3,000 TPH	April 1974
C-R9	MC	C-R9	Radial Stacker Conveyor R9 (transfer to North Yard Storage Pile – Station R7)	3,000 TPH	April 1974
Station R7	FE, MC	Sta-R7	Drop point from North Yard Storage Pile through Crusher R7-1 to Feeder Conveyor BFR7-1	N/A	April 1974
CR-R7-1	FE, MC	CR-R7-1	Coal Crusher	1,000 TPH	April 1974
BFR7-1	FE, MC	BFR7-1	Feeder BFR7-1 (transfer to Conveyor R10)	1,100 TPH	April 1974
C-R1 0	PE, MC	C-R10	Conveyor R10 (transfer to truck load out and Station R4)	1,100 TPH	April 1974
C-R5	PE, MC	C-R5	Conveyor R5 (transfer to Drive Tower S1)	3,000 TPH	1971
Drive Tower S1	FE, MC	Drive Tower S1	Drop point to Conveyor R6	N/A	1971
C-R6	PE, MC	C-R6	Conveyor R6 (transfer to Station 2)	3,000 TPH	1971
Station 2	FE, MC	Sta-2	Drop point to Radial Stacker Conveyor 2	N/A	1969
RS-2	WS, MC	RS-2	Radial Stacker 2 (transfer to surge pile)	4,000 TPH	1969
Station 1A	FE, MC	Sta-1A	Drop point from frozen coal storage area 4 through crusher CR-1A to Conveyor 1A	N/A	1969
CR-1A	FE, MC	CR-1A	Coal Crusher	1,000 TPH	1969
C-1A	PE, MC	C-1A	Conveyor 1A (transfer to Station 1B)	1,100 TPH	1969
Station 1B	FE, MC	Sta-1B	Drop point to Conveyor 1	N/A	1969
C-1	PE, MC	C-1	Conveyor 1 (transfer to Station 2)	2,600 TPH	1969
CSA-1	MC	CSA-1	Coal Storage Area #1 (Surge Pile)	Approx 40 Acres	1969
CSA-2	MC	CSA-2	Coal Storage Area #2 (North Yard Storage Pile)	Approx 40 Acres	April 1974
CSA-3	MC	CSA-3	Coal Storage Area #3 (Temporary Storage Pile at R3)	Approx 6 Acres	
CSA-4	MC	CSA-4	Coal Storage Area #4 (conveyor from 1B)	Included in CSA-1	1969
SGM1 through SGM16	FE, MC	SGM1 through	Reclaim Hoppers/Vibratory Feeders (Reclaim Area #1 surge pile) transfers to Conveyors 3A, 3B and 3C	300 TPH each	1969
C-3A	FE, MC	C-3A	Conveyor 3A (transfer to Station 3B)	1,100 TPH	1969
Station 3B	FE, MC	Sta-3B	Drop point to Conveyor 3B	N/A	1969
C-3B	FE, MC	C-3B	Conveyor 3B (transfer to Station 3)	1,100 TPH	1969
C-3C	FE, MC	C-3C	Conveyor 3C (transfer to Station 3)	1,100 TPH	1969
Station 3	FE, MC	Sta-3	Drop point to Conveyors 4E and/or 4W	N/A	1969

C-4E/C-4W	PE, MC	C-4E/C-4W	Conveyors 4E and 4W (transfer to Station 4)	1,100 TPH each	1969
Station 4	FE, MC	Sta-4	Drop point to Sample System, Conveyor 7E and/or 7W, and Conveyor 5 or Emergency Conveyors E25 through E2 1	N/A	1969
C-7E/C-7W	PE, MC	C-7E/C-7W	Conveyors 7E and 7W (transfer to Station 5	1,100 TPH each	1969
C-5	FE, MC	C5	Conveyor 5 (transfer to Unit 2 coal silos 3, 4 or 5 and to Conveyor 6)	1,100 TPH	1969
C-6	FE, MC	C-6	Conveyor 6 (transfer to Unit 2 coal silos 1 or 2)	1,100 TPH	1969
C-E25 through C- E21	MC	C-E25 through C-E21	Emergency conveyors E25 through E21 (used in an emergency to transfer coal into Unit 2 coal silos)	500 TPH each	1969
Station 5	FE, MC	Sta-5	Drop point to Conveyor 8 or Emergency Conveyors E1 1 through E15	N/A	1969
C-8	FE, MC	C-8	Conveyor 8 (transfer to Unit 1 coal silos 3, 4, or 5 and to Conveyor 9)	1,100 TPH	1969
C-9	FE, MC	C-9	Conveyor 9 (transfer to Unit 1 coal silos 1 or 2)	1,100 TPH	1969
C-E1 1 through C- E15	MC	C-E1 1 through C-E15	Emergency conveyors E1 1 through E15 (used in an emergency to transfer coal into Unit 1 coal silos)	500 TPH	1969
Fly Ash Material Handling					
Haul Roads	Water Truck	Haul Roads	Fly Ash Material Haul Roads and Landfill	N/A	N/A
EP-1	Filter/Separator	ME-1A	Unit 1 Mechanical Exhauster 1A	N/A	2012
EP-2	Filter/Separator	ME-1B	Unit 1 Mechanical Exhauster 1B	N/A	2012
EP-3	Filter/Separator	ME-1C (spare)	Unit 1 Mechanical Exhauster 1C	N/A	2012
EP-4	Filter/Separator	ME-2A	Unit 2 Mechanical Exhauster 2A	N/A	2012
EP-5	Filter/Separator	ME-2B	Unit 2 Mechanical Exhauster 2B	N/A	2012
EP-6	Filter/Separator	ME-2C (spare)	Unit 2 Mechanical Exhauster 2C	N/A	2012
EP-7	BVF-A	FAS-A	Fly Ash Silo A	2,160 tons	2012
EP-8	BVF-B	FAS-B	Fly Ash Silo B	2,160 tons	2012
EP-9	BVF-C	FAS-C	Fly Ash Silo C	2,160 tons	Future
F-1	MC	WFA-AA	Transfer conditioned fly ash from Fly Ash Silo A to Truck via Pin/Paddle Mixer	360 tph	2012
F-2	MC	WFA-BA	Transfer conditioned fly ash from Fly Ash Silo B to Truck via Pin/Paddle Mixer	360 tph	2012
F-3	MC	WFA-CA	Transfer conditioned fly ash from Fly Ash Silo C to Truck via Pin/Paddle Mixer	360 tph	Future
F-4	MC	WFA-AB (spare)	Transfer conditioned fly ash from Fly Ash Silo A to Truck via Pin/Paddle Mixer	360 tph	2012
F-5	MC	WFA-BB (spare)	Transfer conditioned fly ash from Fly Ash Silo B to Truck via Pin/Paddle Mixer	360 tph	2012
F-6	MC	WFA-CB (spare)	Transfer conditioned fly ash from Fly Ash Silo C to Truck via Pin/Paddle Mixer	360 tph	Future
EP-10, F-7	TC	TC-A	Transfer dry fly ash from Fly Ash Silo A to Truck via Pin/Paddle Mixer	300 tph	2012
EP-11, F-8	TC	TC-B	Transfer dry fly ash from Fly Ash Silo B to Truck via Pin/Paddle Mixer	300 tph	2012
EP-12, F-9	TC	TC-C	Transfer dry fly ash from Fly Ash Silo C to Truck via Pin/Paddle Mixer	300 tph	Future

~~LPG~~	~~None~~	~~LPG~~	~~Generac SG080, Lean Burn Four Stroke, Liquid Propane Gas-fired emergency generator Certificate No. DGNXB08.92NL-011~~	~~126 bhp~~	~~2013~~ **(Removed)**
~~LPT~~	~~None~~	~~LPT~~	~~Liquid Propane Tank for LPG~~	~~500 gallons~~	~~2013~~ **(Removed)**
1S – Limestone Material Handling					
BUN-1 (Fugitive)	None	BUN-1	Limestone Unloading Crane	1,000 TPH	2006
RH-1 (Fugitive)	WS, PE	RH-1	Limestone Unloading Hopper	60 Tons	2006
VF-1 (Fugitive)	FE	VF-1	Limestone Unloading Feeder	750 TPH	2006
BC-1 (Fugitive)	PE	BC-1	Limestone Dock/Connecting Conveyor	750 TPH	2006
TH-1 (Fugitive)	FE	TH-1	Limestone Transfer House #1	750 TPH	2006
BC-2 (Fugitive)	PE	BC-2	Limestone Storage Pile Stacking Conveyor	750 TPH	2006
LSSP (Fugitive)	None	LSSP	Limestone Active/Long-Term Stockpile	155,000 Tons	2006/2011
2S - Gypsum Material Handling					
BC-8 (Fugitive)	PE	BC-8	Vacuum Collecting Conveyor	200 TPH	2007
TH-3 (Fugitive)	FE	TH-3	Gypsum Transfer House #3	200 TPH	2007
BC-9 (Fugitive)	PE	BC-9	Connecting Conveyor	200 TPH	2007
TH-4 (Fugitive)	FE	TH-4	Gypsum Transfer House #4	200 TPH	2007
BC-10 (Fugitive)	PE	BC-10	Connecting Conveyor	200 TPH	2007
TH-5 (Fugitive)	FE	TH-5	Gypsum Transfer House #5	200 TPH	2007
BC-11 (Fugitive)	PE	BC-11	Connecting Conveyor	200 TPH	2007
TH-6 (Fugitive)	FE	TH-6	Gypsum Transfer House #6	200 TPH	2007
BC-12 (Fugitive)	PE	BC-12	Stacking Tripper Conveyor	200 TPH	2007
GSP (Fugitive)	FE	GSP	Gypsum Stockpile	15,600 tons	2007
PSR-1 (Fugitive)	FE	PSR-1	Traveling Portal Scraper Reclaimer	1,000 TPH	2007
BC-14 Fugitive)	PE	BC-14	Reclaim Conveyor	1,000 TPH	2007
TH-7 (Fugitive)	FE	TH-7	Transfer House #7	1,000 TPH	2007
BC-13 (Fugitive)	PE	BC-13	Bypass Conveyor	200 TPH	2007
BC-15 (Fugitive)	PE	BC-15	Connecting Conveyor	1,000 TPH	2007
TH-1 (Fugitive)	FE	TH-1	Transfer House #1	1,000 TPH	2007
BC-16 (Fugitive)	PE	BC-16	Transfer Conveyor	1,000 TPH	2007
BL-1 (Fugitive)	PE	BL-1	Barge Loader	1,000 TPH	2007
BC-14 (Fugitive)	PE	BC-14	Reclaim Conveyor Extension	1,000 TPH	2007

TH-8 (Fugitive)	FE	TH-8	Transfer House 8	1,000 TPH	2007
BC-19 (Fugitive)	PE	BC-19	Transfer Conveyor	1,000 TPH	2007
TH-9 (Fugitive)	FE	TH-9	Transfer House 9	1,000 TPH	2007
BC-20 (Fugitive)	PE	BC-20	Transfer Conveyor to 20	1,000 TPH	2007
TH-10 (Fugitive)	FE	TH-10	Transfer House 10	1,000 TPH	2007
BC-21 (Fugitive)	PE	BC-21	Transfer Conveyor to 21	1,000 TPH	2007
BUN-1 (Fugitive)		BUN-1	Clamshell Unloading Crane	1,000 TPH	2007
RH-4 (Fugitive)	WS, PE	RH-4	Gypsum Unloading Hopper	30 tons	2007
RP-1 (Fugitive)	FE	RP-1	Gypsum Rotary Plow	750 TPH	2007
BC-17 (Fugitive)	PE	BC-17	Dock/Connecting Conveyor	750 TPH	2007
TH-7 (Fugitive)	FE	TH-7	Transfer House #7	750 TPH	2007
BC-18 (Fugitive)	PE	BC-18	Bypass Conveyor	750 TPH	2007
TH-6 (Fugitive)	FE	TH-6	Transfer House #6	750 TPH	2007
3S - Limestone Mineral Processing					
VF-2 (Fugitive)	FE	VF-2	Limestone Reclaim Feeder 2	750 TPH	2007
VF-3 (Fugitive)	FE	VF-3	Limestone Reclaim Feeder 3	750 TPH	2007
BC-3 (Fugitive)	PE	BC-3	Limestone Tunnel Reclaim Conveyor	750 TPH	2007
FB-1 (Fugitive)		FB-1	Emergency Limestone Reclaim Feeder/Breaker	750 TPH	2007
TH-2 (Fugitive)	FE	TH-2	Limestone Transfer House 2	750 TPH	2007
BC-4 (Fugitive)	PE	BC-4	Limestone Silo A Feed Conveyor	750 TPH	2007
BC-5 (Fugitive)	PE	BC-5	Limestone Silo B Feed Conveyor	750 TPH	2007
BC-6 (Fugitive)	PE	BC-6	Limestone Silo C Feed Conveyor	750 TPH	Future
6E	BH	LSB-1	Limestone Silo A	900 Tons	2007
7E	BH	LSB-2	Limestone Silo B	900 Tons	2007
8E	BH	LSB-3	Limestone Silo C	900 Tons	Future
(Fugitive)	FE		Vibrating Bin Discharger (one per silo)	68.4 TPH	2007
LSWF-1 (Fugitive) LSWF-2 (Fugitive) LSWF-3(Fugitive)	FE	LSWF-1 LSWF-2 LSWF-3	Limestone Weigh Feeder (one per silo)	68.4 TPH	2007
(Fugitive)	FE		Wet Ball Mill (one per silo)	68.4 TPH	2007
4S - Dry Sorbent Material Handling					

(Fugitive)	FE		Truck Unloading Connection (2)	25 TPH	2007
10E	BH, FE	DSSB 1	Dry Sorbent Storage Silo #1	500 TPH	2007
11E	BH, FE	DSSB 2	Dry Sorbent Storage Silo #2	500 TPH	2007
(Fugitive)	FE		Aeration Distribution Bins	4.6 TPH	2007
(Fugitive)	FE		De-aeration Bins	4.6 TPH	2007
(Fugitive)	FE		Rotary Feeder	4.6 TPH	2007
5S - Coal Blending System					
HTS-1 (Fugitive)	FE	HTS-1	Transfer House #1	3,000 TPH	2007
HSC-1 (Fugitive)	PE	HSC-1	Stacking Conveyor #1	3,000 TPH	2007
HTS-2A (Fugitive)	FE	HTS-2A	Transfer House #2A	3,000 TPH	2007
HSC-2 (Fugitive)	PE	HSC-2	Stacking Conveyor #2	3,000 TPH	2007
HTS-3 (Fugitive)	FE	HTS-3	Transfer House #3	3,000 TPH	2007
HSC-3 (Fugitive)	PE	HSC-3	Stacking Conveyor #3	3,000 TPH	2007
SH-1 (Fugitive)	FE	SH-1	Stacking Hopper SH-1 Transfer to SC-3 (receive coal from plant radial stacker R9)	3,000 TPH	2007
HSC-3 to High Sulfur Pile (Fugitive) (CSA-2, existing)	Stacking Tube	HSC-3 to High Sulfur Pile (CSA-2, existing)	Transfer from Stacking Conveyor HSC-3 to High Sulfur Pile at existing North Yard Storage Area (CSA-2)	3,000 TPH	2007
HVF-1 (Fugitive)	FE	HVF-1	Coal Reclaim Feeder 1	800 TPH	2007
HVF-2 (Fugitive)	FE	HVF-2	Coal Reclaim Feeder 2	800 TPH	2007
HVF-3 (Fugitive)	FE	HVF-3	Coal Reclaim Feeder 3	800 TPH	2007
HVF-4 (Fugitive)	FE	HVF-4	Coal Reclaim Feeder 4	800 TPH	2007
HVF-1 through HVF-4 to HRC-1 (Fugitive) (Transfer)	FE	HVF-1 through HVF-4 to HRC-1 (Transfer)	Transfer from Vibrating Feeders HVF-1 through HVF-4 to Reclaim Conveyor HRC-1	1,600 TPH	2007
HRC-1 (Fugitive)	PE	HRC-1	Coal Tunnel Reclaim Conveyor	1,600 TPH	2007
HTS-2B (Fugitive)	FE	HTS-2B	Coal Transfer House #2B	1,600 TPH	2007
HRC-2 (Fugitive)	PE	HRC-2	Reclaim Conveyor #2	1,600 TPH	2007
HTS-4 (Fugitive)	FE	HTS-4	Coal Transfer House #4	1,600 TPH	2007
HRC-3 (Fugitive)	PE	HRC-3	Reclaim Conveyor #3	1,600 TPH	2007
HTS-5 (Fugitive)	FE	HTS-5	Coal Transfer House #5	1,600 TPH	2007
SB-1 (Fugitive)	FE	SB-1	Surge Bin #1	80 Tons	2007
HBF-1A (Fugitive)	PE	HBF-1A	Belt Feeder 1A	800 TPH	2007
HBF-1B (Fugitive)	PE	HBF-1B	Belt Feeder 1B	800 TPH	2007
HBF-1A/1B to BF-4E/4W (Fugitive)	FE	HBF-1A/1B to BF-4E/4W	Transfer from Belt Feeders HBF-1A and HBF-1B to Existing Coal Conveyors 4E and 4W	1,600 TPH	2007

6S, 7S - Emergency Quench Water System					
15E	FE	6S	Diesel Engine on Quench Pump #1	60 HP (approx.)	2007
16E	FE	7S	Diesel Engine on Quench Pump #2	60 HP (approx.)	2007
9S – Magnesium Hydroxide Material Handling System					
MHM-1	N/A	MHM-1	Magnesium Hydroxide Mix Tank #1	1000 Gal.	2007
MHM-2	N/A	MHM-2	Magnesium Hydroxide Mix Tank #2	1000 Gal.	2007
11S – Wastewater Treatment Material Handling					
Fugitive	FE		Truck Unloading Connection (2)	25 TPH	2007
24E	BH, FE		Lime Storage Silo #1	100 TPH	2007
25E	BH, FE		Lime Storage Silo #2	100 TPH	2007
Fugitive	Building Enclosure		Wastewater Treatment Cake Stockpile	3,600 Tons	2007
Fugitive	PE	FB-2	Filter Cake Feeder/Breaker	600 TPH	2007
Fugitive	PE	BC-22	Transfer Conveyor 22	600 TPH	2007
Fugitive	PE	TH-12	Transfer House #12	600 TPH	2007
Miscellaneous Other					
Tank #1	N/A	Tank #1	Ignition Oil Tank – S. of U1 Cooling Tower	1,500,000 Gal.	~1975
Tank #2	N/A	Tank #2	Ignition Oil Tank – N. of U2 Cooling Tower	500,000 Gal.	1971
Tank #3	N/A	Tank #3	Ignition Oil Tank – N. of U2 Cooling Tower	500,000 Gal.	1971
Tank #4	N/A	Tank #4	Used Oil Tank – S. of U1 Cooling Tower	1,000 Gal.	Relocated ~2004
Tank #5	N/A	Tank #5	Used Oil Tank – Tractor Shed	500 Gal.	~2000
Tank #6	N/A	Tank #6	Sulfuric Acid Tank – W. of Units 1&2	15,000 Gal.	1971
Tank #7	N/A	Tank #7	Ammonium Hydroxide Tank – W. of Units 1 &2	4,750 Gal.	1971
Tank #8	N/A	Tank #8	Diethylene Glycol Tank – N. of Station R-4	500 Gal.	~2002
Tank #9	N/A	Tank #9	Diethylene Glycol Tank – Station 3	300 Gal.	~2002
Tank #10	N/A	Tank #10	Diethylene Glycol Tank – Station R-4	300 Gal.	~2002
Tank #11	N/A	Tank #11	No.2 Fuel Oil Tank – Coal Transfer Station #3	1,000 Gal.	2007
Tank #12	N/A	Tank #12	No.2 Fuel Oil Tank – Coal Transfer Station R-2	3,000 Gal	~2004
Tank #13	N/A	Tank #13	No.2 Fuel Oil Tank – Coal Transfer Station R-4	3,000 Gal.	~2004
Tank #14	N/A	Tank #14	No.2 Fuel Oil Tank – Drain Receiver Tank	400 Gal.	1969
Tank #15	N/A	Tank #15	Gasoline Tank – Main Plant Entrance	8,000 Gal.	1991
Tank #16	N/A	Tank #16	Diesel Fuel Tank – Tractor Shed	10,000 Gal	1991
Tank #17	N/A	Tank #17	Turbine Oil Tank – U1	~14,000 Gal.	1971

Tank #18	N/A	Tank #18	Turbine Oil Tank – U2	~14,000 Gal.	1971
Tank #19	N/A	Tank #19	Lube Oil Tank – U1	~20,000 Gal.	1971
Tank #20	N/A	Tank #20	Lube Oil Tank – U2	~18,000 Gal.	1971
Tank #21	N/A	Tank #21	Chemical Cleaning Solution Tank	1,000,000 Gal.	1989
Tank #22	N/A	Tank #22	EHC System Oil Tank – U1	200 Gal.	1971
Tank #23	N/A	Tank #23	New Lube Oil Tank – U1	1,000 Gal.	1971
Tank #24	N/A	Tank #24	Used Oil Bulk Tank – U1	275 Gal.	~2002
Tank #25	N/A	Tank #25	EHC System Oil Tank – U2	625 Gal.	1971
Tank #26	N/A	Tank #26	New Lube Oil Tank – U2	1,000 Gal.	1971
Tank #27	N/A	Tank #27	Used Oil Bulk Tank – U2	275 Gal.	~2002
Tank #28	N/A	Tank #28	Diesel Fire Pump Fuel Tank – U1	300 Gal.	1971, Replaced in 2023
Tank #29	N/A	Tank #29	Diesel Fire Pump Fuel Tank – U2	300 Gal.	1971, Replaced in 2024
Tank #30	N/A	Tank #30	3 Compartment Oil Tank – Tractor Shed Oil Room	920 Gal.	~1995
Tank #31	N/A	Tank #31	Single Compartment Oil Tank – Tractor Shed	560 Gal.	~1995
Tank #32	N/A	Tank #32	Waste Oil Tank – Tractor Shed Oil Room	500 Gal.	~2000
Tank #33	FE	Tank #33	Urea Receiving Hopper	45 Tons	2007
Tank #34	N/A	Tank #34	No.2 Fuel Oil Tank – Drain Receiver Tank – overflow tank	1,000 Gal.	2001
Tank #35	N/A	Tank #35	TK103-100 Urea Solution Storage Tank	200,000 Gal.	2007
Tank #36	N/A	Tank #36	TK102-100 Urea Mix Tank	2,700 Gal.	2007
Tank #37	N/A	Tank #37	CPS Lime Slurry Tank #1	750 Gal.	2007
Tank #38	N/A	Tank #38	CPS Lime Slurry Tank #2	750 Gal.	2007
Tank #39	N/A	Tank #39	CPS Equalization Tank #1	254,513 Gal.	2007
Tank #40	N/A	Tank #40	CPS Equalization Tank #2	254,513 Gal.	2007
Tank #41	N/A	Tank #41	CPS Ferric Chloride Mix Tank #1	9,200 Gal.	2007
Tank #42	N/A	Tank #42	CPS Ferric Chloride Mix Tank #2	9,200 Gal.	2007
Tank #43	N/A	Tank #43	CPS Ferric Chloride Bulk Storage Tank	8,800 Gal.	2007
~~Tank #44~~	~~N/A~~	~~Tank #44~~	~~CPS Acid Bulk Storage Tank~~	~~10,575 Gal.~~	~~2007~~ **(Removed)**
Tank #45	N/A	Tank #45	CPS Polymer Totes (2)	225 Gal. (each)	2007
Tank #46	N/A	Tank #46	Emergency Quench Pump #1 Diesel Tank	70 Gal.	2007
Tank #47	N/A	Tank #47	Emergency Quench Pump #2 Diesel Tank	70 Gal.	2007
Tank #48	N/A	Tank #48	Aux. Boiler Collection Tank Return UST	500 Gal.	2006

Tank #49	N/A	Tank #49	No. 2 Fuel Tank – SW Corner of CSA-2	2000 Gal.	2008
Tank #50	N/A	Tank #50	Gypsum Storage Building Fuel Oil Tank	1000 Gal.	2009
Tank #51	N/A	Tank #51	Highway Grade Diesel Tank #1	1000 Gal.	2011
Tank #52	N/A	Tank #52	Limestone Storage Pile Diesel Tank #1	500 Gal.	2011
Fugitive	Enclosure		Rock Salt Storage Pile (roadway ice control)	600 Tons	2010 and 2014
Tank #53	N/A	Tank #53	Landfill Building Furnace Fuel Oil Tank	2000 Gal.	2018
Tank #54	N/A	Tank #54	Landfill Gasoline Tank	520 Gal.	2018
Tank #55	N/A	Tank #55	Kerosene Tank	1,000 Gal.	2015
Tank #56	N/A	Tank #56	CPS Coagulant Tank	5,000 Gal.	2019
Tank #57	N/A	Tank #57	Unit 1 Scale Inhibitor Tank	3,500 Gal.	2015
Tank #58	N/A	Tank #58	Unit 2 Scale Inhibitor Tank	3,500 Gal.	2015
Tank #59	N/A	Tank #59	Unit 1 Dispersant Tank	5,000 Gal.	2015
Tank #60	N/A	Tank #60	Unit 2 Dispersant Tank	5,000 Gal.	2015
Tank #61	N/A	Tank #61	Unit 1 Ferric Chloride Tank	1,500 Gal.	2015
Tank #62	N/A	Tank #62	Unit 1 Ferric Chloride Tank	2,500 Gal.	2015
Tank #63	N/A	Tank #63	FGD corrosion inhibitor tank	5,000 Gal.	2015
	N/A		Landfill Building Fuel Oil Fired Furnace Clean Burn Model CB-3250	0.325 MMBtu/hr	2018
Tank #64	N/A	Tank #64	Bioreactor Nutrient Tank	12,575 Gal.	2024
Tank #65	N/A	Tank #65	Bioreactor Hydrochloric Acid Tank	6,000 Gal.	2024
Tank #66	N/A	Tank #66	WW Pond Sulfuric Acid Tank	14,500 Gal.	2023
Tank #67	N/A	Tank #67	WW Pond Sodium Hydroxide Tank	20,300 Gal.	2023
Tank #68	N/A	Tank #68	WW Pond Organosulfide Tank	6,400 Gal.	2023
Tank #69	N/A	Tank #69	WW Pond Polymer Tank	1,360 Gal.	2023

[1]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.

Attachment E

Emission Unit Forms

ATTACHMENT E - Emission Unit Form

Emission Unit Description Unit 1 Main Boiler

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** ESP, SCR, FGD
Unit 1 – ML1	Unit 1 Boiler	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Unit 1 is 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, rail car, truck or conveyor. Oil is delivered to the site via river barge or truck.

Manufacturer:	**Model number:**	**Serial number:**
Foster Wheeler	2-85-303	Custom

Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	05/31/1971	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal 7020 mmBtu/Hr (270 TPH with 13,000 BTU/lb Coal Supply) 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.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 5,289,000 lb/hr Steam	Nominal 46,331,640,000 lb/yr Steam	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? X__Yes ___ No	**If yes, is it?** X__ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 8590 mmBtu/hr (rating used to model full load operation for FGD permit determination)	**Type and Btu/hr rating of burners:** LNB – Foster Wheeler

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.
Primary: Coal; Secondary: Oil; The steam generator is capable of burning coal, and will utilize fuel oil for start-up, shutdown and for flame stabilization. Other materials burned included non-hazardous water treatment resins, chemical cleaning solution, on spec used oil, etc.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal (Bit.)	4.5 lb/mmBtu	12.5%	13,000 BTU/lb
Oil	0.5%	N/A	19,750 BTU/lb

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	531	2324.5
Nitrogen Oxides (NO_X)	4139	18131
Lead (Pb)	0.42	1.8
Particulate Matter ($PM_{2.5}$)	105	461.2
Particulate Matter (PM_{10})	237	1037.7
Total Particulate Matter (TSP)	351	1537.4
Sulfur Dioxide (SO_2)	10243	44862.6
Volatile Organic Compounds (VOC)	64	279
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	0.64	2.8
Beryllium	1.53	6.7
Chromium	0.23	1.0
Cobalt	0.08	0.4
Manganese	0.43	1.9
Mercury	0.24	1.1
Nickel	0.19	0.8
Selenium	5.53	24.2
Hydrogen Chloride	1408.3	6168.3
Hydrogen Fluoride	122.3	535.6
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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 4.0 through 4.1 (see Attachment I) : Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 4.2 through 4.5 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Unit 2 Main Boiler

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** ESP, SCR, FGD
Unit 2 – ML2	Unit 2 Boiler	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Unit 2 is 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, rail car, truck or conveyor. Oil is delivered to the site via river barge or truck.

Manufacturer:	**Model number:**	**Serial number:**
Foster Wheeler	2-85-304	Custom

Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	05/31/1971	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal 7020 mmBtu/Hr (270 TPH with 13,000 BTU/lb Coal Supply). 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.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 5,280,000 lb/hr Steam	Nominal 46,252,800,000 lb/yr Steam	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? X__Yes ___ No	**If yes, is it?** X__ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 8,481 mmBtu/hr (rating used to model full load operation for FGD permit determination)	**Type and Btu/hr rating of burners:** LNB – Foster Wheeler

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.
Primary: Coal; Secondary: Oil; The steam generator is capable of burning coal, and will utilize fuel oil for start-up, shutdown and for flame stabilization. Other materials burned include non-hazardous water treatment resins, chemical cleaning solution, on spec used oil, etc.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal	4.5 lb/mmBtu	12.5%	13,000 BTU/lb
Oil	0.5%	N/A	19,750 BTU/lb

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	531	2323.5
Nitrogen Oxides (NO_X)	4139	18131
Lead (Pb)	0.42	1.8
Particulate Matter ($PM_{2.5}$)	105	461.2
Particulate Matter (PM_{10})	237	1037.7
Total Particulate Matter (TSP)	351	1537.4
Sulfur Dioxide (SO_2)	10243	44862.6
Volatile Organic Compounds (VOC)	64	279
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	0.64	2.8
Beryllium	1.53	6.7
Chromium	0.23	1.0
Cobalt	0.08	0.4
Manganese	0.43	1.9
Mercury	0.24	1.1
Nickel	0.19	0.8
Selenium	5.53	24.2
Hydrogen Chloride	1408.3	6168.3
Hydrogen Fluoride	122.3	535.6
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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 4.0 through 4.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 4.2 through 4.5 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Auxiliary Boiler 1

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Aux ML1	Auxiliary Boiler 1	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Auxiliary Boiler 1 is an oil-fired non-EGU boiler. Use of the auxiliary boiler includes, but is not limited to heating, startup and shutdown purposes. The nominal design of Auxiliary Boiler 1 is 663 mmBtu/hr. Oil is delivered to the site via river barge or truck.

Manufacturer:	**Model number:**	**Serial number:**
Foster Wheeler	SD-25	Custom

Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	1970, Rebuild 2012	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal 663 mmBtu/Hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
355,000 lb/hr steam	310,980,000 lb/yr steam	876 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? X__Yes ___ No	**If yes, is it?** X__ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: Nominal 663 mmBtu/hr	**Type and Btu/hr rating of burners:** Front Wall

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.
Primary: Oil

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Oil	0.3%	N/A	19,750 Btu/lb

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	206.8	90.6
Nitrogen Oxides (NO_X)	99.5	43.56
Lead (Pb)	0.006	0.0026
Particulate Matter ($PM_{2.5}$)	1.18	0.52
Particulate Matter (PM_{10})	4.74	2.07
Total Particulate Matter (TSP)	9.47	4.15
Sulfur Dioxide (SO_2)	39.78	17.42
Volatile Organic Compounds (VOC)	0.95	0.41
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	0.0003	0.001
Beryllium	0.0002	0.001
Chromium	0.0002	0.001
Manganese	0.0004	0.002
Mercury	0.0002	0.001
Nickel	0.0002	0.001
Selenium	0.001	0.004
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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 5.0 through 5.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 5.2 through 5.5 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Coal and Ash Handling

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures, mechanical controls, water sprays.
Emission Group 003	Coal & Ash Handling	

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, railcar unloader, chutes and conveyors, transfer stations, crushers, storage piles and silos for coal, as well as a wet ash handling system for ash. Note that a project is currently underway to convert the wet fly ash handling system to a dry fly ash handling system. See attached description of the coal and ash handling systems.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Coal transfer capacity (nominal) – up to 4,000 ton/hr; Fly Ash Handling – up to 980,000 tons per year.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Coal: Nominal 3,000 ton/hr Fly Ash: 720 ton/hr	Coal - Nominal 26,280,000 ton/yr Fly Ash – 980,000 ton/yr	8760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	7.2	28.6
Particulate Matter (PM_{10})	36.1	135.8
Total Particulate Matter (TSP)	92.5	318.4
Sulfur Dioxide (SO_2)		
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.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Coal and Ash Handling Description:

- **Mitchell Plant Coal Handling:**

  General Description:
  Normally, coal is received at the Mitchell Plant by river barge, rail car, truck or conveyor and is placed on the coal storage piles or transported to the coal silos for immediate plant use.

  Railcar Dumping System (Station R-6):
  Coal delivered to Mitchell Plant by rail car is unloaded at the rail car dumper and then transported by a feeder/conveyor system to Station R-2

  Coal Barge Unloader (Station R-1):
  Coal delivered to Mitchell Plant by river barge is unloaded at Station R-1 (coal barge unloader) and then transported via multiple conveyors to Station R-2

  Station R-2:
  Coal from the rail unloading and barge unloading systems enters Station R-2, where it can be crushed and then transferred to conveyor that transports it to Station R-3.

  Station R-3:
  At Station R-3, coal can be placed on a conveyor that transports it to Station R-4.

  Station R-4:
  At Station R-4, coal is sampled and then can be transferred to either a conveyor that transports the coal to Station 2 or to a series of conveyors ending with a radial stacker that discharges the coal to the North Yard long-term storage pile.

  Station 2:
  At Station 2, coal is transferred to a conveyor and then to a radial stacker for distribution on the South Yard active surge pile.

  Station R-7:
  Station R-7 is located under the North Yard storage pile. At Station R-7, coal is pushed by dozer into a reclaim hopper where it is transferred via a feeder/conveyor system to Station R-4. As described previously, coal that enters Station R-4 can be diverted vial conveyors to the Radial Stacker at Station 2 and placed on the South Yard surge pile.

  Stations 3A, 3B, and 3C:
  Stations 3A, 3B and 3C are located under the South Yard surge pile. Coal is reclaimed from the surge pile through reclaim hoppers at each of these Stations and transferred via a series of feeders/conveyors to Station 3.

  Station 1A:
  Station 1A is also located under South Yard surge pile. Coal that is reclaimed from the South Yard surge through reclaim hoppers at Station 1A can be crushed before being transferred via a feeder and conveyor to Station 1B.

  Station 1B:
  At Station 1B, coal is transferred to a conveyor that transports the coal to Station 2. As described previously, coal that enters Station 2 can be transferred onto the active surge pile via the radial coal stacker and then transferred via conveyors from the reclaim hoppers to Station 3.

  Station 3:
  At Station 3, coal is transferred to conveyors that transport the coal to Station 4.

  Station 4:

At Station 4, coal is sampled and then transferred to either the Unit 2 silo filling system or to conveyors that transport the coal to Station 5.
Unit 2 Silo Filling:
Coal that is diverted from Station 4 to the Unit 2 silo filling system is discharged into the Unit 2 silos via a series of conveyors and diversion gates.

Station 5 and Unit 1 Silo Filling:
At Station 5, coal is diverted to a series of conveyors and diversion gates that discharge coal into the Unit 1 silos.

Emergency Conveyor System:
Emergency conveyor systems, located above the Unit 1 and Unit 2 silos provide emergency filling of the silos if, for any reason, the primary system is inoperable.

Methods of Compliance:
Fugitive emissions from the coal handling and storage systems are controlled by various methods. Typical measures employed at Mitchell Plant to control fugitive dust emissions from the coal handling and coal storage facilities include, but are not limited to: full and partial transfer point enclosures, coal wetting, full and partially covered conveyors, compaction, and delivery management techniques. The delivery management techniques generally minimize the amount of coal in storage: however, coal delivery capabilities and practices may vary throughout the year. For example, stockpiles may be periodically increased in size in anticipation of coal unloader outages or temporary mining shutdowns. The Mitchell Plant employs management techniques to control and minimize fugitive emissions from the coal handling system and the coal storage areas. The coal handling and storage areas are inspected periodically in accordance with Title V requirements to insure that compliance with fugitive emissions regulations is being maintained.

- **Mitchell Plant Ash Handling:**

Fly Ash Handling Description:
The Mitchell Plant fly ash removal system conveys fly ash collected in the electrostatic precipitator hoppers. Fly ash is then removed from the hoppers by a vacuum conveying system that flows into the dry fly ash handling system. A description of the dry fly ash system follows.

The Mitchell Plant dry fly ash handling system conveys dry, free flowing Fly Ash and Economizer Ash from Units 1 and 2 to three concrete Fly Ash Silos for storage and transport. The overall handling system is composed of three major processes: Unit 1 Fly Ash Removal System, Unit 2 Fly Ash Removal System and the Fly Ash Silo System. Additionally, a dry fly ash landfill and associated haul road are utilized for disposal of the fly ash.

<u>Unit 1 Fly Ash Removal System</u>
The Unit 1 Fly Ash Removal System includes the ash handling Vacuum Conveying System from the precipitator boxes and Economizer hoppers to the Vacuum/Pressure Transfer Stations and the ash handling Pressure Conveying System to the Fly Ash Silos.

There are two Vacuum Conveying Systems, one per precipitator box, provided to convey the ash from the Fly Ash hoppers and the Economizer Ash hoppers (handled by Box 1 ash handling vacuum system) and are operated independently of the other System. Each System is designed to convey to one of two dedicated Vacuum/Pressure Transfer Stations (TS-1A, TS-1B or TS-1C, TS-1D). An automatic Transfer Station crossover exists for each conveying System when one Transfer Station is shut down for maintenance. There are a total of four Transfer Stations for Unit 1. A Transfer Station consists of one Filter/Separator assembly and two feeder assemblies.

The vacuum source for the Vacuum Conveying System is supplied by one of three motor driven Mechanical Exhausters (ME-1A, ME-1B, ME-1C). The three Mechanical Exhausters are connected such that one is dedicated to each System and one is a spare that can be used by either System. The mixture of ash and air is conveyed in conveyor lines in a dry state to the Filter/Separator of the selected Transfer Station where ash is removed from the air stream and dumped into the feeder assemblies for pressure

conveying to the Fly Ash Silo System for storage and transport. The Filter/Separator is intended to control particulate emissions from the conveying air. When conveying air leaves the separating equipment, it passes through the Mechanical Exhauster and discharges to atmosphere.

There are two Pressure Conveying Systems, one for each unit (one for unit 1 and one for unit 2) serving a pair of Transfer Stations, provided to convey the ash from the Transfer station feeder assemblies to the Fly Ash Silos. The two systems are operated independently of each other. A common spare pressure conveying line (with automatic crossover) is provided for both conveying Systems. Therefore, there are three pressure conveying lines routed to the Fly Ash Silos.

Conveying air for each Pressure System is supplied by one of three motor driven Fly Ash Conveying Compressors. The three Compressors are connected such that one is dedicated to each System and one is a spare that can be used by either System.

Two feeder assemblies are located under each Filter/Separator. Each feeder assembly receives material from the Filter/Separator at low pressure and introduces it into the pressurized conveyor line. The row of feeder assemblies' empty, in a timed sequence, into the main conveying line. Here, the material is mixed with the conveying air and is transported to the Fly Ash Silos.

The material is collected and stored in the Silos, while the conveying air is vented to atmosphere through a Bin Vent Filter (BVF-A, BVF-B, BVF-C). Each storage silo is equipped with a bin vent filter. The bin vent filter is intended to control particulate emissions from the displaced air that is discharged from the silos. The air discharging through the bin vent filter is a result of the conveying air, dry unloader vent fan air, the air displacement caused by filling the silo with fly ash, the air displacement caused by expansion due to temperature difference, and also from fly ash fluidizing air that is blown into the bottom of the storage silo.

Unit 2 Fly Ash Removal System
The Unit 2 Fly Ash Removal System is similar to the Unit 1 Fly Ash Removal System.
Unit 2 Mechanical Exhausters (ME-2A, ME-2B, ME-2C)
Transfer Stations (TS-2A, TS-2B or TS-2C, TS-2D)

Fly Ash Silo System
The Fly Ash Silo System includes three concrete Fly Ash Silos, each equipped with its own dedicated controlled Silo Fluidizing System, Silo Dry Ash Unloading System and Silo Conditioned Ash Unloading System.

The material collected and stored in the Fly Ash Silos can be unloaded into trucks for removal to a disposal point in either a dry or conditioned state. Ash is unloaded from a Silo in a dry state into a closed-top tank truck with a Telescopic Spout (TC-A, TC-B, TC-C). Each spout is equipped with a vent module (TCV-A, TCV-B, TCV-C). If it is not desired to unload the ash in a dry state, ash is unloaded from a Silo in a conditioned state into an open-top truck with a Pin Paddle Mixer/Unloader (WFA-AA, WFA-BA, WFA-CA, WFA-AB, WFA-BB, WFA-CB). The trucks, containing conditioned fly ash, are used to transport the ash to the Mitchell Plant dry fly ash landfill that was constructed in conjunction with the dry fly ash project.

Bottom Ash Handling Description:
The Mitchell Plant bottom ash removal facilities are designed as wet transport and storage systems and therefore have no fugitive emissions. Slag shed from the furnace walls or dislodged by slage blowers falls through the furnace hopper throats and is collected in ash hoppers. Bottom ash accumulated in the ash hoppers is removed periodically by sluicing it from the hoppers through an ash gate and bottom ash jet pump into an ash disposal line. The ash disposal line carries the mixture to the bottom ash disposal ponds.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Limestone Handling and Processing

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures, water sprays.
Emission Groups 1S	Limestone Handling	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The limestone handling system consists of a barge unloader, chutes and conveyors, transfer stations, and storage piles for limestone. See attached description of the limestone handling system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Limestone transfer capacity (nominal) – up to 750 ton/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 750 ton/hr	Nominal 1,100,000 ton/yr	8760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.67	0.52
Particulate Matter (PM_{10})	4.62	3.68
Total Particulate Matter (TSP)	10.30	8.53
Sulfur Dioxide (SO_2)		
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. For purposes of determining fugitive emissions associated with this system, the FGD Reg 13 permit application (permit R13-2608A) calculations were used.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Limestone Handling and Processing Description:

Limestone Handling:
The limestone handling system is the portion of the limestone supply system that is not applicable under 40 CFR 60 Subpart OOO NSPS regulations.

Limestone will be delivered to the Mitchell Plant site in river barges having capacities of up to 2000 tons. New barge docking river cells will be installed parallel to the shoreline near the existing fuel oil unloading pier to store the incoming and outgoing fleet of limestone barges. A barge haul system will be installed to position the barges for unloading. The limestone barge unloading equipment, consisting of a 1000 ton per hour free digging capacity clamshell crane unloader (750 ton per hour average unloading rate), and a receiving hopper/vibratory feeder will be mounted on the new large diameter river cells.

Limestone will be transferred from the clamshell crane Unloader BUN-1 to the fixed, cell mounted hopper RH-1. The hopper RH-1 will discharge via a vibrating feeder VF-1 to the tail end of the limestone dock/connecting conveyor BC-1. The limestone dock/connecting conveyor BC-1 will transfer the limestone from the unloading dock to the first limestone/gypsum Transfer House #1 (TH-1) on shore. Dust will be controlled at the barge unloading operation (hopper load-in area) using a dry fog dust suppression system and windscreens. Nozzles will be mounted around the top of the unloading hopper generating fog to keep any dust generated by dropping the limestone into the hopper, inside the hopper. Further, the dock/connecting conveyor will utilize a ¾ cover to minimize fugitive dust.

At Transfer House TH-1, the limestone will be transferred from the dock/connecting conveyor BC-1 to the storage-pile stacking conveyor BC-2. The stacking conveyor BC-2 will convey the limestone to the active/long-term storage area creating the limestone storage pile (LSSP). The limestone storage pile will be uncovered and have a total capacity of approximately 41,300 tons. The limestone storage pile (LSSP) will have a capacity of approximately 15-days at a generator capacity factor of 100%. The long-term portion of the storage pile will be constructed by moving limestone from the active portion of the pile with mobile equipment to place it in the long-term storage portion of the pile. At the Transfer House TH-1, fugitive dust will be controlled with the use of fully enclosed chutework located within an enclosed building. The chutes incorporate closed loading skirts with adjustable rubber seals to minimize free air flow across the chute. The stacking conveyor BC-2 utilizes a ¾ cover to minimize fugitive dust and discharges to the limestone storage pile LSSP via a concrete stacking tube ST-1.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Limestone Handling and Processing

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures, baghouses, water sprays.
Emission Groups 3S	Limestone Processing	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The limestone processing system consists of chutes and conveyors, transfer stations, ball mills, and silos for limestone. See attached description of the limestone processing system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Limestone transfer capacity (nominal) – up to 750 ton/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 750 ton/hr	Nominal 1,100,000 ton/yr	8760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	1.14	0.82
Particulate Matter (PM_{10})	7.50	5.40
Total Particulate Matter (TSP)	15.85	11.43
Sulfur Dioxide (SO_2)		
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. For purposes of determining fugitive emissions associated with this system, the FGD Reg 13 permit application (permit R13-2608A) calculations were used. The only exception is that baghouse potential emissions were adjusted to reflect a more reasonable potential emission total. Previously, the baghouse emissions were calculated assuming dust loading of the control device was equal to the maximum that the device could handle. The adjustment involves calculating a dust loading that is equal to the maximum that the device will see in the particular installation.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Limestone Processing Description:

Non-Metallic Mineral (Limestone) Processing System:
The "Non-Metallic Mineral Processing" system is the portion of the limestone supply/processing system that is applicable under 40 CFR 60 Subpart OOO NSPS regulations.

Limestone will be reclaimed from the active conical pile through two below grade vibrating pile drawdown hoppers DH-1 and DH-2 that discharge onto two reclaim feeders VF-2 and VF-3. The reclaim feeders VF-2 and VF-3 will discharge onto the tunnel reclaim conveyor BC-3. The tunnel reclaim conveyor BC-3 will discharge onto the silo "A" feed conveyor BC-4. The silo "A" feed conveyor BC-4 terminates in the limestone silo enclosure above the northernmost limestone storage silo LSB-1.

Each of the reclaim feeders (VF-2 and VF-3) will be completely enclosed with loading skirts. The portion of the tunnel reclaim conveyor BC-3 that is located above ground as well as the silo "A" feed conveyor BC-4 utilize ¾ covers to minimize fugitive dust. Each of the transfer points utilizes fully enclosed chutework located within an enclosed building. The chutes incorporate closed loading skirts with adjustable rubber seals between the skirtboard and the loaded belt.

An alternate limestone reclaim system has been designed into the Mitchell project. The alternate reclaim system is used when the reclaim feeders VF-2 and VF-3 are out of service for maintenance or repair or for handling limestone during periods of time that it may be frozen in clumps. The system consists of a feeder/breaker to receive limestone directly from under the storage pile or from an end loader. The feeder/breaker discharges to the limestone tunnel reclaim conveyor BC-3. The limestone tunnel reclaim conveyor can then transfer the limestone to the normal limestone feed conveyors

Limestone from the silo "A" feed conveyor BC-4 can be fed directly into the northernmost limestone silo LSB-1, or can be diverted to the silo "B" feed conveyor BC-5 via a diverter gate. The silo "B" feed conveyor BC-5 will convey the material to limestone silo LSB-2 or to the future silo "C" feed conveyor BC-6 via a diverter gate. Future silo "C" feed conveyor BC-6 will convey limestone to future limestone silo LSB-3. Each of the silo feed conveyors utilize a ¾ cover to minimize fugitive dust and each of the transfer points utilize fully enclosed chutework located within an enclosed building. The chutes incorporate closed loading skirts with adjustable rubber seals between the skirtboard and the loaded belt.

A bagfilter dust collector system will be provided to serve each of the silos. The limestone silo dust collector will have an open bottom and will be mounted on top of the limestone silo. All material collected on the bags falls via gravity into the limestone silo.

Three (including one future) independent FGD reagent preparation trains are provided, supplying complete redundancy support of 24-hour operation. Provisions have been made in the reagent preparation building design to expand the building and add the third (future) reagent preparation train (ball mill, classifier, ball mill product tank, ball mill slurry pumps, etc.) Each of the preparation trains supply limestone slurry to one recirculating feed loop that distributes slurry to both absorbers (one absorber per generating unit).

The limestone silos LSB-1, LSB-2, and LSB-3 (future) are used to store limestone for feed to the grinding system. Limestone drops by gravity from the vibrating bin discharger to the limestone weigh feeder LSWF-1, LSWF-2 and LSWF-3 (future), which conveys the limestone on a belt to the feed chute on the Wet Ball Mill. The limestone weigh feeder is a weighing, variable speed conveyor with its speed adjusted to set the mass flow. Make-up water is added to the feed chute and the mixture enters the wet ball mill.

The wet ball mill is a horizontal cylinder partially filled with steel balls that is rotated, tumbling the balls and grinding the limestone solids. The wet ball mill is motor driven through a gear reducer and is supplied with an air-operated clutch, which is engaged to start the mill once the mill motor is in operation. The clutch may also be used to stop the ball mill operation without stopping the motor. The size of the limestone particles is reduced in the ball mill by a rotating charge of steel balls. The limestone slurry overflows from the ball mill through the mill trommel and gravity feeds to the ball mill slurry tank. Limestone slurry density is maintained by controlling the make-up water flow rate to the classifier underflow launder proportional to the limestone feed rate. Each of the ball mill trains operates as its own separate loop.

The mill slurry pump transfers the limestone slurry from the mill slurry tank to the ball mill classifier. Two 100% ball mill slurry pumps per ball mill slurry tank are provided. Each limestone slurry classifier for the ball mills contains a battery of cyclones with a minimum of 25% spare capacity. The cyclone classifiers are arranged in a circular configuration and are fed from a cylindrical feed chamber. The feed chamber contains no internal partitions, baffles, and/or obstructions and provides a uniform and constant inlet pressure to each cyclone. Fine product slurry is separated from oversized particles of limestone by the classifier. The fine product collected in the overflow launder gravity flows to a common header, which in turn feeds the two limestone reagent slurry storage tanks, while the slurry containing oversized limestone is collected in the underflow launder and gravity flows back to the corresponding ball mill inlet for regrinding.

The two reagent slurry storage tanks are used to maintain a slurry inventory for feed to the absorbers and to provide the minimum suction pressure required by the reagent slurry feed pumps. The reagent slurry storage tank agitator maintains solids in suspension. The reagent slurry feed pump delivers slurry to one of two recirculating feed loop (one operating, one spare). The reagent slurry feed pump maintains a continuously recirculating flow in the loop and slurry velocities are constantly maintained while at the same time providing the required reagent feed to each absorber. Reagent slurry is added to each reaction tank at the base of the absorber in response to the SO2 concentration in the flue gas entering the wet FGD system and the pH of the reaction tank slurry.

The entire processing system beginning at the limestone silo fill point is enclosed in the processing building and all conveyors and transfer points are totally enclosed. Furthermore, the grinding operation occurs in water (slurry) and does not produce dust.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Gypsum Handling

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures, water sprays.
Emission Groups 2S	Gypsum Handling	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The gypsum handling system consists of a barge loader and unloader, chutes and conveyors, transfer stations, and storage piles for gypsum. See attached description of the gypsum handling system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Gypsum transfer capacity (nominal) – up to 1,000 ton/hr.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 1,000 ton/hr	Up to Nominal 1,912,000 ton/yr	8760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.74	0.63
Particulate Matter (PM_{10})	11.78	4.38
Total Particulate Matter (TSP)	47.22	9.99
Sulfur Dioxide (SO_2)		
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. For purposes of determining potential fugitive emissions associated with this system, the FGD Reg 13 permit application (permit R13-2608A) calculations were used.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Gypsum Handling Description:

Gypsum Handling:
At the Mitchell facility, gypsum is created as a by-product of the Wet FGD Process. The gypsum will be collected from the four vacuum belt filters (including one future vacuum belt filter) that will discharge onto the Gypsum Vacuum Filter Collecting Conveyor BC-8. The Collecting Conveyor BC-8 will be located inside the dewatering building and will convey the material to the outside of the building and into Transfer House #3 where the gypsum is transferred to the gypsum Connecting Conveyor BC-9.

Connecting Conveyor BC-9 conveys the gypsum from Transfer House #3 to Transfer House #4 where it is transferred to gypsum Connecting Conveyor BC-10. Connecting Conveyor BC-10 conveys the gypsum from Transfer House #4 to Transfer House #5 where it is transferred to gypsum Connecting Conveyor BC-11. Connecting Conveyor BC-11 conveys the gypsum from Transfer House #5 to Transfer House #6 where it is transferred to either gypsum Stacking Tripper Conveyor BC-12 or gypsum Bypass Conveyor BC-13.

The head end of the stacking tripper conveyor BC-12 will be equipped with a traveling tripper able to discharge the gypsum to create the Gypsum Stockpile (GSP). The stockpile will be a 14,200-ton pile to store the gypsum prior to transfer for disposal or use. The gypsum stockpile will be located in a fully enclosed building. At the gypsum stockpile area, the gypsum is reclaimed from the and discharged to gypsum Reclaim Conveyor BC-14. Reclaim Conveyor BC-14 carries the gypsum to Transfer House #7 where it is transferred to gypsum Connecting Conveyor BC-15. As an alternative to carrying the gypsum on BC-14 to Transfer House #7, Reclaim Conveyor BC-14 will be designed as a reversible conveyor. As discussed later in this system description, Reclaim Conveyor BC-14 (operating in tpsrhe reverse mode) will be designed for transfer to a conveyor system supplying gypsum to an alternative destination where it will be utilized by a wallboard manufacturing facility.

As an alternative to placing the gypsum in the stockpile via the stacking tripper conveyor BC-12, Bypass Conveyor BC-13 can be used to transport the gypsum from Transfer House #6 to Transfer House #7 where it is transferred directly to Connecting Conveyor BC-15.

Connecting Conveyor BC-15 conveys the gypsum from Transfer House #7 to Transfer House #1 where is transferred to Transfer Conveyor BC-16. Transfer Conveyor BC-16 conveys the gypsum from Transfer House #1 to the gypsum Barge Loader BL-1. Barge Loader BL-1 transfers the gypsum to waiting river barges via a telescopic chute.

As mentioned previously, as an alternative to carrying the gypsum on BC-14 to Transfer House #7 and on to the barge loader BL-1 for loadout, Reclaim Conveyor BC-14 will be designed as a reversible conveyor. In the reverse mode, Reclaim Conveyor BC-14 will be designed for an extension of the gypsum handling system to allow gypsum transfer to a wallboard plant that will be constructed south of the Mitchell plant on the eastern side of West Virginia State Route 2.

At the gypsum stockpile area, the gypsum is reclaimed from the stockpile and discharged to gypsum Reclaim Conveyor BC-14. Reclaim Conveyor BC-14 (operating in the reverse mode) carries the gypsum to Transfer House TH-8 where it is transferred to gypsum Transfer Conveyor BC-19. Transfer Conveyor BC-19 conveys the gypsum to Transfer House TH-9 where it is transferred to gypsum Transfer Conveyor BC-20. Transfer Conveyor BC-20 conveys the gypsum to Transfer House TH-10 where it is transferred to gypsum Transfer Conveyor BC-21 crossing State Highway 2. Transfer Conveyor BC-21 conveys the gypsum to a future wallboard plant. As an alternative to transferring gypsum from Conveyor BC-20 to BC-21 in Transfer House TH-10, gypsum can also be diverted from Conveyor BC-20 to a small stockpile located at the base of Transfer House TH-10. The gypsum in the small stockpile will be reclaimed with end loaders and placed into dump trucks for transport. The purpose of the Transfer House TH-10 diversion gate and small stockpile is to provide a method of performing a periodic material weight test of the Conveyor BC-19 belt scale by re-weighing the material on a truck scale.

In order to support operation of the third-party wallboard plant, it will be necessary for additional gypsum to be delivered to the Mitchell Plant site in river barges having capacities of up to 1500 tons. The gypsum unloading system will utilize the same barge docking river cells, barge haul system and clamshell barge unloader as the limestone handling system. The barge unloader's clamshell bucket will be changed via a quick disconnect when switching from handling limestone to gypsum.

Gypsum will be transferred from the clamshell unloader BUN-1 to the fixed, cell mounted hopper RH-4. The unloading hopper RH-4 will discharge via a rotary plow RP-1 to the tail end of the gypsum dock/connecting conveyor BC-17. The gypsum dock/connecting conveyor BC-17 will transfer the gypsum from the unloading dock to Transfer House TH-7 on shore. Dust will be controlled at the barge unloading operation (hopper load-in area) using a dry fog dust suppression system and windscreens. Nozzles will be mounted around the top of the unloading hopper generating fog to keep any dust generated by dropping the gypsum into the hopper, inside the hopper.

At Transfer House TH-7, the gypsum will be transferred from the dock/connecting conveyor BC-17 to reclaim conveyor BC-14. As previously noted Reclaim Conveyor BC-14 will be designed as a reversible conveyor. In the reverse mode, Reclaim Conveyor BC-14 will be designed for allow gypsum transfer to a wallboard plant located south of the Mitchell plant as previously described.

As an alternative to transferring the gypsum from dock/connecting conveyor BC-17 to reclaim conveyor BC-14 for transport to the wallboard plant, the gypsum can be temporarily diverted to the gypsum stockpile area awaiting transfer to the wallboard plant. Under this scenario, gypsum from BC-14 is diverted to bypass conveyor BC-18 via diverter gate DG-8 inside Transfer House TH-7. Bypass conveyor BC-18 will transfer the material to stacking conveyor BC-12 inside Transfer House TH-6. As previously described, Stacking Conveyor BC-12, equipped with a traveling tripper, will stack the material into the gypsum stockpile.

Subsequently, as previously described, the gypsum is reclaimed from the stockpile and discharged to gypsum Reclaim Conveyor BC-14. Reclaim Conveyor BC-14 carries the gypsum to the gypsum conveyor extension to the wallboard plant.

Because the gypsum material will be damp (10% moisture by weight) from the filtering process, additional dust collection/suppression equipment is not provided. Nevertheless, the transfer points are designed as fully-enclosed transfer points and each of the outdoor conveyors utilize ¾ covers.

In the event that the normal gypsum handling system or portions of that system are out of service for maintenance/repair or if the gypsum product is of poor quality, provisions are being made to allow for emergency gypsum handling and disposal. The system consists primarily of an emergency stackout conveyor and stockpile. The gypsum collected from the four vacuum belt filters (including one future vacuum belt filter) is capable of being discharged onto the Gypsum Vacuum Filter Collecting Backup Conveyor BC-7. The Backup Collecting Conveyor BC-7 will be located inside the dewatering building and will convey the gypsum to the outside of the building where it will be stacked out to the emergency gypsum stockpile (GSPE). Gypsum stockpiled on the emergency pile will be reclaimed using front-end loaders and placed into dump trucks for transfer and disposal off-site or transfer to the normal gypsum stockpile (GSP). Since the material will be damp (10% moisture by weight) from the filtering process additional dust collection/suppression equipment is generally not necessary. Nevertheless, a ¾ cover will be utilized on the outdoor portion of Backup Collecting Conveyor BC-7.

ATTACHMENT E - Emission Unit Form

Emission Unit Description WWT Handling

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures, baghouses, water sprays.
Emission Groups 11S	WWT Handling	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The waste water treatment handling system consists of truck unloading equipment, chutes and conveyors, transfer stations, lime storage silos, and storage piles for WWT cake. See attached description of the WWT handling system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): WWT Cake transfer capacity (nominal) up to 600 ton/hr.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 600 ton/hr	Nominal 212,000 ton/yr	8760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	14.95	0.87
Particulate Matter (PM_{10})	98.90	5.83
Total Particulate Matter (TSP)	219.56	14.63
Sulfur Dioxide (SO_2)		
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. For purposes of determining potential fugitive emissions associated with this system, the FGD Reg 13 permit application (permit R13-2608A) calculations were used.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

WWT Handling Description:

Waste Water Treatment Handling System:
The Wastewater Treatment System is used to treat the FGD wastewater prior to discharge of the water into the plant wastewater ponds. The wastewater treatment system is designed to reduce the effluent total suspended solids (TSS) concentration and maintain pH within an acceptable range. In addition to the TSS reduction, the treatment system is designed to be retrofitted should dissolved metals removal be required in the future. A generic treatment system process flow diagram has been supplied with this permit application.

The wastewater treatment system process includes equipment for dissolved sulfate desaturation, primary clarification, chemical addition, mixing and reaction, secondary clarification and filtration. Chemicals are added to the wastewater stream to improve the removal efficiency of the waste stream solids. The solids removed from the water stream are dewatered and stored for disposal. Dewatering is accomplished by filter presses (four, including one future). The design includes a provision to add a polymer at the inlet to the secondary clarifiers if required. Filter cake storage is in concrete bins, or rooms located beneath the filter presses. After desired dryness is achieved, the dewatered filter cake drops through a hole in the floor to a dewatered filter cake storage room. The projected amount of filter cake that will be generated on an annual basis is 212,000 tons/year.

Hydrated lime will be delivered to the site by pneumatic truck equipped with its own positive displacement rotary blower. The lime will be stored on site in two lime storage silos. A bag type bin vent filter, rated at 99.9 percent removal efficiency, will be provided to control escape of dust during transfer. Lime feeders and mix tanks will be located inside an enclosure below the silos.

Along with the lime, several other liquid chemicals will be delivered for use in the wastewater treatment system. These include ferric chloride and acids delivered by bulk tank truck along with organosulfate (future), and a polymer delivered by totes.

Disposal of the filter cake that will be generated by the wastewater treatment system will be accomplished by either placing the material in a barge, or in emergency situations, trucks for transport from the plant site. Each of the cake storage rooms (four) located beneath the filter presses (three with provisions for the fourth) will be open at one of the narrow ends for access by front-end loaders (i.e. the building enclosure consists of three walls and a roof). The filter cake will be removed by front-end loader and deposited into a covered stockpile at the loading end of a feeder/breaker FB-2, (drag flight-type conveyor). Feeder/breaker FB-2 will transport filter cake to the loading end of Transfer Conveyor BC-22 (belt type conveyor). Transport conveyor BC-22 will transport and discharge onto transfer conveyor BC-15 at Transfer House TH-12. Transfer conveyor BC-15 conveys the filter cake to Transfer House TH-1 where it is transferred to Transfer Conveyor BC-16. Transfer Conveyor BC-16 conveys the filter cake from Transfer House TH-1 to the Barge Loader BL-1. Barge Loader BL-1 transfers the filter cake to covered river barges via telescopic chute TC-1. Feeder/breaker FB-2 and Transfer Conveyor BC-22 will limit the maximum load out capacity to 600 tons per hour.

Filter cake storage will be accommodated inside the storage rooms (maximum of 900 tons each) beneath the filter presses as well as at the covered loading area of the feeder/breaker (300 tons). In the event barge load out of the filter cake is disrupted (i.e. high river water conditions stopping barge traffic) and the covered filter cake storage areas are filled, trucks will be used to transport the filter cake to GSPE, the gypsum emergency stockpile area, (2500 tons) normally used for gypsum and covered by tarps. In the extreme condition that the stockpile area is filled or if the facility is able to find a third party interested in purchasing the filter cake, trucks will be used to transport the filter cake off-site.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Coal Blending System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Conveyor covers, partial and full enclosures.
Emission Group 5S	Coal Blending System	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The coal blending system consists of a chutes and conveyors, transfer stations, and storage piles for coal. See attached description of the coal blending system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Coal transfer capacity (nominal) – up to 3,000 ton/hr.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 3,000 ton/hr	Nominal 5,732,544 ton/yr	8760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)	3.65	4.76	
Particulate Matter (PM_{10})	24.08	31.46	
Total Particulate Matter (TSP)	50.92	66.52	
Sulfur Dioxide (SO_2)			
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. For purposes of determining potential fugitive emissions associated with this system, the FGD Reg 13 permit application (permit R13-2608A) calculations were used.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.0 through Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.2 through 6.6 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Coal Blending System Description:

Coal Blending:
At the Mitchell Plant, the installation of the Wet FGD Process will allow the facility to burn a high-sulfur coal potentially available from a local mine. Nevertheless, it will likely be necessary to blend this high sulfur coal with a lower sulfur coal in order to obtain the coal qualities necessary for long-term, reliable combustion of the coal in the Mitchell Units. As such, a coal blending system is planned as an integral part of the FGD retrofit project.

The locally mined coal will enter the Mitchell site via the existing Consol Conveyor 3100. Conveyor 3100's discharge will be modified to transport the coal into the Mitchell coal handling system Transfer Station 1 (HTS-1). In Transfer Station #1, coal will be transferred from Conveyor 3100 to Stacking Conveyor HSC-1. Stacking Conveyor HSC-1 will transport the coal from Transfer Station #1 to Transfer Station #2A (HTS-2A) where the coal will be sampled and transferred to Stacking Conveyor HSC-2. Stacking Conveyor HSC-2 will transport the coal from Transfer Station #2A to Transfer Station #3 (HTS-3) where the coal will be transferred to Stacking Conveyor HSC-3. As an alternative, coal can be transferred to Stacking Conveyor HSC-3 from existing plant radial stacker R9 via Stacking Hopper SH-1.

Stacking Conveyor HSC-3 transfers the coal from Transfer Station #3 to the existing North Yard Storage area where it will be discharged through a new Stacking Tube (ST-1) to help form the high sulfur coal pile.

Coal will be reclaimed from the high sulfur coal pile via four under-pile drawdown hoppers/vibratory feeders. Each of the four vibratory feeders (HVF-1 through HVF-4) transfer coal to Tunnel Reclaim Conveyor HRC-1. Tunnel Reclaim Conveyor HRC-1 transfers the coal from under the pile to Transfer Station #2B where it is transferred to Reclaim Conveyor HRC-2. Reclaim Conveyor HRC-2 will transport the coal from Transfer Station #2 to Transfer Station #4 (HTS-4) where the coal will be transferred to Reclaim Conveyor HRC-3.

Reclaim Conveyor HRC-3 will transport the coal from Transfer Station #4 to Transfer Station #5 where it will discharge via a surge bin (SB-1) to two Belt Feeders (HBF-1A and HBF-1B). Belt Feeder HBF-1A will discharge coal onto existing plant coal conveyor 4E. Belt Feeder HBF-1B will discharge coal onto existing plant coal conveyor 4W. The blending of high sulfur coal with the lower sulfur coal will occur as the high sulfur coal is discharged from Belt Feeders HBF-1A and HBF-1B onto the existing conveyors 4E and 4W that carry low sulfur coal from the existing low sulfur coal pile.

In order to minimize fugitive dust generated from the coal blending system, each of the new transfer points will utilize fully enclosed chutework located within fully enclosed buildings. Furthermore, all outdoor conveyors will utilize ¾ covers. To further minimize fugitive dust generated from the coal blending system, conveyor to conveyor transfers will utilize controlled flow transfer chutes.

An alternate high sulfur coal reclaim system has been designed into the Mitchell project. The alternate reclaim system is used when the reclaim feeders (HVF-1 through HVF-4) are out of service for maintenance/repair or in the event it is necessary to separate frozen chunks of coal. The system consists of a feeder/breaker (FB) to receive coal directly from under the storage pile or from a front-end loader. The feeder/breaker discharges to the high sulfur coal tunnel reclaim conveyor (HRC-1). The high sulfur coal tunnel reclaim conveyor can then transfer the coal to the normal high sulfur coal reclaim conveyors.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Emergency Quench Water System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** Full enclosures.
Emission Units 6S and 7S	Emergency Quench Water System	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The emergency quench water system consists of two diesel-engine driven quench pumps. See attached description of the emergency quench water system.

Manufacturer:	**Model number:**	**Serial number:**
Clark Diesel	JU 4R-UF-19 or equal	N/A

Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	See equipment list in Attachment D	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 60 HP (approx.),

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
5.5 gal./hr (each)	1,100 gal./yr (combined)	200 hrs/yr (both engines combined)

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.8 mmBtu/hr nominal, 60 HP	**Type and Btu/hr rating of burners:**

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.
Diesel Fuel

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.2%	N/A	141,000 Btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.52	0.08
Nitrogen Oxides (NO_X)	7.06	0.35
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.5	0.02
Particulate Matter (PM_{10})	0.5	0.02
Total Particulate Matter (TSP)	0.5	0.02
Sulfur Dioxide (SO_2)	0.46	0.02
Volatile Organic Compounds (VOC)	0.76	0.04
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 and manufacturer's information. For purposes of determining emissions associated with this equipment, the FGD Reg 13 permit application (permit R13-2608A) calculations were used. The estimated potential emissions represent the total emissions for both quench pumps combined.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 7.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 7.2 through 7.5 (see Attachment I): Where appropriate, revisions to existing language are noted

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**.

Emergency Quench Water System Description:

Emergency Quench Water:
The existing air heaters are electric powered which could fail in case of plant power failure. In this case, the hot flue gas (600oF) could enter the absorbers. The emergency quench water system is designed to protect the absorbers by spraying water into the flue gas entering the absorber. The emergency quench system is activated in the event of a loss of on-site power. Two 100% pumps (including one spare) are provided for redundancy. The pumps are diesel engine driven to allow operation during blackout conditions. The service water tank provides the water supply.

Each emergency quench pump drive engine is rated at approximately 60 HP. No post-combustion pollution controls are utilized. Because these diesel engines are each rated at less than 500 brake horsepower, the engines are not subject to regulation under 40 CFR 63 Subpart ZZZZ (RICE rule).

The diesel fuel is supplied from a storage tanks holding approximately 70 gallons of fuel (one for each engine). Because the diesel fuel storage tanks are each less than 10,567 gallons capacity and will contain petroleum or organic liquids with a vapor pressure of 1.5 psia or less at storage temperature, and the emissions from both tanks, in the aggregate, are less than 2 tons per year, the tanks are considered de-minimis sources. De-minimis sources are not required to obtain construction permits under 45 CSR 13.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Dry Sorbent Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Emission Group 4S	Dry Sorbent Handling Systems	**F**ull enclosures, baghouses.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The dry sorbent handling system consists of truck unloading equipment, dry sorbent storage silos, etc. See attached description of the dry sorbent handling system.

Manufacturer:	**Model number:**	**Serial number:**
Various	Custom	N/A

Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	See equipment list in Attachment D	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 25 TPH Unloading, 500 Ton Dry Sorbent Silos

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 25 ton/hr	Dry Sorbent 81,000 TPY Nominal	8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	31.31	136.86
Particulate Matter (PM_{10})	206.77	903.82
Total Particulate Matter (TSP)	438.69	1912.18
Sulfur Dioxide (SO_2)		
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/permit limits and engineering knowledge. For purposes of determining potential fugitive emissions associated with this equipment, the FGD Reg 13 permit application (permit R13-2608A) calculations were used.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Dry Sorbent Handling System Description:

SO_3 Mitigation System:
The installation and operation of a Selective Catalytic Reduction (SCR) system in conjunction with a wet FGD system on a boiler combusting high sulfur coal can potentially lead to increased concentrations of SO_3. Subsequently, the SO_3 reacts with moisture in the stack plume and the atmosphere to support the secondary formation of H_2SO_4. If not mitigated, the increase in SO_3 and subsequent increase in the formation of H_2SO_4 can impact the visible appearance of the discharge plume downwind of the stack.

The Mitchell Plant SCR installation utilizes a low conversion catalyst that helps minimize the conversion of SO_2 to SO_3 by the SCR system. Nevertheless, a supplemental SO_3 mitigation system is needed to help reduce SO_3 concentrations. Based on AEP's evaluation of various SO_3 mitigation systems at other AEP generating facilities, it was determined that the primary SO_3 mitigation system that would be constructed at Mitchell plant was a dry sorbent injection system. Hydrated Lime is the primarily used dry sorbent, with Trona being the secondary option. When Hydrated Lime is used, the dry sorbent injection system is supplemented with the injection of liquid Magnesium Hydroxide. For the purposes of this permit application, each of the options is described.

Dry Sorbent Handling:
The dry sorbent is injected through a pneumatic conveying system to ductwork downstream of the air preheaters as a means to reduce SO_3 in the stack plume. The dry sorbent feed rate for each Mitchell Unit will vary depending on the sorbent (Trona or Hydrated Lime) being utilized and the sulfur content of the fuel. The Trona feed rate is variable with an expected maximum feed of up to 4.6 tons per hour (per unit). The Hydrated Lime feed rate is also variable with an expected maximum feed of up to 4.4 tons per hour (per unit).

Two dry sorbent storage silos at approximately 500 tons each receive dry sorbent from self-unloading trucks. Bin vent filters are supplied on each silo for the filtered venting of the truck blow-off air and the silo's fluidizing air system. An aeration system, consisting of open-type airslides, with operating and standby aeration blowers and routing valves supplies air to the silos, distribution bin, airslides, and de-aeration bins.

Dry sorbent is discharged out of the silo through a distribution bin and airslides into two de-aeration bins. The de-aeration bins are periodically filled and serve to control the fluidity of the material and minimize the head pressure that the material imposes on the downstream variable speed rotary feeders.

The feed stack-up below each de-aeration bin consists of a variable speed rotary feeder, vent hopper, fixed-speed rotary airlock, and material pick-up tee. There are two such stack-ups (one in-service and one stand-by), each with the capability to feed the primary conveying line. A pneumatically operated isolation valve is included at the discharge of the silo bin.

The dry sorbent is fed through a piping system (conveying lines) to injection lances located in the duct downstream of the air preheaters. Conveying air is supplied by three blower skid packages (two operating and one as standby) isolated by air-operated valves. Dry, high-pressure air is supplied for purging the bearings on the rotary feeders and airlocks and for pulsation cleaning of the bags in the bin vent filter at the top of each silo.

Because the dry sorbent handling system is a totally enclosed system using pressurized air as the carrying medium, particulate emissions are eliminated with the exception of those that are emitted as a result of truck traffic and from the baghouses installed on the storage silos. On a short-term basis, truck deliveries of dry sorbent are expected to be up to 2 per hour. At full load conditions, approximately 1550 tons of dry sorbent are potentially required per week. This equates to approximately 3215 trucks per year assuming a 100% capacity factor.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Magnesium Hydroxide Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit: F**ull enclosures
Emission Group 9S	Magnesium Hydroxide Handling Systems	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The magnesium hydroxide handling systems consists of truck unloading equipment, mag. hydroxide mix tanks, etc. See attached description of the magnesium hydroxide handling system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1,000 gallon mag. hydroxide mix tanks (2)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
8000 gal/hr delivered	Mag. Hyd. 6,600,000 Gal./yr	8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.08	0.03
Particulate Matter (PM_{10})	0.51	0.21
Total Particulate Matter (TSP)	2.61	1.08
Sulfur Dioxide (SO_2)		
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/permit limits and engineering knowledge. For purposes of determining potential fugitive emissions associated with this equipment, the FGD Reg 13 permit application (permit R13-2608A) calculations were used.

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Section 6.2 through 6.4 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

Magnesium Hydroxide Handling System Description:

SO_3 Mitigation System:
The installation and operation of a Selective Catalytic Reduction (SCR) system in conjunction with a wet FGD system on a boiler combusting high sulfur coal can potentially lead to increased concentrations of SO_3. Subsequently, the SO_3 reacts with moisture in the stack plume and the atmosphere to support the secondary formation of H_2SO_4. If not mitigated, the increase in SO_3 and subsequent increase in the formation of H_2SO_4 can impact the visible appearance of the discharge plume downwind of the stack.

The Mitchell Plant SCR installation will utilize a low conversion catalyst that will help to minimize the conversion of SO_2 to SO_3 by the SCR system. Nevertheless, it is anticipated that a supplemental SO_3 mitigation system will be needed to help reduce SO_3 concentrations. Based on AEP's evaluation of various SO_3 mitigation systems at other AEP generating facilities, it has been determined that the primary SO_3 mitigation system that will be constructed at Mitchell plant will be a dry sorbent injection system. Hydrated Lime is the primarily used dry sorbent, with Trona being the secondary option. When Hydrated Lime is used, the dry sorbent injection system is supplemented with the injection of liquid Magnesium Hydroxide. For the purposes of this permit application, each of the options is described.

Magnesium Hydroxide Injection:
The purpose of magnesium hydroxide injection is to assist in the mitigation of SO_3 in the furnace in the event that Trona dry sorbent injection in not being used. If hydrated lime dry sorbent is injected into the flue gas downstream of the air preheater, magnesium hydroxide injection into the furnace will likely be needed to assist in the mitigation of SO_3. Magnesium hydroxide, if use, will be injected into the furnace as a 15% magnesium hydroxide/water slurry. Approximately 1.5 tons per hour (per unit) of magnesium hydroxide will be required for 90% SO_3 mitigation.

The magnesium hydroxide will be delivered to the Mitchell Plant site by tanker truck in a 60% magnesium hydroxide/water slurry and pumped into one of two storage tanks. The 60% solution is then pumped into a small mixing tank where it will be diluted with filtered water to a 15% slurry. The 15% slurry is then pumped to the furnaces and injected. The tanker trucks are expected to have a nominal capacity of approximately 4000 gallons. The only emissions associated with this material handling system will be fugitive particulate emissions associated with the delivery truck traffic on the plant site. On a short-term basis, tanker truck deliveries for the magnesium hydroxide system are expected to be up to 2 per hour.

At full load conditions, approximately 18,000 gallons of 60% slurry will be required per day. This equates to approximately 1650 truckloads of liquid magnesium hydroxide per year assuming a 100% capacity factor.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Urea Handling System

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit: F**ull and partial enclosures.
N/A	Urea Handling Systems	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The urea handling systems consists of truck unloading equipment, screw conveyor, mix tanks, etc. See attached description of the urea handling system.

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 48 Ton Unloading Hopper, 200,000 gal. Urea Storage Tank.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Nominal 50 ton/hr	Dry urea 26,000 TPY Nominal,	8760 Hr/Yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:**

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.
N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.036	0.009
Particulate Matter (PM_{10})	2.47	0.64
Total Particulate Matter (TSP)	6.93	1.8
Sulfur Dioxide (SO_2)		
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/permit 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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

X.0. Source-Specific Requirements [Urea Handling (*Emission points listed in section 1.0. Table*)]
X.1. Limitations and Standards
The Urea handling system is subject to 45CSR§2-5 as outlined in the facility wide section of this permit (condition 3.1.9) regarding fugitive dust control system.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

X.2. Monitoring, Recordkeeping, and Reporting Requirements
See Permit conditions 3.4 and 3.5 in the facility wide section of this permit. [45 CSR 30-5.1.c]

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**.

Dry Sorbent and Magnesium Hydroxide Handling System Description:

Urea Handling System:
Ammonia is the reagent used in the SCR process to reduce the NO_x, produced in the combustion process to elemental nitrogen and water vapor. The ammonia is generated from the Urea to Ammonia (U2A™) system. The U2A™ system uses dry urea as the feedstock to produce ammonia vapor by hydrolyzing a urea solution to form ammonia vapor, carbon dioxide and water vapor. The urea solution is prepared from dry urea and steam condensate water.

The dry urea unloading system includes the equipment necessary to unload dry urea from trucks and transport it to urea solution mix tank. There is a provision to receive two 25-ton truckloads of dry urea back to back in a hopper located in a pit constructed by AEP at the Truck Unloading Station. Dry urea is then transferred from the hopper to a urea solution mix tank via full enclosed screw/drag conveyor equipment. In the mix tank, urea and condensate water is added in sufficient quantities to convert the dry urea into a 40% (by weight) urea solution for use in the urea to ammonia conversion process. The design is suitable for either prill or granular urea. The urea solution is transferred from the mix tank to a urea solution storage tank for use by the U2A™ system.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Diesel Engine Driven Coping Power Emergency Generators (EG-1 and EG-2)

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EG-1 EG-2	Diesel Driven Coping Power Emergency Generators EG-1 and EG-2	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
These are large diesel driven emergency generators. One rated at 3,717 bhp (EG-1) and one rated at 3,0004 bhp (EG-2). The generators are intended to provide facility auxiliary power in the event of a regional power grid outage.

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	C175-16 (EG-1); 3516C-HD TA (EG-2)	
Construction date:	**Installation date:**	**Modification date(s):**
08/2014	08/2014	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 3,717 bhp (EG-1) and 3,0004 bhp (EG-2)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it? RICE** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 3,717 bhp (EG-1) at 1800rpm 3,0004 bhp (EG-2) at 1800rpm	**Type and Btu/hr rating of burners:**

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.
Diesel Fuel

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	15ppm		

Emissions Data

Criteria Pollutants	Potential Emissions			
	PPH		TPY	
	EG-1	EG-2	EG-1	EG-2
Carbon Monoxide (CO)	7.66	4.85	1.92	1.21
Nitrogen Oxides (NO_X)	59.9	36.4	14.98	9.1
Lead (Pb)				
Particulate Matter ($PM_{2.5}$)	0.05	0.04	0.01	0.01
Particulate Matter (PM_{10})	0.35	0.26	0.09	0.06
Total Particulate Matter (TSP)	0.44	0.33	0.11	0.08
Sulfur Dioxide (SO_2)	0.01	0.01	0.06	0.05
Volatile Organic Compounds (VOC)	0.94	1.18	0.24	0.3

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions			
	PPH		TPY	
CO2	3961	3185	990.3	796.3

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.).

Manufacturer's Data used for NOx, CO, VOC, PM10 and CO2. AP-42 used for SO2

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.

The following permit conditions are considered the applicable requirements for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. Where appropriate, calculation basis is provided. For existing limits that were previously captured in the permit, the calculations were provided in the previous permit application(s). No changes to existing limits are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 8.0 through 8.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

____ 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.)

The following permit conditions are considered the applicable requirements for monitoring, testing, recordkeeping and reporting for this emission unit. Where appropriate, the actual permits are attached to provide the applicable language along with the underlying rule/regulatory citation. No changes are being requested at this time.

Requirements currently captured in Title V permit:

R30-05100005-2019 (MM01) Sections 8.2 through 8.5 (see Attachment I): Where appropriate, revisions to existing language are noted.

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**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
17S	Unit 1 Emergency Diesel Driven Fire Pump	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Emergency diesel driven fire pump that replaced existing unit associated with Unit 1 at the plant. 249 BHP diesel engine.

Manufacturer:	**Model number:**	**Serial number:**
Cummins	CFP7E-F60 Fire Pump / QSB6.7 Engine	

Construction date: MM/DD/YYYY	**Installation date:** MM/DD/YYYY	**Modification date(s):** MM/DD/YYYY
08/2023	08/2023	08/2023

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Approx. 14 gal/hr, 249 BHP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Approx. 14 gal/hr	7,000 gal/yr	Assumed 500 hr/yr, but not limited during emergency

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☑ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☑ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 249 BHP	**Type and Btu/hr rating of burners:**

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.

Diesel Fuel, less than 15 ppm sulfur.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	15 ppm		Approx. 137,030 btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.65	0.16
Nitrogen Oxides (NO_X)	1.36	0.34
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.06	0.015
Particulate Matter (PM_{10})	0.06	0.015
Total Particulate Matter (TSP)	0.06	0.015
Sulfur Dioxide (SO_2)	0.51	0.128
Volatile Organic Compounds (VOC)	0.63	0.16
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO2	286.35	71.59

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.).

Manufacturer's Data used for NOx, PM, and CO. AP-42 used for SO2, CO2, and VOC.

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.

This emergency diesel fire pump engine is subject to the requirements in 40 CFR 63 Subpart IIII. The previous diesel fire pump engine was subject to the requirements in 40 CFR 63 Subpart ZZZZ and suggested language revisions have been included in Attachment L.

Requirements currently captured in Title V permit:
R30-05100005-2019 (MM01) Section 7.1.

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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.)

This emergency diesel fire pump engine is subject to the requirements in 40 CFR 63 Subpart IIII. The previous diesel fire pump engine was subject to the requirements in 40 CFR 63 Subpart ZZZZ and suggested language revisions have been included in Attachment L.

Requirements currently captured in Title V permit:
R30-05100005-2019 (MM01) Sections 7.2 through 7.5.

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

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
18S	Unit 2 Emergency Diesel Driven Fire Pump	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Emergency diesel driven fire pump that will replace existing unit associated with Unit 2 at the plant. 249 BHP diesel engine.

Manufacturer:	**Model number:**	**Serial number:**
Cummins	CFP7E-F60 Fire Pump / QSB6.7 Engine	

Construction date: MM/DD/YYYY	**Installation date:** MM/DD/YYYY	**Modification date(s):** MM/DD/YYYY
06/2024	06/2024	06/2024

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Approx. 14 gal/hr, 249 BHP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Approx. 14 gal/hr	7,000 gal/yr	Assumed 500 hr/yr, but not limited during emergency

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☑ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☑ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 249 BHP	**Type and Btu/hr rating of burners:**

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.

Diesel Fuel, less than 15 ppm sulfur.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	15 ppm		Approx. 137,030 btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.65	0.16
Nitrogen Oxides (NO_X)	1.36	0.34
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.06	0.015
Particulate Matter (PM_{10})	0.06	0.015
Total Particulate Matter (TSP)	0.06	0.015
Sulfur Dioxide (SO_2)	0.51	0.128
Volatile Organic Compounds (VOC)	0.63	0.16
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO2	286.35	71.59

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.).

Manufacturer's Data used for NOx, PM, and CO. AP-42 used for SO2, CO2, and VOC.

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.

This emergency diesel fire pump engine is subject to the requirements in 40 CFR 63 Subpart IIII. The previous diesel fire pump engine was subject to the requirements in 40 CFR 63 Subpart ZZZZ and suggested language revisions have been included in Attachment L.

Requirements currently captured in Title V permit:
R30-05100005-2019 (MM01) Section 7.1.

☐ 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.)

This emergency diesel fire pump engine is subject to the requirements in 40 CFR 63 Subpart IIII. The previous diesel fire pump engine was subject to the requirements in 40 CFR 63 Subpart ZZZZ and suggested language revisions have been included in Attachment L.

Requirements currently captured in Title V permit:
R30-05100005-2019 (MM01) Sections 7.2 through 7.5.

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

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
LF DEG	LF DEG	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Landfill Leachate Collection Sump Diesel Emergency Generator with integral 600 gallon diesel fuel tank. 300kw generator, 464 Bhp diesel engine.

Manufacturer:	**Model number:**	**Serial number:**
Cummins	C300DQDAC gen/QSL9-G7 engine	
Construction date: (MM/DD/YYYY)	**Installation date: (MM/DD/YYYY)**	**Modification date(s): (MM/DD/YYYY)**
04 / / 2020	04 / / 2020	/ / ; / / / / ; / /

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
approx. 23.1 gal/hr, 464 Bhp, 600 gal associated fuel tank.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
approx 23.1 gal/hr	11,550 gal/yr	assumed 500 hr/yr,but not limited during emergency

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ✔ Yes ___ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 464 Bhp	**Type and Btu/hr rating of burners:**

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.

Diesel Fuel, less than15ppm S.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	15 ppm		approx. 137,030 btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.31	0.08
Nitrogen Oxides (NO_X)	5.37	1.34
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.03	0.008
Particulate Matter (PM_{10})	0.03	0.008
Total Particulate Matter (TSP)	0.03	0.008
Sulfur Dioxide (SO_2)	0.11	0.028
Volatile Organic Compounds (VOC)	1.17	0.292
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.).

Manufacturer's Data used for NOx, CO, SO2, and PM. AP-42 used for VOC.

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:

R30-05100005-2019 (MM01) Section 8.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

___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:

R30-05100005-2019 (MM01) Sections 8.2 through 8.5 (see Attachment I): Where appropriate, revisions to existing language are noted.

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

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
LF DEG2	LF DEG2	n/a

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Diesel driven 400kw, 513 Bhp, mobile emergency generator to be used at the Landfill Leachate Storage Pond

Manufacturer:	**Model number:**	**Serial number:**
Cummins	QSG12	

Construction date: MM/DD/YYYY	**Installation date:** MM/DD/YYYY	**Modification date(s):** MM/DD/YYYY
07/2023	07/2023	

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

approx 23.2 gal/hr, 513 Bhp, 470 gallon fuel tank

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
approx 23.2 gal/hr	11,600 gal/yr	assumed 500hr/yr but not limited during emergency

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☑ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☐ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 513 Bhp	**Type and Btu/hr rating of burners:**

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.

Diesel Fuel, less than 15ppm S.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	15 ppm		approx 137,030 btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.08	0.02
Nitrogen Oxides (NO_X)	0.14	0.04
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.01	0.002
Particulate Matter (PM_{10})	0.01	0.002
Total Particulate Matter (TSP)	0.01	0.002
Sulfur Dioxide (SO_2)	0.11	0.026
Volatile Organic Compounds (VOC)	1.29	0.322
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.).

Manufacturer's Data used for NOx, CO, and PM. AP-42 used for SO2 and VOC.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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:

R30-05100005-2019 (MM01) Section 8.1 (see Attachment I): Where appropriate, revisions to existing language are noted.

☐ 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:

R30-05100005-2019 (MM01) Sections 8.2 through 8.5 (see Attachment I): Where appropriate, revisions to existing language are noted.

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 G

Air Pollution Control Device Forms

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ML1 ESP	**List all emission units associated with this control device.** Unit 1	
Manufacturer: Wheelabrator Frye	**Model number:** 1487	**Installation date:** 12/30/1977

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator _X_ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM	100%	99.85%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Avg. Pressure Drop = 0.07 inches H_2O, Avg. Gas Flow Rate = 3,000x10^3 acfm, Avg. Operating temp. = 370 ºF, Design Removal Efficiency = 99.85%

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes __ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitor opacity as an indicator of electrostatic precipitator performance. Periodic stack tests are performed to assure compliance with the particulate mass emissions standard.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ML1 FGD	**List all emission units associated with this control device.** Unit 1	
Manufacturer: B&W	**Model number:** Custom	**Installation date:** 04/28/2007

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) _X_ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
SO_2	100%	95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Full Load Flow Rate = 2.6×10^6 acfm, Outlet temperature = 128 ºF, Design Removal Efficiency = 95%

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Continuous Emissions Monitoring Used.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitoring of SO_2 emissions using CEMS

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ML1 SCR	**List all emission units associated with this control device.** Unit 1	
Manufacturer:	**Model number:** Custom	**Installation date:** 05/02/2007

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) _ _ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare __X Other (describe) Selective Catalytic Reduction

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
NO_x	100%	90%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
NOx Control Efficiency = 90.0%, Design Temperature = 750 ºF, Maximum ammonia slip = 2 ppmvd at 3% O_2

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Continuous Emissions Monitoring Used.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitoring of NO_x emissions using CEMS

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ML2 ESP	**List all emission units associated with this control device.** Unit 2	
Manufacturer: Wheelabrator Frye	**Model number:** 1487	**Installation date:** 06/16/1978

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator _X_ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM	100%	99.85%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Avg. Pressure Drop = 0.07 inches H_2O, Avg. Gas Flow Rate = 3,000x10^3 acfm, Avg. Operating temp. = 370 ºF, Design Removal Efficiency = 99.85%

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes __ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitor opacity as an indicator of electrostatic precipitator performance. Periodic stack tests are performed to assure compliance with the particulate mass emissions standard.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ML2 FGD	**List all emission units associated with this control device.** Unit 2	
Manufacturer: B&W	**Model number:** Custom	**Installation date:** 01/15/2007

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) _X_ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
SO_2	100%	95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Full Load Flow Rate = 2.6×10^6 acfm, Outlet temperature = 128 ºF, Design Removal Efficiency = 95%

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Continuous Emissions Monitoring Used.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitoring of SO_2 emissions using CEMS

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ML2 SCR	**List all emission units associated with this control device.** Unit 2	
Manufacturer:	**Model number:** Custom	**Installation date:** 05/02/2007

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) _ _ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare _X_ Other (describe) Selective Catalytic Reduction

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
NO_x	100%	90%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
NOx Control Efficiency = 90.0%, Design Temperature = 750 ºF, Maximum ammonia slip = 2 ppmvd at 3% O_2

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Continuous Emissions Monitoring Used.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monitoring of NO_x emissions using CEMS

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) [a] 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	[b] EMISSION LIMITATION or STANDARD	[c] 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
EXAMPLE 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

[a] 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).

[b] 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).

[c] 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.

4a) PSEU Designation: **Unit 1**	**4b) Pollutant:** **PM**	**4c) [a] Indicator No. 1:** Opacity	**4d) [a] Indicator No. 2:** **Opacity**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH 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.
[b] Establish the appropriate INDICATOR RANGE 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.
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		The COMs is located in the duct 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 the duct 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.
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		N/A	N/A
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES 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.
[d] Provide the MONITORING FREQUENCY:		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 DATA COLLECTION PROCEDURES 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 DATA AVERAGING PERIOD 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.

[a] 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.

[b] 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.

[c] 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.

[d] Emission units with post-control PTE ≥ 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.			
4a) PSEU Designation: **Unit 2**	**4b) Pollutant:** **PM**	**4c) [a] Indicator No. 1:** Opacity	**4d) [a] Indicator No. 2:** **Opacity**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH 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.
[b] Establish the appropriate INDICATOR RANGE 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.
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		The COMs is located in the duct 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 the duct 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.
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		N/A	N/A
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES 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.
[d] Provide the MONITORING FREQUENCY:		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 DATA COLLECTION PROCEDURES 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 DATA AVERAGING PERIOD 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.

[a] 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.

[b] 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.

[c] 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.

[d] Emission units with post-control PTE ≥ 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:	6b) Regulated Air Pollutant:
Unit 1	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):

Wheeling 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 of 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.
1. 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.
1. If the opacity increase occurs after normal working hours, on weekends, or holidays; the unit-operations data may be collected the following working day.
1. 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 Mitchell Plant can demonstrate a reasonable assurance of compliance with the particulate mass emission limit as long as the 3-hour block average stack (duct) opacity is maintained below the upper threshold value of 10%. opacity.

Wheeling 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, Wheeling 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	Average Opacity
8/21/2000	0.0180 lb/mmBtu	7.0
8/5/2003	0.0147 lb/mmBtu	3.3
7/14/2006	0.0134 lb/mmBtu	3.2
4/7/2009	0.0195 lb/mmBtu	5.1
1/24/2012	0.0337 lb/mmBtu	3.7
12/14/2012	0.0037 lb/mmBtu	6.1
3/18/2014	0.0033 lb/mmBtu	7.6
3/3/2016	0.0030 lb/mmBtu	3.9
12/12/2018	0.0026 lb/mmBtu	6.2
6/17/2021	0.0040 lb/mmBtu	6.8

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 compliance 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 particulate mass emissions compliance test 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 minimized the environmental impacts of operating the particulate control equipment under less than normal operating conditions. Nevertheless, it was 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:	6b) Regulated Air Pollutant:
Unit 2	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):

Wheeling 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 of 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.
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).

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7/14/2006	0.0134 lb/mmBtu	3.2
4/8/2009	0.0099 lb/mmBtu	5.9
1/26/2012	0.0421 lb/mmBtu	6.2
12/13/2012	0.0038 lb/mmBtu	6.1
3/20/2014	0.0035 lb/mmBtu	7.2
3/2/2016	0.0031 lb/mmBtu	5.9
12/13/2018	0.0045 lb/mmBtu	8.5
6/16/2021	0.0039 lb/mmBtu	8.7

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 compliance 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 particulate mass emissions compliance test 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 minimized the environmental impacts of operating the particulate control equipment under less than normal operating conditions. Nevertheless, it was understood that more than one run under specific unit operating conditions may be necessary.

Attachment I
Existing Applicable Permits

West Virginia Department of Environmental Protection
Earl Ray Tomblin
Governor
Division of Air Quality
Randy C. Huffman
Cabinet Secretary

Class I Administrative Update Permit

R13-2608E

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 above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
AEP Generation Resources, Inc.
Mitchell Plant
051-00005

William F. Dunham
Deputy Director

Issued: May 12, 2014

This permit will supercede and replace Permit R13-2608D.

Facility Location:	State Route 2 Cresap/Moundsville, Marshall County, West Virginia
Mailing Address:	Mitchell Plant P.O. Box K Moundsville, WV 26041
Facility Description:	Electric Generating Plant
NAICS Codes:	221112
UTM Coordinates:	516.0 km Easting • 4,409.0 km Northing • Zone 17
Permit Type:	Administrative Update
Description of Change:	This update is to correctly codify the term of the limited use for Boiler Aux-1 in the terms as defined in the Subpart DDDDD of Part 63 of Chapter 40 and correctly define the compliance path for Aux-1 under Subpart Db of Part 60 in Chapter 40.

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.

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.

Table of Contents

1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Design Capacity	Control Device
1S - Limestone Material Handling				
BUN-1		Limestone Unloading Crane	1,000 TPH	None
RH-1		Limestone Unloading Hopper	60 Tons	WS/PE
VF-1		Limestone Unloading Feeder	750 TPH	FE
BC-1		Limestone Dock/Connecting Conveyor	750 TPH	PE
TH-1		Limestone Transfer House #1	750 TPH	FE
BC-2		Limestone Storage Pile Stacking Conveyor	750 TPH	PE
LSSP		Limestone Active/Long-Term Stockpile	41,300 Tons	None
2S - Gypsum Material Handling				
BC-8		Vacuum Collecting Conveyor	200 TPH	PE
TH-3		Gypsum Transfer House #3	200 TPH	FE
BC-9		Connecting Conveyor	200 TPH	PE
TH-4		Gypsum Transfer House #4	200 TPH	FE
BC-10		Connecting Conveyor	200 TPH	PE
TH-5		Gypsum Transfer House #5	200 TPH	FE
BC-11		Connecting Conveyor	200 TPH	PE
TH-6		Gypsum Transfer House #6	200 TPH	FE
BC-12		Stacking Tripper Conveyor	200 TPH	PE
GSP		Gypsum Stockpile	15,600 Tons	FE
PSR-1		Traveling Portal Scraper Reclaimer	1,000 TPH	FE
BC-14		Reclaim Conveyor	1,000 TPH	PE
TH-7		Transfer House #7	1,000 TPH	FE
BC-13		Bypass Conveyor	200 TPH	PE
BC-15		Connecting Conveyor	1,000 TPH	PE
TH-1		Transfer House #1	1,000 TPH	FE
BC-16		Transfer Conveyor	1,000 TPH	PE
BL-1		Barge Loader	1,000 TPH	PE
BC-14		Reclaim Conveyor Extension	1,000 TPH	PE
TH-8		Transfer House #8	1,000 TPH	FE
BC-19		Transfer Conveyor	1,000 TPH	PE
TH-9		Transfer House #9	1,000 TPH	FE
BC-20		Transfer Conveyor	1,000 TPH	FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Design Capacity	Control Device
TH-10		Transfer House #10	1,000 TPH	PE
BC-21		Transfer Conveyor to 21	1,000 TPH	FE
BUN-1		Clamshell Unloading Crane	1,000 TPH	
RH-4		Gypsum Unloading Hopper	30 tons	WSPE
RP-1		Gypsum Rotary Plow	750 TPH	FE
BC-17		Dock Connecting Conveyor	750 TPH	PE
TH-7		Transfer House #7	750 TPH	FE
BC-18		Bypass Conveyor	750 TPH	PE
TH-6		Transfer House #6	750 TPH	FE
3S		**Limestone Mineral Processing**		
VF-2		Limestone Reclaim Feeder 2	750 TPH	FE
VF-3		Limestone Reclaim Feeder 3	750 TPH	FE
BC-3		Limestone Tunnel Reclaim Conveyor	750 TPH	PE
FB-1		Emergency Limestone Reclaim Feeder/Breaker	750 TPH	None
TH-2		Limestone Transfer House 2	750 TPH	FE
BC-4		Limestone Silo A Feed Conveyor	750 TPH	PE
BC-5		Limestone Silo B Feed Conveyor	750 TPH	PE
BC-6		Limestone Silo C Feed Conveyor (future)	750 TPH	PE
LSB-1	6E	Limestone Silo A	900 tons	FF
LSB-2	7E	Limestone Silo B	900 tons	FF
LSB-3	8E	Limestone Silo C (future)	900 tons	FF
		Vibrating Bin Discharger (one per silo)	68.4 TPH	FE
LSWF-1 LSWF-2 LSWF-3		Limestone Weigh Feeder	68.4 TPH	FE
		Wet Ball Mill (one per silo)	68.4 TPH	FE
4S		**Dry Sorbent Material Handling**		
		Truck Unloading Connection (2)	25 TPH	FE
DSSB-1	10E	Dry Sorbent Storage Silo #1	500 Tons	FE/FF
DSSB-1	11E	Dry Sorbent Storage Silo #2	500 Tons	FE/FF
		Aeration Distribution Bins	4.6 TPH	FE
		De-aeration Bins	4.6 TPH	FE
		Rotary Feeder	4.6 TPH	FE
5S		**Coal Blending System**		

Emission Unit ID	Emission Point ID	Emission Unit Description	Design Capacity	Control Device
HTS-1		Transfer House #1	3,000 TPH	FE
HSC-1		Stacking Conveyor #1	3,000 TPH	PE
HTS-2A		Transfer House #2A	3,000 TPH	FE
HSC-2		Stacking Conveyor #2	3,000 TPH	PE
HTS-3		Transfer House #3	3,000 TPH	FE
HSC-3		Stacking Conveyor #3	3,000 TPH	PE
SH-1		Stacking Hopper SH-1 Transfer to SC-3 (receives coal from existing plant radial stacker R9)	3,000 TPH	FE
HSC-3 to High Sulfur Pile (CSA-2, existing)		Transfer from Stacking Conveyor HSC-3 to the High Sulfur Coal Pile located at existing North Yard Storage Area (CSA-2)	3,000 TPH	ST
HVF-1		Coal Reclaim Feeder 1	800 TPH	FE
HVF-2		Coal Reclaim Feeder 1	800 TPH	FE
HVF-3		Coal Reclaim Feeder 1	800 TPH	FE
HVF-4		Coal Reclaim Feeder 1	800 TPH	FE
HVF-1 through HVF-4 to HRC-1 (Transfer)_		Transfer from Vibrating Feeders HVF-1 through HVF-4 to Reclaim Conveyor HRC-1	1,600 TPH	FE
HRC-1		Coal Tunnel Reclaim Conveyor	1,600 TPH	PE
HTS-2B		Coal Transfer House #2B	1,600 TPH	FE
HRC-2		Reclaim Conveyor #2	1,600 TPH	PE
HTS-4		Coal Transfer House #4	1,600 TPH	FE
HRC-3		Reclaim Conveyor #3	1,600 TPH	PE
HTS-5		Coal Transfer House #5	1,600 TPH	FE
SB-1		Surge Bin #1	80 Tons	FE
HBF-1A		Belt Feeder 1A	800 TPH	PE
HBF-1B		Belt Feeder 1B	800 TPH	PE
HBF-1A/1B to BF-4E/4W (Transfer)		Transfer from Belt Feeders HBF-1A and HBF-1B to Existing Coal Conveyors 4E and 4W	1,600 TPH	FE
6S. 7S		**Emergency Quench Water System**		
6S	15E	Diesel Fired Engine for Quench Pump #1	60 Bhp	None
7S	16E	Diesel Fired Engine for Quench Pump #2	60 Bhp	None
9S		**Magnesium Hydroxide Material Handling System**		
MHM-1		Magnesium Hydroxide Mix Tank	1,000 Gallons	

Emission Unit ID	Emission Point ID	Emission Unit Description	Design Capacity	Control Device
MHM-2		Magnesium Hydroxide Mix Tank	1,000 Gallons	
11S		**Wastewater Treatment System Material Handling**		
		Truck Unloading Connection (2)	25 TPH	FE
		Lime Storage Silo #1	100 TPH	FE//FF
		Lime Storage Silo #2	100 TPH	FE//FF
		Wastewater Treatment Cake Stockpile	3,600 Tons	BE
FB-2		Filter Cake Feeder/Breaker	600 TPH	PE
BC-22		Transfer Conveyor 22	600 TPH	PE
TH-12		Transfer House #12	600 TPH	PE
		Fly Ash Handling System		
ME-1A	EP-1	Unit 1 Mechanical Exhauster		FF/Separator
ME-1B	EP-2	Unit 1 Mechanical Exhauster		FF/Separator
ME-1C	EP-3	Unit 1 Mechanical Exhauster		FF/Separator
ME-2A	EP-4	Unit 2 Mechanical Exhauster		FF/Separator
ME-2B	EP-5	Unit 2 Mechanical Exhauster		FF/Separator
ME-2C	EP-6	Unit 2 Mechanical Exhauster		FF/Separator
FAS-A	EP-7	Fly Ash Silo A	2,160 tons	FF Bin Vent
FAS-B	EP-8	Fly Ash Silo B	2,160 tons	FF Bin Vent
FAS-B	EP-8	Fly Ash Silo B	2,160 tons	FF Bin Vent
WFA-AA	F-1	Conditioned fly ash transfer from Silo A to Truck	360 TPH	MC
WFA-BA	F-2	Conditioned fly ash transfer from Silo B to Truck	360 TPH	MC
WFA-CA	F-3	Conditioned fly ash transfer from Silo C to Truck	360 TPH	MC
WFA-BA	F-4	Conditioned fly ash transfer from Silo A to Truck	360 TPH	MC
WFA-BB	F-5	Conditioned fly ash transfer from Silo B to Truck	360 TPH	MC
WFA-CB	F-6	Conditioned fly ash transfer from Silo C to Truck	360 TPH	MC
TC-A	EP-10	Dry Ash Transfer from Silo A to Truck	360 TPH	TC
TC-B	EP-11	Dry Ash Transfer from Silo A to Truck	360 TPH	TC
TC-C	EP-12	Dry Ash Transfer from Silo A to Truck	360 TPH	TC
		Auxiliary Boiler		
Aux-1	Aux-ML-1	Auxiliary Boiler using Flue Gas Recirculation with Low NO_x Burners	663 MMBtu/hr	None
You can type whatever you want here :o)				

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 (45CSR§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

CAAA	Clean Air Act Amendments	**NO_X**	Nitrogen Oxides
CBI	Confidential Business Information	**NSPS**	New Source Performance Standards
CEM	Continuous Emission Monitor	**PM**	Particulate Matter
CES	Certified Emission Statement	**$PM_{2.5}$**	Particulate Matter less than 2.5 μm in diameter
C.F.R. *or* CFR	Code of Federal Regulations		
CO	Carbon Monoxide	**PM_{10}**	Particulate Matter less than 10μm in diameter
C.S.R. *or* CSR	Codes of State Rules		
DAQ	Division of Air Quality	**Ppb**	Pounds per Batch
DEP	Department of Environmental Protection	**Pph**	Pounds per Hour
		Ppm	Parts per Million
dscm	Dry Standard Cubic Meter	**Ppm_V or ppmv**	Parts per Million by Volume
FOIA	Freedom of Information Act		
HAP	Hazardous Air Pollutant	**PSD**	Prevention of Significant Deterioration
HON	Hazardous Organic NESHAP		
HP	Horsepower	**Psi**	Pounds per Square Inch
lbs/hr	Pounds per Hour	**SIC**	Standard Industrial Classification
LDAR	Leak Detection and Repair		
M	Thousand	**SIP**	State Implementation Plan
MACT	Maximum Achievable Control Technology	**SO_2**	Sulfur Dioxide
		TAP	Toxic Air Pollutant
MDHI	Maximum Design Heat Input	**TPY**	Tons per Year
MM	Million	**TRS**	Total Reduced Sulfur
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour	**TSP**	Total Suspended Particulate
		USEPA	United States Environmental Protection Agency
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour		
		UTM	Universal Transverse Mercator
NA	Not Applicable	**VEE**	Visual Emissions Evaluation
NAAQS	National Ambient Air Quality Standards	**VOC**	Volatile Organic Compounds
		VOL	Volatile Organic Liquids
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act 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*;

2.3.2. 45CSR14 – *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration;*

2.3.3. 45CSR19 – *Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollution and Emission Trading for Intrasource Pollutants.*

2.4. Term and Renewal

2.4.1. This permit supersedes and replaces previously issued Permit R13-2608D. 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 other 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 R13-2608, R13-2608A, R13-2608B, R13-2608C, R13-2608D, R13-2608E, 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 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; and

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 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 emissions, 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 45CSR11.
[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
Charleston, WV 25304-2345

If to the US EPA:
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 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. Limestone transferred across belt conveyor BC-1 to Transfer House #1 [TH-1] shall be limited to a maximum transfer rate of 750 tons per hour and 1,100,000 tons per year.

4.1.2 Limestone transferred across belt conveyor BC-3 to Transfer House #2 [TH-2] shall be limited to a maximum transfer rate of 750 tons per hour and 1,100,000 tons per year.

4.1.3. Gypsum transferred across belt conveyor BC-9 to Transfer House #4 [TH-4] shall be limited to a maximum transfer rate of 200 tons per hour and 1,700,000 tons per year.

4.1.4. Gypsum and wastewater treatment system cake transferred across belt conveyor BC-14 to Transfer House #7 [TH-7] shall be limited to a maximum transfer rate of 1,000 tons per hour and 1,912,000 tons per year.

4.1.5. Gypsum transferred across belt conveyor BC-17 to Transfer House #7 [TH-7] shall be limited to a maximum transfer rate of 750 tons per hour and 1,200,000 tons per year.

4.1.6. Gypsum transferred across belt conveyor BC-19 to Transfer House #9 [TH-9] shall be limited to a maximum transfer rate of 1,000 tons per hour and 1,700,000 tons per year.

4.1.7. Coal transferred across belt conveyor HSC-1 shall be limited to a maximum transfer rate of 3,000 tons per hour and 5,732,544 tons per year.

4.1.8. Dry Sorbent (Trona or Hydrated Lime) for SO_3 mitigation shall be delivered to the facility at a maximum annual rate of 81,000 tons per year.

4.1.9. Liquid magnesium hydroxide shall be delivered to the facility at a maximum annual rate of 6,600,000 gallons per year.

4.1.10. Hydrated lime for the FGD wastewater treatment system shall be delivered to the facility at a maximum annual rate of 3,200 tons per year.

4.1.11. Ferric Chloride for the FGD wastewater treatment system shall be delivered to the facility at a maximum annual rate of 110,000 gallons per year.

4.1.12. Acid (hydrochloric or sulfuric) for the FGD wastewater treatment system shall be delivered to the facility at a maximum annual rate of 170,000 gallons per year.

4.1.13. Polymer and organosulfide for the FGD wastewater treatment facility shall be delivered to the facility at a maximum annual rate of 13,500 gallons per year.

4.1.14. The diesel-fired engines [6S and 7S] used to power the emergency quench water system shall be limited to a total maximum combined annual operating schedule of 200 hours per year.

4.1.15. Compliance with all annual operating limits shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the quantified operating data at any given time during the previous twelve (12) consecutive calendar months.

4.1.16. 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.

4.1.17. Additionally, at least three times 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.

4.1.18. The permittee shall not cause, suffer, allow or permit any source of fugitive particulate matter to operate that is not equipped with a fugitive particulate matter control system. This system shall be operated and maintained in such a manner as to minimize the emission of fugitive particulate matter.

4.1.19. The installation and operation of the proposed Limestone Processing equipment [3S] shall be applicable to the limits and requirements set forth by 40CFR60 - Subpart OOO, "Standards of performance for non-metallic mineral processing plants."

a. The material transfers across the conveyors within the enclosed transfer stations and ball mill within the processing building will be limited to the opacity emissions from the building or building vents. The buildings will be limited to emissions of no visible opacity per 40CFR60.672(e)(1), and the vents from the buildings will be limited to an opacity of 7% and particulate emissions of 0.022 grains per dry standard cubic foot, per 40CFR60.672(e)(2).

b. The emissions from the baghouse on each of the limestone day bins will be limited to 7% opacity per 40CFR60.672(f).

c. All material transfer points outside of the buildings will be limited to a maximum 10% opacity per 40CFR60.672(b).

d. In order to comply with the emission and opacity limitations of this Subpart, the permittee shall employ dust suppression methods to minimize particulate emissions from the limestone processing equipment. In order to demonstrate compliance, in accordance to the requirements of the regulation, the applicant shall conduct performance testing and monitoring activities as set forth by this Subpart.

4.1.20. The maximum amount of fly ash handled by the fly ash handling system shall not exceed 800,000 tons per year on a dry (1% moisture) basis (i.e 980,000 tons per year at 20% 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 (12) consecutive calendar months.

4.1.21. PM emissions from Mechanical Exhausters ME-1A, ME-1B and ME-1C shall not exceed 0.16 lb/hr and 0.69 tpy individually nor 0.32 lb/hr and 1.38 tons per year combined.

4.1.22. PM emissions from Mechanical Exhausters ME-2A, ME-2B and ME-2C shall not exceed 0.15 lb/hr and 0.65 tpy individually nor 0.30 lb/hr and 1.30 tons per year combined.

4.1.23. PM emissions from Bin Vent Filters BVF-A, BVF-B and BVF-C shall not exceed 0.75 lb/hr nor 3.25 tpy combined.

4.1.24. PM emissions from the transfer of conditioned fly ash from the silos to trucks (WFA-AA, WFA-AB, WFA-BA, WFA-BB, WFA-CA, and WFA-CB) shall not exceed 0.07 pounds per hour nor 0.09 tons per year combined.

4.1.25. **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 purpose of determining compliance with the material transfer limits set forth by Section 4.1.1. and 4.1.2. of this permit, the permittee shall monitor the hourly and annual limestone transfer rates across belt conveyor BC-1 to Transfer House #1 [TH-1] and across belt conveyor BC-3 to Transfer House #2 [TH-2].

4.2.2. For the purpose of determining compliance with the material transfer limits set forth by Section 4.1.3., 4.1.4., 4.1.5. and 4.1.6. of this permit, the permittee shall monitor the hourly and annual gypsum and wastewater treatment cake transfer rates across belt conveyors BC-9 to Transfer House #4 [TH-4], BC-14 to Transfer House #7 [TH-7], BC-17 to the Transfer House #7 Extension, and BC-19 to Transfer House #9 [TH-9].

4.2.3. For the purpose of determining compliance with the material transfer limits set forth by Section 4.1.7. of this permit, the permittee shall monitor the hourly and annual coal transfer rates across belt conveyor HSC-1 to Transfer Station #2A.

4.2.4. For the purpose of determining compliance with the limits associated with the delivery of raw materials for the SO_3 mitigation system, as set forth by Section 4.1.8. and 4.1.9. of this permit, the permittee shall monitor the on-site delivery of dry sorbent (including trona and hydrated lime) and liquid magnesium hydroxide.

4.2.5. For the purpose of determining compliance with the limits associated with the delivery of raw materials for the FGD wastewater treatment system, as set forth by Sections 4.1.10. through 4.1.13. of this permit, the permittee shall monitor the on-site delivery of hydrated lime, ferric chloride, acid (hydrochloric or sulfuric), polymer and organosulfide.

4.2.6. For the purpose of determining compliance with the operating limits set forth by Section 4.1.14. of this permit, the permittee shall monitor the operating schedule of the diesel-fired engine [6S and 7S] used to power the emergency quench water system.

4.2.7. For the purpose of determining compliance with the limits associated with disposal of dry fly ash, as set forth by Section 4.1.20 of this permit, the permittee shall monitor and record the amount of dry fly ash disposed of.

4.2.8. For the purpose of determining compliance with the operating limits set forth by Section 4.1.17. of this permit, the permittee shall monitor and record the date that chemical solution is applied to the haulroads along with the amount and concentration of the solution applied.

4.3. Testing Requirements

4.3.1. For the purpose of determining compliance with the performance testing requirements of 40 C.F.R. Part 60, Subpart OOO, as set forth by Section 4.1.19. of this permit, the permittee shall conduct compliance testing of the permitted facility within 180 days of the equipment start-up. These tests will be used to determine the particulate matter emissions generated from the open transfer points and processing operations. The testing methods to be employed are as follows:

Pollutant	USEPA Test Method*
Determination of the Opacity of Emissions	9

* Per 40CFR60, Appendix A

The permittee shall submit to the Director of the DAQ a test protocol detailing the proposed test methods, date, and time testing is to take place, testing locations, and any other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. The Director shall be notified at least fifteen (15) days in advance of the actual dates and times during which the tests will be conducted. The results of emissions testing shall be submitted to the DAQ within thirty (30) days of completion of testing.

4.3.2. Within 120 days of startup of the dry ash handling system, the permittee shall perform or have performed EPA approved tests (or other methods as approved by WVDAQ) to determine maximum PM emissions from any one of the Silo Bin Vent Filters (BVF-A, BVF-B or BVF-C).

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. For the purpose of demonstrating compliance with the monitoring requirements set forth in Section 4.2.1. of this permit, the permittee shall maintain monthly records of the amount of limestone transferred across the monitored belt conveyors.

4.4.5. For the purpose of demonstrating compliance with the monitoring requirements set forth in Section 4.2.2. of this permit, the permittee shall maintain monthly records of the amount of gypsum and wastewater treatment cake transferred across the monitored belt conveyors.

4.4.6. For the purpose of demonstrating compliance with the monitoring requirements set forth in Section 4.2.3. of this permit, the permittee shall maintain monthly records of the amount of coal transferred across the monitored belt conveyor.

4.4.7. For the purpose of demonstrating compliance with the monitoring requirements set forth in Section 4.2.4. of this permit, the permittee shall maintain monthly records of the amount of dry sorbent (trona and hydrated lime) and liquid magnesium hydroxide delivered to the facility via truck.

4.4.8. For the purpose of demonstrating compliance with the monitoring requirements set forth in Section 4.2.5. of this permit, the permittee shall maintain monthly records of the amount of hydrated lime, ferric chloride, acid (hydrochloric or sulfuric), polymer and organosulfide delivered to the facility via truck.

4.4.9. For the purpose of demonstrating compliance with the monitoring requirements set forth in Section 4.2.6. of this permit, the permittee shall maintain monthly records of the hours of operation of the diesel-fired engines [6S and 7S].

4.4.10. For the purposes of determining compliance with Section 4.1.16., 4.1.17., and 4.1.18. 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.

4.4.11. All records produced in accordance to the requirements set forth by Section 4.4. of this permit shall be maintained on-site for a period of no less than five (5) years and made available to the Director or his duly authorized representative upon request. At a time prior to being submitted to the Director, all records shall be certified and signed by a "Responsible Official" or a duly authorized representative, utilizing the attached Certification of Data Accuracy statement.

4.4.12. For the purposes of determining compliance with the maximum throughput limit set forth in Condition 4.1.20 above, the facility shall maintain monthly (and calculated rolling yearly total) records of the amount of fly ash handled by the Units 1 and 2 fly ash system.

5.0. Source-Specific Requirements for the Auxiliary Boiler (Aux-1)

5.1. Limitations and Standards

5.1.1. The following conditions and requirements are specific to the Boiler Aux-1:

a. Emissions from the boiler shall not exceed the following limits:

Pollutant	lb/hr	tpy
SO_2	39.78*	17.42
NO_x	99.45	43.56
CO	206.86	90.60
VOC	0.95	0.41
PM (filterable +condensable.)	15.63	6.85
PM_{10} (filterable +condensable)	10.90	4.77
$PM_{2.5}$ (filterable +condensable)	7.34	3.22
CO_2	105,606.4	46,255.6
N_2O	0.88	0.38
CH_4	4.38	1.92
CO_{2e} (Total)	105,971.18	46,413.72
Formaldehyde	0.29	0.13
Benzene	0.01	0.01
Ethylbenzene	0.01	0.01
Toluene	0.03	0.02
Xylene	0.01	0.01
Naphthalene	0.01	0.01

* This limit makes 40 CFR §60.42b(k)(2) applicable and excludes the unit from limitations of 40 CFR §60.42b(k)(1). This limit satisfies the limitation in 45 CSR §10-3.1.b.

b. Boiler Aux-1 shall be fitted with Low NO_x burners and shall utilize Flue Gas Recirculation.

c. The permittee shall limit the annual capacity of the boiler to no more than 10 percent by limiting the annual average heat input of the boiler to 580,788 MMBtu per year. Compliance with this limit shall be satisfied though compliance with the annual fuel usage limit in item d of this condition.
[40 CFR §60.44b(c) and §63.7575; and 45 CSR §2-8.4.a.1.]

d. For the purpose of complying with the SO_2 limits in item a of this condition, the Boiler Aux-1 shall not consume more than 4,736 gallons of fuel oil (distillate oil) per hour nor more than 4,148,736 gallons per year. Such fuel oil can not contain more than 600 ppm or 0.06 % of

sulfur, which makes the sulfur dioxide potential for this unit at no greater than 0.06 lb/MMBtu.
[40 CFR §60.42.b(k)(2), §60.43b(h)(5), and §60.48b(j)(2); and 45 CSR §10-10.2]

e. Opacity from boiler shall not exceed 20% based on a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity, except during periods of startup, shutdown, or malfunction.
[40 CFR §§60.43b(f) & (g)]

f. Visible emissions from the boiler shall not exceed 10 percent opacity based on a six minute block average, except during periods of startup, shutdown, or malfunction.
[45 CSR §2-3.1, and §2-9.1.]

g. The permittee shall conduct an initial tune-up of the unit before January 31, 2016 (40 CFR §63.7510(e)) and subsequent tune-ups once every 5 years thereafter in accordance with the applicable requirements of 40 CFR 63, Subpart DDDDD. Subsequent tune-ups shall be conducted no later than 61 months from previous tune-up. If the unit is not operating on the required date for a tune-up, then the tune-up must be conducted within 30 calendar days of re-startup. These tune-ups shall consist of the following:

i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (permittee may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment, but each burner must be inspect at least once every 72 months;

ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);

iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, which includes the verifying or ensure the manufacturer's NO_x concentration specification are maintain;

v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).
[40 CFR §§63.7500(a)(1) & (c); §63.7505(a); §63.7510(e); §63.7515(d); §§63.7540(a)(10), (11) & (12); and Table 3 to Subpart DDDDD of Part 63—Work Practice Standards]

5.1.2. **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.]

5.2. Monitoring Requirements

5.2.1. In order to determine compliance with Condition 5.1.1.d of this permit, the permittee shall monitor and record the amount of fuel oil combusted by Boiler Aux-1 on a monthly basis. Compliance with fuel usage limitations in item d will constitute compliance with the emission limitations of item a. of Condition 5.1.1. Such records shall be maintained in accordance with Condition 3.4.1. **[40 CFR §60.49b(d)(2); and 45 CSR §2-8.3c., §§10-8.2.c.3., and 8.3.c.]**

5.2.2. The permittee shall obtain records indicating the fuel oil received at the facility for Boiler Aux I meets the specification of distillate oil as defined in 40 CFR §60.41b and sulfur content stated in item d. of Condition 5.1.1. from the fuel supplier. Such records shall be maintained in accordance with Condition 3.4.1.
[40 CFR §60.49b(r)(1) and 45 CSR §§10-8.2.c.3.]

5.2.3. The permittee shall conduct subsequent visible emission observations of the emission point for Boiler Aux-1 at least once every 12 months from the date of the most recent observation. Such observations be conducted using Method 9 of Appendix A-4 of Part 60. If visible emissions are observed, the permittee must follow the subsequent observation schedule in 40 CFR §60.48b(a)(1)(ii) through (iv) as applicable. Record of Method 9 observation shall contain the following:

a. Dates and time intervals of all opacity observation periods;

b. Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

c. Copies of all visible emission observer opacity field data sheets;

If the most recent observation is less than 10 percent opacity, the permittee may use Method 22 of Appendix A-7 of Part 60 to demonstrate compliance in lieu of using Method 9. The use of Method 22 observations must be in accordance with the length of observation and frequency as outline in 40 CFR §60.48b(a)(2)(i) through (ii) as applicable. Record of Method 9 observation shall contain the following

a. Dates and time intervals of all visible emissions observation periods;

b. Name and affiliation for each visible emission observer participating in the performance test;

c. Copies of all visible emission observer opacity field data sheets; and

d. Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

Records of observations shall be maintained in accordance with Condition 3.4.1.
[40 CFR §§60.48b(a) and 60.49b(f); and 45 CSR §2-8.1(a)]

5.3. Testing Requirements

[Reserved]

5.4. Recordkeeping Requirements

5.4.1. **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.

5.4.2. **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.

5.4.3. **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.

5.4.4. The permittee shall keep the following records in accordance with 40CFR§63.7555. This includes but not limited to the following information during the tune up as required in Condition 4.1.1.g. and 40 CFR §63.7540:

a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. If concentrations of NO_x were taken during the tune-up of the unit, record of such measurements shall be included;

b. A description of any corrective actions taken as a part of the tune-up; and.
[40 CFR §§63.7540(a)(10)(vi) and 63.7555]

5.5. Reporting Requirements

5.5.1. The permittee shall submit a "Notification of Compliance Status" for Boiler Aux-1 to the Director before the close of business on the sixtieth (60^{th}) day after completion of the initial compliance demonstration as required in 40 CFR §63.7530(f). Such "Notification of Compliance Status" shall be in accordance with 40 CFR §63.9(h)(2(ii) and contain the information specified in 40 CFR §§63.7545(e)(1), and (8), which included a statement the initial tune-up for boiler was completed.
[40CFR§63. 7530(d), and §63. 7545(e)]

5.5.2. The permittee shall submit "5- year Compliance Reports" to the Director for Boiler Aux-1 with the first report being submitted by no later than January 31, 2016, and subsequent reports are due every 5 years from thereafter. Such reports shall contain the information specified in 40 CFR §§63.7550(c)(5) (i)through (iv) and (xiv) which are:

a. Permittee and facility name, and address;

b. Process unit information, emission limitations, and operating limitations;

c. Date of report and beginning and ending dates of the reporting period;

d. The total operating time during the reporting period of each affected unit;

e. Include the date of the most recent tune-up for the boiler; and

f. Include the date of the most recent burner inspection if it was not done biennial and was delayed until the next scheduled or unscheduled unit shutdown.

[40CFR §§63.7550(b), (b)(1), (c)(1), & (c)(5)(i) though (iv) and (xiv)]

5.5.3. The permittee shall report any observation made in accordance with Condition 5.2.3. that indicate visible emissions in excess of either items e and/or f of Condition 5.1.1. made during January 1 to June 30 in the facility's Title V Semi Annual Compliance Report or July 1 to December 31 as part of the facility's Title V Annual Compliance Report. Such report shall include the record of the recorded observation in accordance with Condition 5.2.3. and measures taken as result of the observation. This reporting requirement can be satisfied by including the results of the exceeded observation(s) with the facility's quarterly opacity report and list the exceedance in the facility's Title V annual compliance certification report.
[40 CFR §60.49b(h) and 45 CSR §2-8.3b.]

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[1] _____ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title _____ _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

[1] 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 U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

west virginia department of environmental protection
Division of Air Quality

Phase II Acid Rain Permit

Plant Name: **Mitchell Power Station**		Permit #: **R33-3948-2027-6**
Affected Unit(s): **1, 2**		
Operator: **Kentucky Power Company**		ORIS Code: **3948**
Effective Date	From: **January 1, 2023**	To: **December 31, 2027**

Contents:

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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

Digitally signed by: Laura M. Crowder
DN: CN = Laura M. Crowder email = Laura.M.Crowder@wv.gov C = US O = West Virginia Department of Environmental Protection OU = Division of Air Quality
Date: 2022.12.19 12:21:39 -05'00'

Laura M. Crowder, Director
Division of Air Quality

December 19, 2022
Date

Plant Name: **Mitchell Power Station**	Permit #: **R33-3948-2027-6**

2. SO_2 Allocations and NO_x Requirements for each affected unit

Unit No. **1**

SO_2 Allowances	**Year**				
	2023	**2024**	**2025**	**2026**	**2027**
Table 2 allowances, as adjusted by 40 CFR Part 73	18995	18995	18995	18995	18995
Repowering plan allowances	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_2 allowance allocations identified in this permit (See 40 CFR §72.84).					

NO_X Requirements	**2023**	**2024**	**2025**	**2026**	**2027**
NO_X Limit (lb/mmBtu)	0.50	0.50	0.50	0.50	0.50

Pursuant to 40 CFR Part 76 and 45CSR33, the West Virginia Department of Environmental Protection, Division of Air Quality approves a NO_x emissions compliance plan for this unit effective for calendar years 2023, 2024, 2025, 2026 and 2027. Under this plan the unit's actual annual average NO_x emission rate shall not exceed the applicable limitation of 0.50 lb/mmBtu as set forth in 40 CFR §76.5(a)(2) for Group 1, Phase I dry bottom wall-fired boilers.

In addition to the described NO_x compliance plans, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.

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

None.

4. Permit application forms:

Attached.

Plant Name: **Mitchell Power Station**	Permit #: **R33-3948-2027-6**

2. SO_2 Allocations and NO_x Requirements for each affected unit

Unit No. **2**

SO_2 Allowances	**Year**				
	2023	**2024**	**2025**	**2026**	**2027**
Table 2 allowances, as adjusted by 40 CFR Part 73	19656	19656	19656	19656	19656
Repowering plan allowances	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_2 allowance allocations identified in this permit (See 40 CFR §72.84).					

NO_X Requirements	**2023**	**2024**	**2025**	**2026**	**2027**
NO_X Limit (lb/mmBtu)	0.50	0.50	0.50	0.50	0.50

Pursuant to 40 CFR Part 76 and 45CSR33, the West Virginia Department of Environmental Protection, Division of Air Quality approves a NO_x emissions compliance plan for this unit effective for calendar years 2023, 2024, 2025, 2026 and 2027. Under this plan the unit's actual annual average NO_x emission rate shall not exceed the applicable limitation of 0.50 lb/mmBtu as set forth in 40 CFR §76.5(a)(2) for Group 1, Phase I dry bottom wall-fired boilers.

In addition to the described NO_x compliance plans, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.

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

None.

4. Permit application forms:

Attached.

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258
Approval expires 12/3 /202

Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: ☐ new ☐ revised ☑ for ARP permit renewal

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Mitchell (WV)	West Virginia	3948
Facility (Source) Name	State	Plant Code

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
1	Yes
2	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes

Mitchell (WV)
Facility (Source) Name (from STEP 1)

STEP 3

Read the standard requirements.

Permit 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.

Mitchell (WV)
Facility (Source) Name (from STEP 1)

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.

Mitchell (WV)
Facility (Source) Name (from STEP 1)

STEP 3, Cont'd.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, a 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 o the Act, including the provisions o title I o the Act relating to applicable National Ambient Air Quality Standards o State Implementation Plans;

(2) Limiting the number o allowances a source can hold; provided, that the number o allowances held by the source shall not affect the source's obligation o comply with any other provisions o 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, o 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

Read the certification statement, sign, and date.

Certification

am authorized o make this submission o behalf o the owners and operators o the affected source o affected units for which the submission is made. certify under penalty o law that have personally examined, and am familiar with, the statements and information submitted 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 o my knowledge and belief true, accurate, and complete. 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 4/7/2022

United States
Environmental Protection Agency
Acid Rain Program

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

Acid Rain NO_X Compliance Plan

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

This submission is: ☐ New ☑ Revised

STEP 1
Indicate plant name, State, and Plant code from the current Certificate of Representation covering the facility.

Plant Name	State	Plant Code
Mitchell	WV	3948

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 Type DBW	ID# 2 Type DBW	ID# Type	ID# Type	ID# Type	ID# Type
(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)	X	X				
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)						
(c) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)						
(d) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II 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

Plant Name (From Step 1)
Mitchell

	ID# / Type	ID# / Type	ID# / Type	ID# / Type	ID# / Type	ID# / Type
(i) NO_X Averaging Plan (include NO_X Averaging form)						
(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_X Averaging (check the NO_X Averaging Plan box and include NO_X 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 12-18-18

West Virginia Department of Environmental Protection
Joe Manchin, III
Governor
Division of Air Quality
Randy C. Huffman
Cabinet Secretary

Class II General Permit
G60-C Registration to Modify

for the
Prevention and Control of Air Pollution in regard to the
Construction, Modification, Relocation, Administrative Update and
Operation of Emergency Generators

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 General Permit G60-C.

G60-C057A

Issued to:
AEP Generation Resources Inc.
Mitchell Plant
051-00005

William F. Durham
Director

Issued: August 8, 2014

This Class II General Permit Registration will supercede and replace G60-C057.

Facility Location:	State Route 2, Moundsville, Marshall County, West Virginia
Mailing Address:	P.O. Box K Moundsville, WV 26041
Facility Description:	Electric Generation Facility
NAICS Codes:	221112
UTM Coordinates:	516.0 km Easting • 4,409.0 km Northing • Zone 17
Registration Type:	Modification
Description of Change:	Installation of two additional generators (EG-1 and EG-2) to black start the facility.

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.)	X
Section 6	Tanks	X
Section 7	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	X
Section 8	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	X

Emission Units

Emission Unit ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity (Bhp/rpm)
LPG	Generac SG080, 127 BHP Engine (Spark Ignition Engine)	2013	127/1,800
EG-1	CAT® C175-16 (Compression Ignition (CI) Engine) Certificate No. ECPXL106.NZS-011 Engine ECPXL106.NZS	2014	3,717/1,800
EG-2	CAT® 3516C-HD TA (CI Engine) Certificate No. ECPXL78.1NZS-024 Engine ECPXL78.1NZS	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
LPG	0.74	0.19	21.75	5.44	0.22	0.06
EG-1	59.9	14.98	7.66	1.92	0.94	0.24
EG-2	36.4	9.1	4.85	1.21	1.18	0.03
TOTAL	97.04	24.27	34.26	8.57	2.34	0.33

West Virginia Department of Environmental Protection

Austin Caperton
Cabinet Secretary

Class II General Permit G60-D

for the
Prevention and Control of Air Pollution in regard to the
Construction, Modification, Relocation, Administrative Update and
Operation of Emergency Generators

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation.

William F. Durham
Director, Division of Air Quality

Issued: May 9, 2018

Class II General Permit G60-D supersedes and replaces General Permit G60-C issued on May 21, 2009.

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.

General Permit G60-D authorizes the construction, modification, administrative update and/or operation of emergency generators.

Table of Contents

1.0. Emission Units

1.1. General Permit Registration

1.1.1. All emission units covered by this permit are listed on the issued G60-D Registration.

2.0. General Conditions

2.1. Purpose

The purpose of this Class II General Permit is to authorize the construction, modification, administrative update, relocation, and operation of eligible emergency generators through a Class II General Permit registration process. The requirements, provisions, standards and conditions of this Class II General Permit address the prevention and control of regulated pollutants from the operation of emergency generator(s).

2.2. 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:

2.2.1. 45 CSR 13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation.*

2.3. Applicability

2.3.1. All emergency generators installed for the purpose of allowing key systems to continue to operate without interruption during times of utility power outages, including emergency generators installed at Title V(major) facilities and other facilities having additional point sources of emissions, are eligible for Class II General Permit registration except for:

a. Any emergency generator which is a major source as defined in 45CSR14, 45CSR19 or 45CSR30;
b. Any emergency generator subject to the requirements of 45CSR14, 45CSR15, 45CSR19, 45CSR25, 45CSR27, 45CSR30, 45CSR34;
c. Any emergency generator whose estimated hours of operation exceeds 500 hours per year;
d. Any emergency generator located in or which may significantly impact an area which has been determined to be a nonattainment area. Unless otherwise approved by the Secretary.
e. Any emergency generator which will require an individual air quality permit review process and/or individual permit provisions to address the emission of a regulated pollutant or to incorporate regulatory requirements other than those established by General Permit G60-D.
f. Any emergency generator which is/are part of an emergency demand response program.

2.3.2. For the purposes of General Permit G60-D, *emergency generator* means a generator whose purpose is to allow key systems to continue to operate without interruption during times of utility power outages.

2.3.3. The West Virginia Division of Air Quality reserves the right to reopen this permit or any authorization issued under this permit if the area in which the affected facility is located is federally designated as non-attainment for specified pollutants. If subsequently any proposed construction, modification and/or operation does not demonstrate eligibility and/or compliance with the requirements, provisions, standards and conditions of this General Permit, this General

Permit registration shall be denied and an individual permit for the proposed activity shall be required.

2.3.4. Except for emergency diesel generators, all emission units covered by this permit, unless they are classified as De Minimis Sources in 45CSR13 Table 45-13B, must be fueled with pipeline-quality natural gas, field gas, propane gas, or equivalent with a maximum sulfur content of 20 grains of sulfur per 100 standard cubic feet and a maximum H_2S content of 0.25 grains per 100 cubic feet of gas (maximum allowed to have in natural gas sold for delivery through the interstate pipeline system).
[45CSR§13-5.11]

2.4. Definitions

2.4.1. 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.

2.4.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.4.3. "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 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.4.4. The terms established in applicable definitions codified in the Code of Federal Regulations including 40 CFR Part 60 NSPS Subparts A, IIII and JJJJ or 40 CFR Part 63 MACT Subparts A and ZZZZ shall also apply to those sections of General Permit G60-D where these subparts are incorporated or otherwise addressed.

2.5. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSCR	Non Selective Catalytic Reduction
CEM	Continuous Emission Monitor	NSPS	New Source Performance Standards
CES	Certified Emission Statement		
CFR	Code of Federal Regulations	PM	Particulate Matter
CO	Carbon Monoxide	$PM_{2.5}$	Particulate Matter less than 2.5 µm in diameter
CSR	Code of State Rules		
DAQ	Division of Air Quality	PM_{10}	Particulate Matter less than 10 µm in diameter
DEP	Department of Environmental Protection	ppm	Parts per million
FOIA	Freedom of Information Act	ppm_v	Parts per million by Volume
HAP	Hazardous Air Pollutant	PSD	Prevention of Significant Deterioration
HP	Horsepower		
lb/hr	Pounds per hour	psi	Pounds per square inch
LDAR	Leak Detection and Repair	RICE	Reciprocating Internal Combustion Engine
M or m	Thousand		
MACT	Maximum Achievable Control Technology	SCR	Selective Catalytic Reduction
		SIC	Standard Industrial Classification
MDHI	Maximum Design Heat Input		
MM or mm	Million	SIP	State Implementation Plan
MMBTU/hr	Million British Thermal Units Per Hour	SO_2	Sulfur Dioxide
		TAP	Toxic Air Pollutant
MMCF/hr	Million Cubic Feet per Hour	TPY	Tons per year

N/A	Not Applicable	TSP	Total Suspended Particulate
NAAQS	National Ambient Air Quality Standards	USEPA	United States Environmental Protection Agency
NESHAPS	National Emissions Standards for Hazardous Air Pollutants	UTM	Universal Transverse Mercator
		VEE	Visual Emissions Evaluation
LAT	Latitude	VOC	Volatile Organic Compounds
LON	Longitude	VRU	Vapor Recovery Unit

2.6. Permit Expiration and Renewal

2.6.1. This Class II General 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 other applicable legislative rule.

2.6.2. General Permit registrations granted by the Secretary shall remain valid, continuous and in effect unless suspended or revoked by the Secretary. If the Class II General Permit registration is subject to action or change, existing registrations will continue to be authorized and subject to the previously established permit conditions. **[45CSR§13-10.2, 45CSR§13-10.3]**

2.6.3. The Secretary shall review and may renew, reissue or revise this Class II General Permit for cause. The Secretary shall define the terms and conditions under which existing General Permit registrations will be eligible for registration under a renewed, reissued, or revised General Permit and provide written notification to all General Permit registrants (or applicants). This notification shall also describe the registrant's (or applicant's) duty or required action and may include a request for additional information that may be required by any proposed general permit renewal, reissuance or revision.

2.7. Administrative Update to General Permit Registration

2.7.1. The registrant may request an administrative update to their General Permit registration as defined in and according to the procedures specified in 45CSR§13-4. **[45CSR§13-4.]**

2.8. Modification to General Permit Registration

2.8.1. The registrant may request a minor permit modification to their General Permit registration as defined in and according to the procedures specified in 45CSR§13-5. **[45CSR§13-5.]**

2.9. Duty to Comply

2.9.1. The registered affected facility shall be constructed and operated in accordance with the information filed in the General Permit Registration Application and any amendments thereto. The Secretary may suspend or revoke a General Permit registration if the plans and specifications upon which the approval was based are not adhered to.

2.9.2. The registrant must comply with all applicable conditions of this Class II General Permit. Any General Permit noncompliance constitutes a violation of the West Virginia Code, and/or the Clean Air Act, and is grounds for enforcement action by the Secretary or USEPA.

2.9.3. Violation of any of the applicable requirements, provisions, standards or conditions contained in this Class II General Permit, or incorporated herein by reference, may subject the registrant 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.

2.9.4. Registration under this Class II General Permit does not relieve the registrant 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.

2.10. Inspection and Entry

2.10.1. The registrant 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 enter upon the registrant'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 Class II General 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 this Class II General 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.

2.11. Need to Halt or Reduce Activity not a Defense

2.11.1. It shall not be a defense for a registrant in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Class II General 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.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonably 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 this Class II General 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. In any enforcement proceeding, the registrant seeking to establish the occurrence of an emergency has the burden of proof.

2.12.3. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Federally-Enforceable Requirements

2.13.1. All terms and conditions in this permit are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

2.13.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-Enforceable" requirements upon SIP approval by the USEPA.

2.14. Duty to Provide Information

2.14.1. The registrant shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this Class II General Permit Registration or to determine compliance with this General Permit. Upon request, the registrant shall also furnish to the Secretary copies of records required to be kept by the registrant. For information claimed to be confidential, the registrant 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 registrant shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 CFR Part 2.

2.15. Duty to Supplement and Correct Information

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

2.16. Credible Evidence

2.16.1. Nothing in this Class II General 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 defenses otherwise available to the registrant including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

2.17. Severability

2.17.1. The provisions of this Class II General Permit are severable. If any provision of this Class II General Permit, or the application of any provision of this Class II General Permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining Class II General Permit terms and conditions or their application to other circumstances shall remain in full force and effect.

2.18. Property Rights

2.18.1. Registration under this Class II General Permit does not convey any property rights of any sort or any exclusive privilege.

2.19. Notification Requirements

2.19.1. The registrant shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit except as required under section 1.1.3 (e.g. 15 days after alternative operating scenario startup).

2.20. Suspension of Activities

2.20.1. In the event the registrant should deem it necessary to suspend, for a period in excess of one (1) year, all operations authorized by this permit, the registrant shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the one (1) year of the suspension period.

2.21. Transferability

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

3.0. Facility-Wide Requirements

3.1. Siting Criteria

3.1.1. All persons submitting a Class II General Permit Registration Application to construct, modify or relocate an emergency generator shall be subject to the following siting criteria:

a. No emission unit shall be constructed, located or relocated within 300 feet of any occupied dwelling, business, public building, school, church, community building, institutional building or public park. An owner of an occupied dwelling or business may elect to waive the 300 foot siting criteria.

b. Any person proposing to construct, modify or relocate any emission unit(s) within 300 feet of any occupied dwelling, business, public building, school, church, community, institutional building or public park may elect to apply for an individual permit pursuant to 45CSR13.

3.2. Limitations and Standards

3.2.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]

3.2.2. **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 or allow 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.]

3.2.3. **Asbestos.** The registrant 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 CFR § 61.145, 40 CFR § 61.148, and 40 CFR § 61.150. The registrant, 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 registrant is subject to the notification requirements of 40 CFR § 61.145(b)(3)(i). USEPA, the Division of Water and Waste Management (DWWM), and the Department of Health and Human Resources (DHHR) – Office of Environmental Health Services (OEHS) require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]

3.2.4. **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]***

3.2.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one, twelve (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. *This requirement does not apply to emergency generator(s) permitted to operate only 500 hours per year.*
[45CSR§13-10.5.]

3.2.6. **Standby plan for reducing emissions.** When requested by the Secretary, the registrant 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 45CSR11. **[45CSR§11-5.2.]**

3.3. Monitoring Requirements

See Section 4.2.

3.4. Testing Requirements

3.4.1. **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 registrant shall conduct test(s) to determine compliance with the emission limitations set forth in this Class II General Permit and/or established or set forth in underlying documents. The Secretary, or their duly authorized representative, may at his/her option witness or conduct such test(s). Should the Secretary exercise his/her 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 CFR 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 Class II General 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 require, approve or specify additional testing or alternative testing to the test methods specified in the Class II General 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 3.4.1.a. of this general 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 Class II General Permit shall be conducted in accordance with an approved test protocol. 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 registrant 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 registrant 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 and any operating parameters required to be monitored. The report shall include the following: the certification described in paragraph 3.6.1; 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]

3.5. Recordkeeping Requirements

3.5.1. **Retention of records.** The registrant 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. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Secretary of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Secretary shall be certified by a responsible official. Where appropriate, the registrant may maintain records electronically.

3.5.2. **Odors.** For the purposes of 45CSR4, the registrant 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.*]**

3.6. Reporting Requirements

3.6.1. **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.

3.6.2. **Confidential information.** A registrant 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.

3.6.3. **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, e-mailed 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
-or-
DEPAirQualityReports@wv.gov
(preferred)

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

3.6.4. **Emission inventory.** At such time(s) as the Secretary may designate, the registrant 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 DAQ. 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.

3.6.5. **Operating Fee**

The registrant will be subject to (a) or (b) below dependent on the source status of the facility:

(a) In accordance with 45CSR22 – Air Quality Management Fee Program, the registrant shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

(b) 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.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. *Operation and Maintenance of Air Pollution Control Equipment and Emission Reduction Devices.* The registrant shall, to the extent practicable, install, maintain, and operate all pollution control equipment and emission reduction devices listed in the issued General Permit Registration and associated monitoring equipment to comply with limits set forth in this General Permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR§13-5.11.]**

4.1.2. *Applicability of State and Federal Regulations.* The registrant is subject to the provisions of the following State Rules and Federal Regulations, to the extent applicable based on its registration:

a. 45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation
b. 45CSR16 - Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60
c. 45CSR22 - Air Quality Management Fee Program
d. 45CSR30 – Requirements for Operating Permits
e. 40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
f. 40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
g. 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

4.2. Recordkeeping Requirements

4.2.1. *Monitoring information.* The registrant 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.

4.2.2. *Record of Maintenance of Air Pollution Control Equipment and Emission Reduction Devices.* For all pollution control equipment and emission reduction devices listed in the General Permit Registration, the registrant shall maintain accurate records of all required pollution control equipment and emission reduction devices inspection and/or preventative maintenance procedures specifically required in this General Permit.

4.2.3. *Record of Malfunctions of Air Pollution Control Equipment and Emission Reduction Devices.* For all air pollution control equipment and emission reduction devices listed in the General Permit Registration, the registrant shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment and emission reduction devices during which excess emissions above the applicable permit limit 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.

5.0. Source-Specific Requirements [Reciprocating Internal Combustion Engine(s) (RICE)]

5.1. Limitations and Standards

5.1.1. For the purposes of General Permit G60-D, *emergency generator* means a generator whose purpose is to allow key systems to continue to operate without interruption during times of utility power outages.

5.1.2. *Regulated Pollutant Limitation.* The registrant shall not cause, suffer, allow or permit emissions of any regulated pollutant listed in the General Permit Registration to exceed the emission limit (pounds per hour and tons per year) recorded with the registrant's General Permit Registration. The registrant may request a modification or administrative update to these emission limits.

5.1.3. *Maximum Hourly Limitation.* The maximum hours of operation for any registered emergency generator listed in the General Permit Registration application shall not exceed 500 hours per year. Compliance with the Maximum Yearly Hourly Operation Limitation shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the hours or operation at any given time during the previous twelve consecutive calendar months.

5.1.4. The applicable emergency generator(s) shall be operated and maintained as follows:

a. In accordance with the manufacturer's recommendations and specifications or in accordance with a site specific maintenance plan; and,
b. In a manner consistent with good operating practices.

5.1.5. Requirements for Use of Catalytic Reduction Devices

a. Rich-burn engine(s) equipped with non-selective catalytic reduction (NSCR) air pollution control devices shall be fitted with a closed-loop, automatic air/fuel ratio controller to ensure emissions of regulated pollutants do not exceed the emission limit listed in the General Permit Registration for any engine/NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 2%.

b. Lean-burn engine(s) equipped with selective catalytic reduction (SCR) air pollution control devices shall be fitted with a closed-loop automatic feedback controller to ensure emissions of regulated pollutants do not exceed the emission limit listed in the General Permit Registration for any engine/SCR combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the engine, ammonia injection and SCR device, monitor emission levels downstream of the catalyst element and limit ammonia slip to less than 10 ppm_v.

c. Lean-burn engine(s) equipped with oxidation catalyst air pollution control devices shall be fitted with a closed-loop automatic air/fuel ratio feedback controller to ensure emissions of regulated pollutants do not exceed the emission limit listed in the General Permit Registration for any engine/oxidation catalyst combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to ensure a lean-rich mixture.

d. For engine(s) equipped with a catalyst, the registrant shall monitor the temperature to the inlet of the catalyst and in accordance with manufacturer's specifications; a high temperature alarm shall shut off the engine before thermal deactivation of the catalyst occurs. If the engine shuts off due to high temperature, the registrant shall also check for thermal deactivation of the catalyst before normal operations are resumed.

e. The registrant shall follow a written operation and maintenance plan that provides the periodic and annual maintenance requirements.

5.1.6. The registrant shall comply with all applicable NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

5.1.7. The emission limitations specified in section 5.1.2 shall apply at all times except during periods of start-up and shut-down provided that the duration of these periods does not exceed 30 minutes per occurrence. The registrant shall operate the engine in a manner consistent with good air pollution control practices for minimizing emissions at all times, including periods of start-up and shut-down. The emissions from start-up and shut-down shall be included in the twelve (12) month rolling total of emissions. The registrant shall comply with all applicable start-up and shut-down requirements in accordance with 40 CFR Part 60, Subparts IIII, JJJJ and 40 CFR Part 63, Subpart ZZZZ.

5.2. Monitoring Requirements

5.2.1. Catalytic Reduction Devices

a. The registrant shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The registrant shall ensure proper operation, maintenance and performance of catalytic reduction devices and auxiliary air pollution control devices by:

1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.

2. Following the catalyst manufacturer emissions related operating and maintenance recommendations, or develop, implement, or follow a site-specific maintenance plan.

5.3. Recordkeeping Requirements

5.3.1. To demonstrate compliance with general permit condition 5.1.3, the registrant shall maintain records of the hours of operation of the emergency generator(s) on a monthly basis.

5.3.2. To demonstrate compliance with general permit section 5.1.4, the registrant shall maintain records of the maintenance performed on each emergency generator.

5.3.3. To demonstrate compliance with general permit sections 5.2.1, the registrant shall maintain a copy of the site specific maintenance plan or manufacturer maintenance plan.

5.3.4. The registrant shall comply with all applicable recordkeeping requirements under NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

5.3.5. All records required by this section shall be maintained in accordance with section 3.5.1 of this general permit.

5.4. Testing Requirements

5.4.1. The registrant shall comply with all applicable testing requirements under NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

5.4.2. To demonstrate compliance with general permit section 5.1.5(a), the registrant shall verify that the closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 2% during any performance testing.

5.5. Reporting Requirements

5.5.1. The registrant shall comply with all applicable notification requirements under NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

6.0. Source-Specific Requirements (Tanks)

6.1. Limitations and Standards

6.1.1. All tanks in the General Permit Registration application will be listed in Section 1.0 (the emission unit table) of the issued registration. Tanks are to be used for fuel storage for the emergency generators only.

6.2. Monitoring Requirements

6.2.1. See Facility-Wide Monitoring Requirements.

6.3. Testing Requirements

6.3.1. See Facility-Wide Testing Requirements.

6.4. Recordkeeping Requirements

6.4.1. See Facility-Wide Recordkeeping Requirements.

6.5. Reporting Requirements

6.5.1. See Facility-Wide Reporting Requirements.

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[1] (please use blue ink) _____ Responsible Official or Authorized Representative _____ Date

Name & Title (please print or type) _____ Name _____ Title

Telephone No. _____ Fax No. _____

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[1] 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 U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

Attachment K
45 CSR 2/10 Monitoring Plan

45 CSR 2 and 45 CSR 10
Monitoring and Recordkeeping Plan

Mitchell Plant

Facility Information:

Facility Name:Mitchell Plant

Facility Address: P.O. Box K
State Route 2
Moundsville, WV 26041

Facility Environmental Contact: Mr. G. M. (Matt) Palmer
–Plant Environmental Coordinator

A. Facility Description:

Mitchell Plant is a coal-fired electric generating facility with two main combustion units (Units 1 and 2) discharging through a common stack shell that utilizes two separate stack discharge flues. Mitchell plant also has an auxiliary boiler (Aux. 1) that discharges through an independent auxiliary stack (aux 1). Unit 1, Unit 2, and Aux. Boiler 1 each have a design heat input greater than 10 mmBTU/hr making both 45 CSR 2A (Interpretive Rule for 45 CSR 2) and 45 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 Stack (CS012)

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, §3.2 …*Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emissions control.*

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, Mitchell Plant has chosen to employ 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 Mitchell 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 Mitchell Plant will use COMS as the primary method of monitoring opacity of the fuel burning units, we are also reserving the right to use 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 Mitchell 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 and 2 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.*

Mitchell 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 a typical 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. <u>Aux. Stack (aux 1)</u>

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, Mitchell Plant previously petitioned the Office of Air Quality (OAQ) Chief for alternative testing, monitoring, and reporting requirements for the auxiliary boiler and associated stack. 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. Since the Mitchell auxiliary boiler does not utilize post-combustion particulate emissions controls, operating parameters of control equipment are nonexistent and 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 Mitchell 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 of the 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, Mitchell Plant previously petitioned the Office of Air Quality (OAQ) Chief for alternative testing, monitoring, and reporting requirements for the auxiliary boiler and associated stack.

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 139,877 Btu/gallon (calendar year 2000 data) and an AP-42 based particulate mass emissions emission factor of 2 lbs/thousand gallons, the calculated particulate mass emissions of the auxiliary boiler 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 a 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 boiler, 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 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 Stack (CS012)

1. Applicable Standard:

   45 CSR 10, §3.1.b. *For fuel burning units of the Mitchell Plant of Ohio Power Company, located in Air Quality Control Region I, the product of 7.5 and the total actual operating 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_2 limit will likely be established as a result of the installation of the flue gas desulfurization system/new stack configuration and the subsequent NAAQS compliance demonstration modeling. Assuming that revised SO2 limit is more stringent than the current limit expressed in 45 CSR 10, Mitchell Plant SO_2 emissions will be regulated by the more stringent of the two limits.

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_2 mass emissions from the two new stack flues (located within one stack shell) will be Continuous Emissions Monitors (CEMS). Data used in evaluating the performance of the Mitchell 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 Units 1 and 2 will discharge through separate flues and both units are "Type a" fuel burning units as defined in 45 CSR 10, the plant-wide limit is calculated by summing the limits from the two flues.

   b. Other Credible Monitoring Method(s): While Mitchell Plant will use CEMS as the primary method of monitoring SO_2 mass emissions from the two 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, Mitchell 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_2 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 Mitchell 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, Mitchell 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_2 standard have occurred, such information shall be stated in the cover letter of the EDR submittal.

B. Aux. Stack (aux 1)

1. Applicable Standard:

45 CSR 10, §3.1.e. *For type 'b' and Type 'c' fuel burning units, the product of 3.1 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 Mitchell Plant auxiliary boiler (auxiliary stack) is 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 SO2 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_2 standards.

Revisions of Monitoring Plan:

Mitchell 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 Revised Monitoring Plan:

Implementation of this revised monitoring plan will occur in concurrence with the installation and operation of the new stack for Units 1 and 2 at Mitchell Plant.

Attachment L
Suggested Title V Permit Language

Wheeling Power suggests that the following changes be made to the Title V Permit Equipment Table to reflect recent additions, not impacting Title V permit language.

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
Tank #64	N/A	Tank #64	Bioreactor Nutrient Tank	12,575 Gal.	2024
Tank #65	N/A	Tank #65	Bioreactor Hydrochloric Acid Tank	6,000 Gal.	2024
Tank #66	N/A	Tank #66	WW Pond Sulfuric Acid Tank	14,500 Gal.	2023
Tank #67	N/A	Tank #67	WW Pond Sodium Hydroxide Tank	20,300 Gal.	2023
Tank #68	N/A	Tank #68	WW Pond Organosulfide Tank	6,400 Gal.	2023
Tank #69	N/A	Tank #69	WW Pond Polymer Tank	1,360 Gal.	2023

Wheeling Power suggests the following administrative revisions to the Title V permit that will improve the functionality of the permit for plant staff.

4.0 Main Boilers [Em. Unit IDs *Unit 1* and *Unit 2* – Em. Pt. IDs *1E* and *2E*]

Permit Condition 4.1.4.a: Historically, Mitchell Plant has conducted particulate matter compliance testing on both units (Unit 1 & Unit 2) during the same 7 day operational period, per the 7 day requirement listed in 45CSR2-Appendix §§ 4.1.b. Due to unit availability, scheduling and performing these tests on both units within the same 7 day period can be difficult at times, and neither 45CSR2-Appendix §§ 4.1.b. or the Title V permit specifies an individual or combined unit testing requirement within the same 7 day period. Wheeling Power is suggesting that additional language be added to this section clarifying if both units have to be tested within the same 7 day period, or if each unit has its own 7 day testing period.

6.0 Material Handling [Emission point IDs identified in Equipment Table subsection 1.1.]

Permit Condition 6.1.13: Polymer and organosulfide for the FGD wastewater treatment facility delivered to the facility via paved roadway(s) has an existing maximum annual rate of 13,500 gallons per year. Wheeling Power requests that this maximum annual rate be increased to 25,000 gallons per year to simplify the ordering and delivery process for plant staff and vendor(s).

Wheeling Power suggests the following language revisions to the Title V permit associated with the Unit 1 and Unit 2 Emergency Diesel Driven Fire Pump replacements.

7.0 Emergency Quench Water Pump Diesel-fired Engines [emission unit IDs: 6S, 7S; emission point IDs: 15E, 16E] and Emergency Diesel-Driven Fire Pumps [emission unit IDs: 17S, 18S; emission point IDs: 17E, 18E]

Sections 7.1, 7.4, and 7.5: The previous emergency diesel driven fire pump engines (17S, 18S) were subject to the requirements in 40 CFR 63 Subpart ZZZZ, and the new replacement diesel driven fire pump engines are subject to 40 CFR 63 Subpart IIII. Suggested language referring to these requirements is provided in Attachment S of this Title V Renewal Application, as Attachment I in the Minor Modification package associated with fire pump engine 18S (the Minor Modification application associated with fire pump engine 17S was previously submitted on 8/25/2023).

Attachment S
Title V Permit Revision Application

WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

TITLE V PERMIT REVISION APPLICATION

PLEASE CHECK TYPE OF TITLE V PERMIT REVISION:

- ☐ **ADMINISTRATIVE AMENDMENT**
- ☑ **MINOR MODIFICATION**
- ☐ **SIGNIFICANT MODIFICATION**
- ☐ **OFF-PERMIT CHANGE**
- ☐ **OPERATIONAL FLEXIBILITY [502(B)(10) CHANGES]**
- ☐ **REOPENING**

TITLE V PERMIT NUMBER:
R30- 05100005-2019 (MM01)

WHEN DID OR WHEN WILL THE CHANGES OCCUR?
MM/DD/YYYY : 06/2024

SIC CODES: PRIMARY: 4911 **SECONDARY:**

Refer to "Title V Revision Guidance" (Appendix A, "Title V Permit Revision Flowchart"), for type of revision, and to Section 7 of this Application for Application Completeness and Ability to Operate information

Section 1: General Information

a. Name of Applicant ***(As registered with the WV Secretary of State's Office)*****:**	**b. Facility Name or Location:**
Wheeling Power Company	Mitchell Plant

b. Contact Information

Responsible Official: Joshua D. Snodgrass		Title: Plant Manager
Street or P.O. Box: P.O. Box K		
City: Moundsville	State: WV	Zip:
Telephone Number: (304) 843 - 6005	Fax Number: (304) 843 - 6080	E-mail: jdsnodgrass@aep.com
Environmental Contact: G. M. (Matt) Palmer		Title: Plant Environmental Coordinator
Street or P.O. Box: P.O. Box K		
City: Moundsville	State: WV	Zip: 26041
Telephone Number: (304) 843 - 6048	Fax Number: (304) 843 - 6080	E-mail: gmpalmer@aep.com
Application Preparer: Brandon T. Belcher		Title: Environmental Specialist
Company: AEP Service Corp.		
Street or P.O. Box: 1 Riverside Plaza, 21st Floor		
City: Columbus	State: OH	Zip: 43215
Telephone Number: (304) 541 - 7437	Fax Number: ( ) -	E-mail: btbelcher@aep.com

Person to contact if we have questions regarding this Application: Brandon T. Belcher

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 2: Revision Information

a. Description of Changes Associated with this Permit Revision

Provide a general description of changes to the facility.

This change involves the replacement of an emergency diesel driven fire pump and fuel tank associated with Unit 2 at the Mitchell Plant. The new diesel driven fire pump is identical to the one installed in 2023 for Unit 1.

b. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☑ No

If Yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"*** guidance as **ATTACHMENT A.**

c. Provide a **Plot Plan(s**) if new emission points were added since latest revision, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the new/modified stationary source(s) is located as **ATTACHMENT B.** For instructions, refer to "***Plot Plan - Guidelines***"**.**

d. Provide a detailed **Process Flow Diagram(s)** if new emission points were added since latest revision, showing each new/modified process or emissions unit as **ATTACHMENT C.** Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

e. Emission Units Table

Fill out the **Emission Units Table** for new and/or modified equipment and provide it as **ATTACHMENT D**.

f. Emission Units Form(s)

For each new and/or modified emission unit(s) with applicable requirement(s) listed in the **Emission Units Table**, fill out and provide an **Emission Unit Form(s)** as **ATTACHMENT E**.

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

For each new and/or modified emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.

g. Control Devices

For each new and/or modified control device listed in the **Emission Units Table**, fill out and provide an **Air Pollution Control Device Form(s)** as **ATTACHMENT G**.

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 Part 70 Major Source Threshold level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. If applicable, please check appropriate box in Section 3(a) below, fill out and provide these forms for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 3: New Applicable Requirements

a. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
☐ SIP	☐ FIP
☐ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☑ Section 111 NSPS (Subpart(s) IIII)	☑ Section 112(d) MACT standards (Subpart(s) ZZZZ)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR26)
☐ CAIR SO_2 Trading Program (45CSR41)	

b. Non Applicability Determinations

List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.

N/A

☐ **Permit Shield Requested** *(not applicable to Minor Modifications, Off-Permit Changes, or for Operational Flexibility)*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

c. Suggested Title V Draft Permit Language

Provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit as **ATTACHMENT I**. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e. g. 45CSR§7-4.1)) for those requirements being added / revised.

See Attachment I

d. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance (MM/DD/YYYY)	Permit/Consent Order Condition Number
Installation did not trigger Reg 13 modification thresholds		

e. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit Number	Date of Issuance (MM/DD/YYYY)	Permit/Consent Order Condition Number

Section 4: Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY	For Off-Permit Changes: Provide Total Aggregated Emissions Increase Since Last Permit/Modification
NOx	0.34	Note: The estimated emissions
CO	0.16	listed do not take into account the
NMHC	0.009	reduction in emissions related to
SO2	0.128	the replacement of the original fire
Particulate Matter	0.015	pump engine.

Provide **Supporting Emission Calculations/Estimations** as **ATTACHMENT J**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 5: Certification of Information

a. Certification For Use Of Minor Modification Procedures ***(Required Only for Minor Modification Requests)***

Note:	*This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

i. Proposed changes do not violate any applicable requirement;

ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;

iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;

v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;

vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed): _____ *(Please use blue ink)* Date: 5 / 9 / 24 *(Please use blue ink)*

Named (typed): Joshua D. Snodgrass Title: Plant Manager

b. Certification of Truth, Accuracy and Completeness and Certification of Compliance
(Required For All Revision Requests)

Note:	*This Certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.*

Certification of Truth, Accuracy and Completeness

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.

Compliance Certification

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.

Responsible official (type or print)

Name: Joshua D. Snodgrass	Title: Plant Manager

Responsible official's signature:

Signature: _____ Signature Date: 5/9/24

(Please use blue ink) *(Please use blue ink)*

Section 6: Attachments

Note: Please check all applicable attachments included with this permit application:	
☐	ATTACHMENT A: Business Confidentiality Claims
☑	ATTACHMENT B: Plot Plan(s)
☑	ATTACHMENT C: Process Flow Diagram(s)
☑	ATTACHMENT D: Emission Units Table
☑	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☐	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring Form(s)
☑	ATTACHMENT I: Suggested Title V Draft Permit Language
☑	ATTACHMENT J: Supporting Emission Calculations/Estimations

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

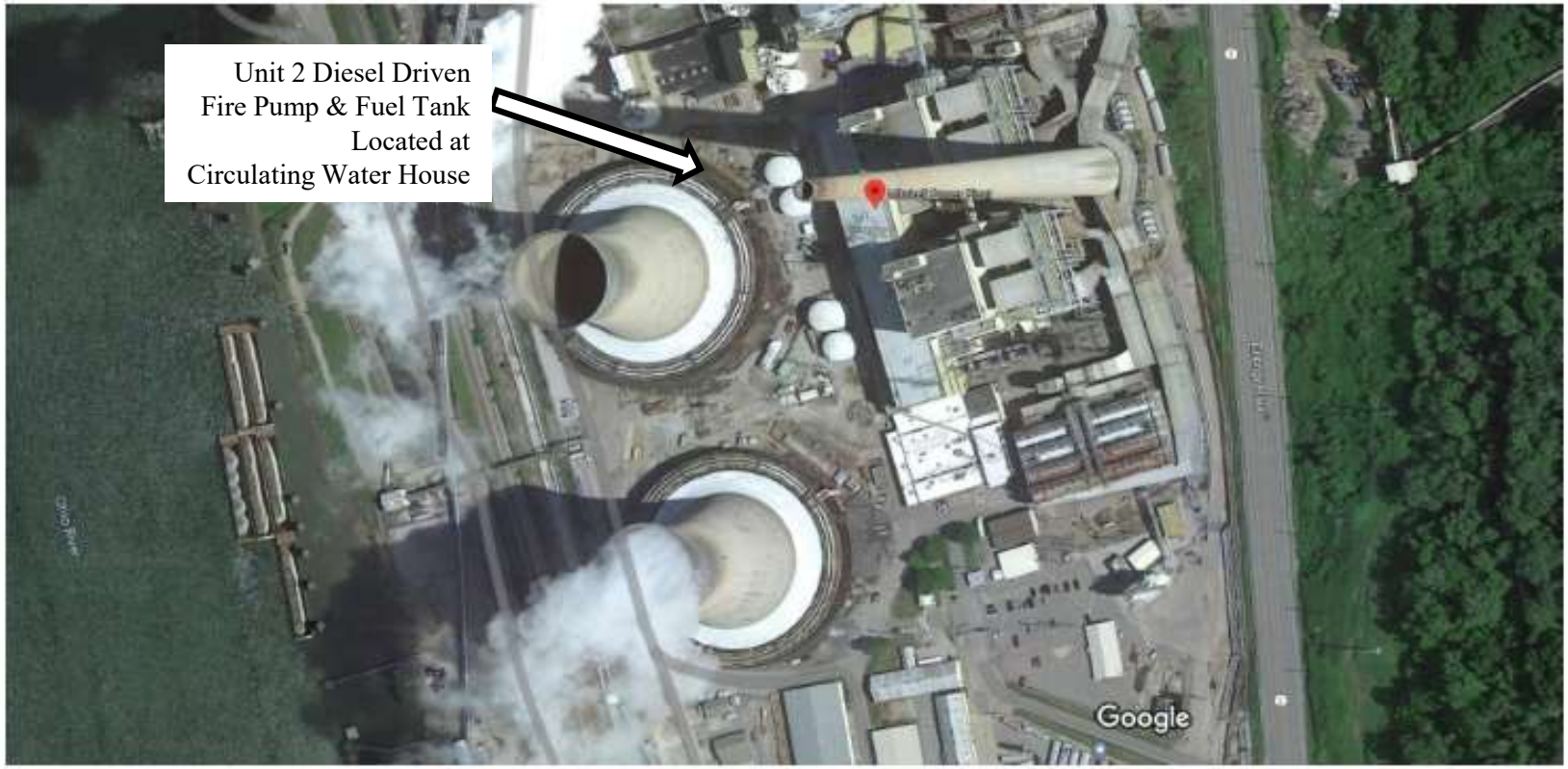
Section 7: Application Completeness and Ability to Operate information for different types of Title V Permit revisions

(Refer to "Title V Revision Guidance" for more information)

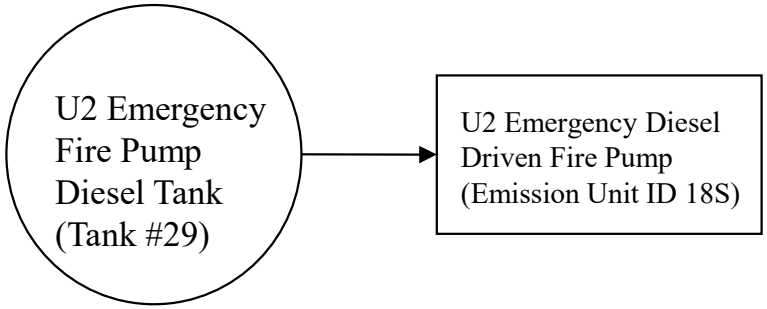
Type of Revision	Application/Notification Requirements	Ability to Operate
Administrative Amendment	☐ Description of change ☐ Supplemental information (rationale) ☐ Certification of application and compliance (Section 5(b))	Upon submittal of the application
Minor Modification	☑ Description of change ☑ Associated change in emissions ☑ Sample Calculations/estimations for determining emissions ☑ List of new applicable requirements associated with changes ☑ List of R13/R14 permits associated with the changes ☑ Suggested draft permit language ☑ Certification for use of Minor Modification (Section 5(a)) ☑ Certification of application and compliance (Section 5(b)) ***No Permit Shield***	After seven (7) days from the submittal of the application, or upon issuance of the R13/R14 permit (if any), whichever is later
Significant Modification	☐ Description of change ☐ Associated change in emissions ☐ Sample Calculations/estimations for determining emissions ☐ List of R13/R14 permits associated with the changes ☐ List of new applicable requirements associated with changes ☐ Request for permit shield ☐ Updated drawings, plot plans, process flow diagrams, etc. ☐ Certification of application and compliance (Section 5(b))	Upon issuance of the modified Title V permit (if changes either conflict with, or are prohibited by existing Title V Permit terms/ conditions), OR upon obtaining of proper R13/ R14 Permit for first 12 months (if changes neither conflict with, nor are prohibited by existing Title V Permit terms/conditions)
Off-Permit Changes	☐ Notification/application to DAQ and U.S.E.P.A. within 2 business days of the change ☐ Description of the change ☐ The date on which the change will occur or has occurred ☐ Pollutants and amounts emitted ☐ Sample Calculations/estimations for determining emissions ☐ Any new applicable requirements that will apply to changes ☐ Certification of application and compliance (Section 5(b)) ***No Permit Shield***	After two (2) days from the submittal of the application
Operational Flexibility	☐ Notification/application submitted to DAQ and U.S.E.P.A. in advance (7 days prior to making changes) ☐ Description of the change ☐ The date on which the change is to occur ☐ Permit terms and conditions affected by the change ☐ Certification of application and compliance (Section 5(b)) ***No Permit Shield***	After seven (7) days from the submittal of the application/notification to DAQ and EPA
Reopening	☐ Description of change ☐ List of new applicable requirements associated with changes ☐ Suggested draft permit language ☐ Certification of application and compliance (Section 5(b))	Ability to operate is not reflected by the changes

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment B: Mitchell Plant



Attachment C:
Mitchell Plant Unit 2 Emergency Diesel Driven Fire Pump



ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
18S	18E	Unit 2 Emergency Diesel Driven Fire Pump	2024	249 BHP	
Tank #29	Tank #29	Diesel Fire Pump Fuel Tank - U2	2024	300 gal	

[1]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.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
18S	Unit 2 Emergency Diesel Driven Fire Pump	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Emergency diesel driven fire pump that will replace existing unit associated with Unit 2 at the plant. 249 BHP diesel engine.

Manufacturer:	**Model number:**	**Serial number:**
Cummins	CFP7E-F60 Fire Pump / QSB6.7 Engine	

Construction date: MM/DD/YYYY	**Installation date:** MM/DD/YYYY	**Modification date(s):** MM/DD/YYYY
06/2024	06/2024	06/2024

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Approx. 14 gal/hr, 249 BHP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Approx. 14 gal/hr	7,000 gal/yr	Assumed 500 hr/yr, but not limited during emergency

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☑ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☑ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 249 BHP	**Type and Btu/hr rating of burners:**

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.

Diesel Fuel, less than 15 ppm sulfur.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	15 ppm		Approx. 137,030 btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.65	0.16
Nitrogen Oxides (NO_X)	1.36	0.34
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)	0.06	0.015
Particulate Matter (PM_{10})	0.06	0.015
Total Particulate Matter (TSP)	0.06	0.015
Sulfur Dioxide (SO_2)	0.51	0.128
Volatile Organic Compounds (VOC)	0.63	0.16
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO2	286.35	71.59

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.).

Manufacturer's Data used for NOx, PM, and CO. AP-42 used for SO2, CO2, and VOC.

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.

This emergency diesel fire pump engine is subject to the requirements in 40 CFR 63 Subpart IIII. The previous diesel fire pump engine was subject to the requirements in 40 CFR 63 Subpart ZZZZ and suggested language revisions have been included in Attachment L.

Requirements currently captured in Title V permit:
R30-05100005-2019 (MM01) Section 7.1.

☐ 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.)

This emergency diesel fire pump engine is subject to the requirements in 40 CFR 63 Subpart IIII. The previous diesel fire pump engine was subject to the requirements in 40 CFR 63 Subpart ZZZZ and suggested language revisions have been included in Attachment L.

Requirements currently captured in Title V permit:
R30-05100005-2019 (MM01) Sections 7.2 through 7.5.

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 I

Summary of Requirements[1]

40 CFR part 60, subpart IIII

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

For fire pump engines with a displacement of less than 30 liters/cyl, manufactured during or after the model year that applies to your fire pump engine power rating in Table 3 of 40 CFR part 60, subpart IIII.

NOTE: To refer directly to the regulatory text, please go to Subpart IIII (scroll down to almost the end of the page).

Temporary Engines:

Per 60.4200(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

Emission Standards: 60.4205(c), Table 4

60.4205(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

Per 60.4215(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205. Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the emission standards in 60.4215(c).

Special requirements apply to engines used in Alaska. Please refer to 60.4216 for the specific requirements and provisions that apply to engines that are located in areas of Alaska not accessible by the FAHS.

[1]Disclaimer: The content provided in this software tool is intended solely as assistance for potential reporters to aid in assessing requirements for compliance under the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR Part 60 Subpart IIII. Any variation between the rule and the information provided in this tool is unintentional, and, in the case of such variations, the requirements of the rule govern. Use of this tool does not constitute an assessment by EPA of the applicability of the rule to any particular facility. In any particular case, EPA will make its assessment by applying the law and regulations to the specific facts of the case.

Fuel Requirements: 60.4207(a), (b), (e)

60.4207(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Per 60.4215(b) stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in 40 CFR 60.4207.

Special requirements apply to engines used in Alaska. Please refer to 60.4216 for the specific requirements and provisions that apply to engines that are located in areas of Alaska not accessible by the FAHS.

Per 60.4217 Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

Importing/Installing Requirements: 60.4208(h), (i)

60.4208(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

Monitoring Requirements: 60.4209(a); If your engine is equipped with a diesel particulate filter: 60.4209(b)

60.4209(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

If your engine is equipped with a diesel particulate filter: 60.4209(b)

60.4209 (b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements: 60.4206, 60.4211(a), (c), (f), (g)

60.4206 Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

60.4211(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(f) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

Testing Requirements: 60.4212

60.4212 Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

Notification, Reports, and Records Requirements: 60.4214(b); If equipped with DPF: 60.4214(c); If >100 HP and > 15 hrs/yr for emergency DR: 60.4214(d)

60.4214(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in Table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

If your engine is equipped with a diesel particulate filter: 60.4214(c)

60.4214(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

If your engine is greater than 100 HP and used more than 15 hours a year for emergency demand response:

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in § 60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

General Provisions (40 CFR part 60): Table 8

Attachment J:

Cummins QSB6.7 Emergency Diesel Driven Fire Pump Emission Calculations

Max Power	249	BHP		
Fuel Use:	14	gal/hr	1.92	MMBtu/hr
	7,000	gal/yr assuming 500 hours operation.	959.21	MMBtu/yr
	137,030	Btu/gal (diesel heat content)		

Hourly Emissions:

	Emission Factor*	Emissions	Emissions	Note:
	Grams/kWh	lb/hr	lb/24hr	
NOx	2.475 Grams/bhp-hr	1.36	32.61	
CO	1.193 Grams/bhp-hr	0.65	15.72	
NMHC	0.062 Grams/bhp-hr	0.03	0.82	* NOx, CO, and NMHC EF's based on Cummins QSB6.7 Spec Sheet.
SO2	0.00205 lb/HP-hr	0.51	12.25	* SO2 estimated using Chapter 3.3 of AP-42 for diesel industrial engines.
PM=PM10=PM2.5	0.111 Grams/bhp-hr	0.06	1.46	* All PM assumed to be less than 1 um
CO2	1.15 lb/HP-hr	286.35	6872.40	* CO2 estimated using AP-42 CO2 EF for diesel industrial engines.
VOC (used TOC)	0.0025141 lb/HP-hr	0.63	15.02	*TOC estimated using AP-42 TOC EF's for exhaust and crankcase emissions for diesel industrial engines.
Formaldehyde	0.00118 lb/MMBtu	0.00226	0.0543	* Formaldehyde estimated using AP-42 Formaldehyde EF for diesel industrial engines. Assuming 14 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Benzene	0.000933 lb/MMBtu	0.0018	0.043	* Benzene estimated using AP-42 Benzene EF for diesel industrial engines. Assuming 14 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Propylene	0.00258 lb/MMBtu	0.005	0.12	* Propylene estimated using AP-42 1,3 Butadiene EF for diesel industrial engines. Assuming 14 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Toluene	0.000409 lb/MMBtu	0.0008	0.019	* Toluene estimated using AP-42 Toluene EF for diesel industrial engines. Assuming 14 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Xylenes	0.000285 lb/MMBtu	0.00055	0.013	* Xylenes estimated using AP-42 Xylenes EF for diesel industrial engines. Assuming 14 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).

Acetaldehyde	0.000767 lb/MMBtu	0.00147	0.0353	*Acetaldehyde estimated using AP-42 Acetaldehyde EF for diesel industrial engines. Assuming 14 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Acrolein	0.0000925 lb/MMBtu	0.000177	0.00426	*Acrolein estimated using AP-42 Acrolein EF for diesel industrial engines. Assuming 1.4gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Napthalene	0.0000848lb/MMBtu	0.00016	0.004	*Naphthalene estimated using AP-42 Naphthalene EF for diesel industrial engines. Assuming 1.9 gal/hr and 137,030 Btu/gal (therefore 1.92 MMBtu/hr).
Total HAPS		0.007	0.17	

Typical Annual Emissions - **(Assume 500 hrs/yr)**

	Emissions
	tons/yr
NOx	0.34
CO	0.16
HC	0.009
SO2	0.1276
PM	0.015
CO2	71.59
VOC	0.16
Formaldehyde	0.000566
Benzene	0.00045
Propylene	0.0012
Toluene	0.00020
Xylenes	0.00014
Acetaldehyde	0.000368
Acrolein	0.0000444
Napthalene	0.00004
Total HAPS	0.0028