

Kentucky Power Company
KPSC Case No. 2025-00257
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DATA REQUEST

- JI 2_1** Please refer to the Direct Testimony of Tanner S. Wolffram on Behalf of Kentucky Power Company (“Wolffram Direct”) at page 18 lines 10-16 (“at 18:10-16”) and explain:
- a. Why is the current net book value of \$537 million for Mitchell greater than the net book value at the time of acquisition twelve years ago?
 - b. The original net book value of the Mitchell plant at the time of acquisition of KPCo’s interest that was:
 - i. Related to flue gas desulfurization (FGD),
 - ii. Non-FGD environmental-related (or recoverable through the environmental surcharge),
 - iii. Related to asset retirement costs, and
 - iv. Non-environmental plant;
 - c. What were the depreciation rates at the time of acquisition for each portion above; and
 - d. Current net book value and depreciation rates related to each expense above.

RESPONSE

The Company objects to this request to the extent it seeks information that is not reasonably calculated to lead to the discovery of relevant or admissible evidence. Subject to and without waiving this objection, the Company states as follows:

- a. Net book value will change as a result of capital additions such as those necessary to comply with federal, state, and local environmental requirements. Capital additions at the Mitchell Plant since the Company’s acquisition have resulted in a net book value higher than the net book value at the time of acquisition.
- b. Please see KPCO_R_JI_2_1_Attachment1 for the requested information.
- c. Please see KPCO_R_JI_2_1_Attachment2 for the Mitchell depreciation rates used at the time of acquisition.

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d. Please see KPCO_R_JI_2_1_Attachment2 for the current depreciation rates used for Mitchell.

Witness: Tanner S. Wolfram

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JI 2_2 Please refer to Wolfram Direct at 19:8-13, and explain why only non-environmental costs are sought to be recovered through the proposed “Generation Rider.”

RESPONSE

The Company objects to the extent the request mischaracterizes the Direct Testimony of Company Witness Wolfram. Subject to and without waiving this objection, the Company states as follows:

As discussed in Company Witness Wolfram’s Direct Testimony at page 21, the Company only seeks to recover non-environmental costs through the Generation Rider because there is an existing mechanism through which to recover Mitchell-related environmental costs (the Environmental Surcharge).

Witness: Tanner S. Wolfram

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JI 2_3 Please refer to Wolffram Direct at 21:18-21 and explain whether only non-environmental costs are being pursued for securitization.

a. If yes, explain why.

b. If no, explain why only non-environmental costs are sought to be included in the proposed “Generation Rider.”

RESPONSE

a. and b. The Company is pursuing securitization legislation that would allow it to securitize the remaining net book value of the Mitchell Plant as discussed in Company Witness Wolffram’s Direct Testimony (inclusive of environmental and non-environmental costs). Please also see the Company’s response to JI 2_2.

Witness: Tanner S. Wolffram

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JI 2_4

Please refer to Wolfram Direct at 21:4-6, and explain:

- a. How including the revenue requirement for the environmental surcharge in the “Generation Rider” would cause “confusion and unnecessary complexity in calculating the revenue requirement for the proposed Generation Rider”?
- b. Please also refer to the Direct Testimony of John D. Cullop on Behalf of Kentucky Power Company (“Cullop Direct”) at 8:2-5, and explain whether all environmental costs related to Mitchell will remain in base rates, or whether any costs will be recovered directly through the environmental surcharge, or elsewhere. List any environmental costs, and the amount, not to be recovered through base rates, and how they will be recovered.

RESPONSE

The Company objects to the extent the request mischaracterizes the Direct Testimonies of Company Witnesses Wolfram and Cullop. Subject to and without waiving this objection, the Company states as follows:

- a. If the basing point for the Environmental Surcharge (“ES”) was removed from base and included in the Generation Rider, then the ES, which is updated monthly, would be based on a variable rider mechanism (the Generation Rider) as opposed to leaving the current structure in place. This would create complications in the monthly ES filings, particularly when there are updates to the ES and Generation Rider in the same month. By leaving the ES basing point in base rates, this complication is avoided.
- b. Company Witness Cullop’s Direct Testimony at pages 8 through 10 details the sole project (FGD) within the Company’s approved Environmental Compliance Plan that is recovered entirely through the Environmental Surcharge, as well as the adjustments (i.e. amounts) necessary to ensure this.

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Additionally, for the remaining costs approved for recovery through the environmental surcharge the Company has, and is proposing an update to, the environmental base revenue requirement. If the total monthly environmental costs exceed the monthly base revenue requirement amount, customers are charged the difference through the environmental surcharge. If the total monthly environmental costs are less than the monthly revenue requirement amount, customers are credited the difference through the environmental surcharge. Further detail on this is provided in Company Witness Cullop's Direct Testimony in "Section IV. Base Environmental Revenue Requirement." Please also see Exhibit JDC-2 for the proposed environmental base revenue requirement and Exhibit JDC-3 (page 4 of 4) for the environmental costs which are currently approved.

Please also see KPCO_R_KPSC_1_55_Attachment17_CullopWP1.

Witness: Tanner S. Wolffram (subpart a)

Witness: John D. Cullop (subpart b)

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JI 2_5

Please refer to Wolffram Direct at 22:5-15 and explain

- a. Why would updating undepreciated plant balance annually through the proposed “Generation Rider” would benefit ratepayers?
- b. Why would not updating the depreciation rates for the Mitchell Plant at this time “result[] in a roughly \$11 million reduction to the Company’s cost-of-service in this proceeding”?

RESPONSE

The Company objects to the extent the request mischaracterizes the Direct Testimony of Company Witness Wolffram. Subject to and without waiving this objection, the Company states as follows:

- a. As it stands now, the undepreciated balance of Mitchell included in base rates is only updated when the Company files a base rate case, which has traditionally been every two to three years. During those periods, the Company’s rates are designed to recover a return on and of that remaining plant balance, meaning rates are set to recover return on the higher plant balance until the Company files its next base case. The Generation Rider will update those plant balances every year, meaning, holding all else equal, the amount the Company recovers a return on is reduced due to more concurrent recognition of accumulated depreciation which reduces the remaining plant balances.
- b. If the Company had updated depreciation rates for the Mitchell Plant as supported by Company Witness Spanos, the updated depreciation rates would have resulted in an \$11 million increase in annual depreciation expense.

Witness: Tanner S. Wolffram

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- JI 2_6** Please refer to Wolfram Direct at 23:18-21, and Exhibit TSW-2 and explain:
- a. Any difference in recovery of costs for Mitchell through the proposed generation rider and recovery through currently-approved mechanisms, by class and amount;
 - b. Does the column “Difference (11) = (10) - (6) - (7)” in Exhibit TSW 2 at page 2 of 2 represent the difference between test year recovery and proposed recovery under the Generation Rider?
 - c. How was the “Test Year CP / kWh Ratio” in Exhibit TSW-2 at page 2 of 2 derived?
 - d. How were “Allocated Demand Related Costs” derived?
 - e. How were “Allocated Energy Related Costs” derived, and why is the value \$0 for each class?
 - f. How were Why is the “\$/kWh Rate” for Classes LGS and IGS is \$0?

RESPONSE

The Company objects to the extent the request mischaracterizes the Direct Testimony of Company Witness Wolfram. Subject to and without waiving this objection, the Company states as follows:

- a. The Generation Rider is designed to mimic, as closely as possible, recovery of the non-environmental plant as if it were to be collected in base rates, as it is currently. The main difference is that these costs will be updated and reviewed more frequently through the annual true-up. This provides customers with the benefit of updating accumulated depreciation more frequently.
- b. The “Difference” column provides a check to ensure that the proposed rates will produce revenues nominally equal to the revenue requirement. For example, the Generation Rider requirement shown on Exhibit TSW-2 is \$20,288,559; while the proposed rates in columns (8) and (9) are expected, under the billing determinants, to produce \$20,288,460 in revenues resulting in a nominal variance of \$(98).

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c. Please see KPCO_R_JI_2_6_Attachment1. The numbers within this attachment were derived from the class cost-of-service study performed by Company Witness Coon.

d.-e. Please see the “Form 2.0” tab of KPCO_R_KPSC_2_28_Attachment1.

f. Please see the Company’s response to KPSC 2_27.

Witness: Tanner S. Wolffram

Witness: Nicole M. Coon (subpart c)

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DATA REQUEST

JI 2_7 Please refer to Wolfram Direct at 25:12 - 29:8, and explain how the changes to Tariff P.P.A. relate to or are affected by the changes to that tariff in the filing under investigation in Commission Case No. 2025-00307.

RESPONSE

The Company objects to this request as it calls for information that is outside the record of this case and therefore is not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving this objection, the Company states as follows:

The referenced changes to Tariff P.P.A. do not relate to, nor are they affected by, the changes to the tariff currently being reviewed in Case No. 2025-00307. Each can be implemented separately without interference with the other.

If the Commission approves the tariff as proposed in this case, then the associated provisions and rate will be implemented accordingly at that time. They will remain unchanged until they are modified again, upon approval of the Commission, for example in Case No. 2025-00307, or otherwise.

Witness: Tanner S. Wolfram

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DATA REQUEST

JI 2_8 Please refer to Wolfram Direct at 26:6-9, and detail the “additional costs associated with asset retirement obligations (“ARO”)” incurred since Case No. 2023-00159 related to the Big Sandy facilities.

RESPONSE

The Company objects to this request as it calls for information that is outside the record of this case and therefore is not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving this objection, the Company states as follows:

As stated in the referenced portions of Company Witness Wolfram’s testimony, the Company has removed the referenced costs from the cost of service sought to be recovered in this case and instead seeks to recover them through the Decommissioning Rider, which is currently under review in Case No. 2025-00307.

Please see the Company’s 2025 annual Big Sandy Decommissioning Rider update filed in Case No. 2023-00159 on August 15, 2025 for information related to AROs paid after the Company completed securitization. Specifically, see the attachment titled “BSDR_2025_Annual_Update.” Please also see Case No. 2025-00307.

Witness: Tanner S. Wolfram

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JI 2_9 Please refer to Wolfram Direct at 27:12-21, and provide the actual amount of gains and losses on “incidental sales” of gas in each of the past five years.

RESPONSE

Please refer to the Company’s response to KPSC 3_1.

Witness: Clinton M. Stutler

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DATA REQUEST

- JI 2_10** Please refer to Wolfram Direct at 27:12-21 and 28:4-10, and:
- a. Explain the Company strategy regarding forward purchase of gas;
 - b. Explain whether the Company has reevaluated that strategy in light of the “significant volatility in the natural gas market in recent years;” and
 - c. Provide any investigation, documentation, or reporting related to previous strategy and/or reevaluation.

RESPONSE

a. Please refer to Section V. Physical Natural Gas Hedging, of Company Witness Stutler’s Direct Testimony and the Company’s response to KPSC 3_3, which detail Kentucky Power’s strategy related to hedging physical sources of energy, including the forward purchase of natural gas supply.

b. Yes, the Company has reevaluated its procurement strategy in light of the “significant volatility in the natural gas market in recent years.” It is precisely why the Company began implementing the current hedging strategy in 2023.

Traditionally, all natural gas supply purchased for the Big Sandy Plant was purchased in the spot market (i.e., next-day, intraday). The benefit of making purchases in this manner was enhanced accuracy related to plant consumption. This strategy worked well in an environment of relatively low and stable pricing, with little volatility. However, in recent years, the market has become more volatile with an increasing number of winter storms (i.e., Uri, Elliot) and the lack of supply and demand equilibrium in 2021 and 2022, causing the price of natural gas to increase and decrease aggressively.

c. Please see the Direct Testimony of Company Witness Stutler. Relying on spot market supply (i.e., next-day, intra-day) for 100% of daily requirements was an adequate strategy prior to 2021. However, with the increase in natural gas price volatility, the more prudent strategy is to secure fixed price natural gas purchases in advance of flow (for a percentage of expected requirements), to protect customers against aggressive spot market price increases. Such forward month, fixed price purchases are then supplemented with spot market purchases, to balance daily natural gas requirements.

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During Winter Storm Elliot, spot market prices settled at more than \$50 per MMBtu for receipt points neighboring the Big Sandy Plant. In the intraday market, such prices exceeded \$100 per MMBtu. During Winter Storm Uri, spot natural gas prices increased to more than \$300 per MMBtu for receipt points in states such as Louisiana, Texas, Oklahoma, and Arkansas.

As an example, let's assume that in a year, the Big Sandy Plant will consume 11 million MMBtu and the average forecasted price of natural gas supply is \$3.00 per MMBtu. Now, let's assume that 98% of the time, the forecast exactly matched the spot market settlement. For the remaining 2% of time, that the forecast did not match, there was a winter storm where prices surged to \$100 per MMBtu. From a natural gas supply cost perspective, Kentucky Power customers would spend \$32.34 million on 10.78 million MMBtu and \$22 million on 0.22 million MMBtu. Please see Table JI 2_10A below, to better illustrate this example.

Table JI 2 10A

Natural Gas Supply	Price \$ Per MMBtu	Total MMBtu	Total Dollars
98% of Supply	\$3.00	10,780,000	\$32,340,000
2% of Supply	\$100.00	220,000	\$22,000,000
Total	\$4.94	11,000,000	\$54,340,000

As another example, not directly related to winter storm price volatility, the market has experienced the lack of supply and demand equilibrium causing significant variation in pricing. Please see Table JI 2_10B below, which summarizes spot natural gas pricing from 2020 through 2024 for the Columbia Gas, App. index price (which is the index applicable to the Big Sandy Plant).

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Table JI 2 10B

Columbia Gas, App. / Platts Gas Daily

Calendar Year	\$ Per MMBtu Average Price	\$ Per MMBtu Maximum Price	\$ Per MMBtu Minimum Price
2020	\$1.604	\$2.505	\$0.330
2021	\$3.289	\$13.050	\$1.890
2022	\$5.662	\$8.990	\$1.060
2023	\$1.788	\$3.055	\$0.940
2024	\$1.669	\$3.005	\$0.950

Witness: Clinton M. Stutler

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- JI 2_11** Please refer to Wolffram Direct at 28:11-18, and explain:
- a. If a change to tariff P.P.A. is required to allow for recovery of losses on incidental sales of gas;
 - b. If so, why the change is being proposed to Tariff P.P.A. rather than the fuel adjustment clause; and
 - c. The frequency and level of Commission review of Company recovery through Tariff P.P.A., especially as it compared to review of FAC charges.

RESPONSE

The Company objects to this request to the extent it calls for legal conclusions or legal interpretations. The Company must seek Commission approval before modifying any of its tariffs, when required by 807 KAR 5:011. Such approval was required in this instance. Subject to and without waiving this objection, the Company states as follows:

- a. Company Witness Wolffram sponsors the proposed changes to Tariff P.P.A. provided in Exhibits D and E to the Company's Application. Additionally, Company Witness Wolffram supports the changes to Tariff P.P.A. on pages 25 through 29 of his Direct Testimony.
- b. Please see Company Witness Wolffram's Direct Testimony at page 28 which addresses why the Company is proposing recovery through Tariff P.P.A. Notably, it is the Company's understanding that these costs are not eligible for recovery through the fuel adjustment clause.
- c. The Company further objects to this request as it calls for information that is equally available to the Joint Intervenor. Subject to and without waiving this objection, please see the Company's response to subpart b.

Witness: Tanner S. Wolffram

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- JI 2_12** Please refer to Wolfram Direct at 28:5-10, and 31:9-22, regarding the causes and “extraordinary” nature of the \$1.9 million in incidental gas sales losses, and explain:
- a. What steps has the Company taken to reevaluate its gas purchases and hedging in light of the extraordinary losses in the test year?
 - b. Is this the first year in which the Company has seen losses on such incidental sales of gas?
 - c. Please provide the records of such incidental sales, the fixed-price forward-month contract amounts for any such purchases being resold, and the net loss or gain on a monthly basis for each month for each of the most recent five years available.

RESPONSE

- a. Consistent with Kentucky Power’s hedging program, pursuing periodic, forward month, fixed price purchases, which are then supplemented with spot market purchases, is the proper strategy to provide fuel cost certainty, fuel supply surety, and fuel price stability for customers. Assembling various natural gas supply contracts, executed at various times, is a vastly superior strategy to “rolling the dice” and only pursuing spot market natural gas purchases.
- b. Kentucky Power has always been required to make natural gas sales to balance its daily position. However, consistent with the previous strategy of only pursuing spot market purchases, sales were infrequent because there is greater clarity in plant requirements the day prior to flow (compared to months in advance of flow, which is consistent to how the forward month purchases are made). In order to mitigate the natural gas market risks described in the Company’s response to JI 2_10, Kentucky Power commenced the hedging program in 2023 and has seen its natural gas sales increase since that time. Gains and losses on incidental sales of natural gas supply were not material prior to 2023. As the gains and losses are becoming more material, Kentucky Power is proposing that such gains and losses are recovered from, or credited to, customers through the annual true-up mechanism in the Tariff Purchase Power Adjustment.

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c. The Company's response to KPSC 3_1 illustrates the gains and losses associated with natural gas sales during the past five years. However, KPCO_R_KPSC_2_94_Attachment1 provides more valuable information. The vast majority of fixed price, forward month purchases are consumed at the Big Sandy Plant. For 2024, 12.3 million MMBtu of natural gas supply was purchased via forward month, fixed price contracts. The weighted average price of such forward month, fixed price contracts was \$2.561 per MMBtu. These purchases were based on the least cost offers received from request for proposals and were based on the forward pricing curve at the time of purchase. If Kentucky Power had "rolled the dice" and purchased spot market natural gas supply, the price would have equated to \$1.923 per MMBtu (which would have been the favored option in this case). However, through August 2025, the weighted average price of forward month, fixed price contracts was \$3.005 per MMBtu, with corresponding spot market purchases equaling \$3.129 per MMBtu (thus, in this case, the forward month purchases were the more advantageous alternative).

Witness: Clinton M. Stutler

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- JI 2_13** Please refer to Wolffram Direct at 28:11-18 and explain:
- a. Why is recovery of gains or losses related to incidental sales of gas through the fuel adjustment clause not appropriate?
 - b. What would be the impact of recovery through the fuel adjustment clause as compared to Tariff P.P.A.?
 - c. Would recovery through the fuel adjustment clause allow for more frequent adjustments?
 - d. Would recovery through the fuel adjustment clause allow for more frequent review by the Commission?

RESPONSE

- a. - d. Please see the Company's response to JI 2_11(b).

Witness: Tanner S. Wolffram

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JI 2_14 Please refer to Wolfram Direct at 29:11-19, and the Commission's Order dated January 19, 2024 in Case No. 2023-00159 at 15-16, approving settlement recovery of NOLC regulatory liability "in the first base rate case filed after the private letter ruling from the IRS is received." Given that the Company has not yet received a PLR, why is the Company proposing to modify the Tariff F.T.C. to allow recovery of the regulatory asset associated with NOLC ADIT?

RESPONSE

The Company objects to this request to the extent it calls for legal conclusions or legal interpretations. Subject to and without waiving this objection, the Company states as follows:

As discussed in Company Witness Wolfram's Direct Testimony, the proposed language in Tariff F.T.C. aligns with the Commission's Order in Case No. 2023-00159 by ensuring that recovery of the regulatory asset associated with NOLC ADIT is contingent upon receiving a Private Letter Ruling from the Internal Revenue Service that affirms the Company's position regarding the NOLC ADIT. Company Witness Hodgson's Direct Testimony also explains why the Company is proposing to make the change to Tariff F.T.C. now as opposed to waiting until after a PLR is received.

Witness: Tanner S. Wolfram

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JI 2_15

Please refer to Wolffram Direct at 31:20 - 32:3, and explain:

- a. Is a prepay program the only program being pursued to enhance the benefits of AMI?
- b. Is a prepay program the only program evaluated to enhance the benefits of AMI?
- c. Please detail any other programs evaluated and/or being pursued, and provide any related evaluation or program implementation documentation in the possession of the Company.

RESPONSE

- a. As explained in the Direct Testimony of Company Witness Cobern in Case No. 2024-00344, the Company will also roll out additional customer engagement platforms to provide customers with additional information on usage, billing, and ways to save. The Company will continue to evaluate additional customer programs to leverage the benefits of AMI.
- b. The Company does not intend for FlexPay to be the only program the Company evaluates to enhance the benefits of AMI.
- c. The Company has not, at this time, formally evaluated any additional programs other than those discussed in subpart a of this response.

Witness: Tanner S. Wolffram

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- JI 2_16** Please refer to Wolfram Direct at 33:21-23 and 36:16-19, and
- a. Compare and contrast the test-year storm damage cost of \$23.0 million, \$23.2 million of current deferrals associated with those events, and the \$23.3 million in current deferrals inclusive of the deferral application pending in Case No. 2025-00264.
 - b. What is in each amount that is not included in the others?
 - c. Explain how the Company has a test-year storm expense of (\$215,408). Were actual expenses lower than those accrued in approved regulatory assets?

RESPONSE

The Company objects because the request is vague, undefined, and overly broad. Subject to and without waiving these objections, the Company states as follows:

a.-b. The \$23.0 million represents the actual distribution storm damage expense incurred in the test year. The \$23.2 million is the total distribution storm expense deferrals in the test year. The difference in those numbers is reflective of updated actuals after the storm expense deferrals are granted. Meaning, the Company's deferral application is based on estimates and those estimates are trued-up with actuals creating a difference between the deferrals and the actuals reflected on the Company's books. The \$23.3 million is inclusive of transmission storm deferrals for the February 15, 2025 Major Event, which is not included in the \$23.0 of actual distribution storm damage expense incurred in the test year.

c. As explained in subparts a and b above, the negative expense is a result of the deferral amount approved as compared to the actual amounts of the storm damage expense incurred by the Company. Meaning, the Company originally books the deferral at its estimate (with Commission approval) then and then the costs of the restoration are trued-up with actuals until the work order is closed. In this instance, the trued-up actuals were less than the deferral amount approved, creating a negative expense.

Witness: Tanner S. Wolfram

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JI 2_17 Please refer to the Direct Testimony of Robert A. Jessee on Behalf of Kentucky Power Company (“Jessee Direct”) at Figure RAJ-4, and confirm what share of the total expense for each project is represented by the amounts, and what share other AEP affiliates or other entities have expended on each project.

RESPONSE

The Company objects to this request as it calls for information relating to the investments by Kentucky Power’s affiliates that are not subject to this proceeding and, therefore, is not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving this objection, the Company states as follows:

Because of the Commission’s Orders in Case No. 2021-00004 and Case No. 2021-00421, requiring the termination of the Company’s interest in energy and capacity from the Mitchell Plant after December 31, 2028, the capital costs for projects at Mitchell with useful lives that extend beyond December 31, 2028 have been asymmetrically allocated between Kentucky Power and Wheeling Power Company based on the expected useful life of the project. The process for allocating such costs is described in the September 1, 2022 Written Consent Action of the Mitchell Operating Agreement which has been provided on pages 28-32 of Exhibit U to Section II of the Application in this case.

Witness: Tanner S. Wolffram

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JI 2_18 Please refer to Jessee Direct at Figure RAJ-4, and detail which projects, if any, were the subject of Certificate of Public Convenience and Necessity (CPCN) applications submitted to the Commission, with case numbers. For any project not the subject of a CPCN application explain why not.

RESPONSE

The Company objects to this request to the extent it calls for legal conclusions or legal interpretations. Subject to and without waiving this objection, the Company states as follows:

As discussed in the Direct Testimony of Company Witness Jessee, Figure RAJ-4 provides a summary of generation capital additions since the Company's last base rate case proceeding and includes projects that have been approved for recovery through the Company's environmental surcharge.

The projects that have been approved for recovery through the environmental surcharge since 2014 were approved in Case No. 2014-00396, Case No. 2017-00179, and Case No. 2021-00004. Kentucky Power is also currently seeking a CPCN to make the necessary investments in and incorporate the ELG system at the Mitchell Plant into the Company's environmental compliance plan in Case No. 2025-00175.

None of the other projects listed in Figure RAJ-4 Plant met the requirements for obtaining a CPCN as the projects were ordinary extensions of existing systems in the usual course of business as the cost of the projects were less than one percent of the Company's net utility plant in service.

Witness: Tanner S. Wolfram

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- JI 2_19** Please refer to Jessee Direct at 13:20 to 24:7, and provide:
- a. Equivalent Unplanned Forced Outage Rates for the Mitchell plant for each of the last five (5) years;
 - b. Hourly sulfur dioxide (SO₂) for Mitchell, by unit, for each of the last five (5) years;
 - c. Hourly heat rate for Mitchell, by unit, for each of the last five (5) years;
 - d. SO₂ emissions allowance allocation, sale, and transfer amounts and prices for each of the last five (5) years by Program; and
 - e. The air pollution permitting application and permit for the project.

RESPONSE

- a. Please see KPCO_R_JI_2_19_Attachment1 for the requested information.
- b. Please see KPCO_R_JI_2_19_Attachment2 for the requested information.
- c. Please see KPCO_R_JI_2_19_Attachment1 for the requested information. The requested hourly heat rate information is only available in a monthly format.
- d. Please see KPCO_R_JI_2_19_Attachment3 and KPCO_R_JI_2_19_Attachment4 for the requested information.
- e. Please see KPCO_R_JI_2_19_Attachment5 and KPCO_R_JI_2_19_Attachment6 for the requested information.

Witness: Robert A. Jessee

Witness: John D. Cullop (subpart d)



American Electric Power
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

BOUNDLESS ENERGY™

Ms. Laura M. Crowder
Director
West Virginia Department of Environmental Protection
Division of Air Quality
May 9, 2024
Page 2

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 57 th 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 ☒ Permit Renewal ☐ Update to Initial/Renewal Permit Application When did operations commence? 1970 What is the expiration date of the existing permit? 11/26/2024	
6. Type of Business Entity: ☒ Corporation ☐ Partnership ☐ Governmental Agency ☐ Limited Partnership ☐ LLC	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 Area¹? ☐ Yes ☒ No If no, do emissions impact a Class I Area¹? ☒ 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)	☐ Compliance Assurance Monitoring (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.

[illegible]

[illegible]

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:

Joshua D. Snodgrass

Title:

Plant Manager

Responsible official's signature:

Signature:

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.

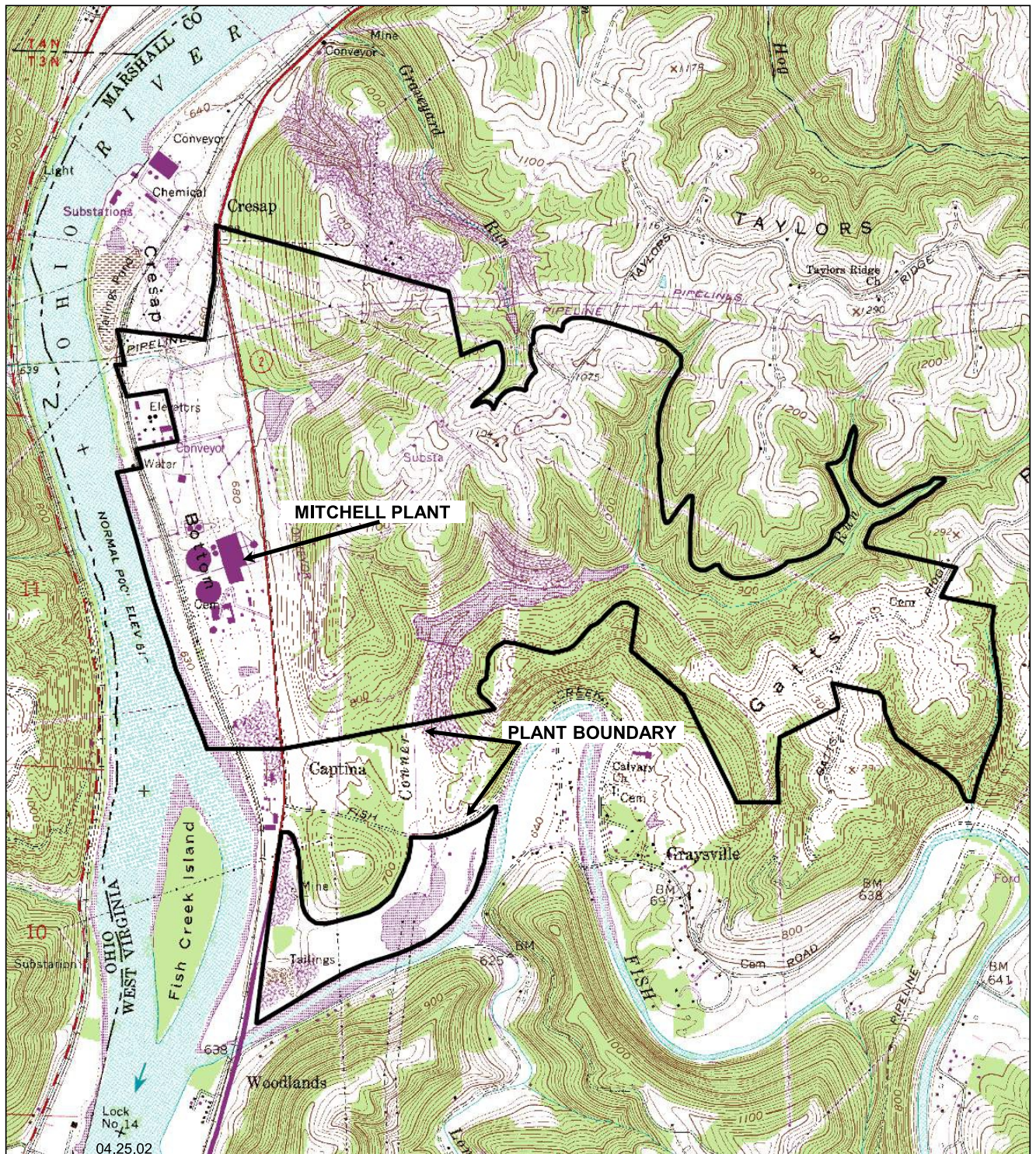
Attachment A

Area Map

Mitchell Plant Title V Renewal
R30-05100005-2019 (MM01) Renewal
2024

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.





Powhatan Point, W.VA. - OH
 Quadrangle
 USGS Topographic Map

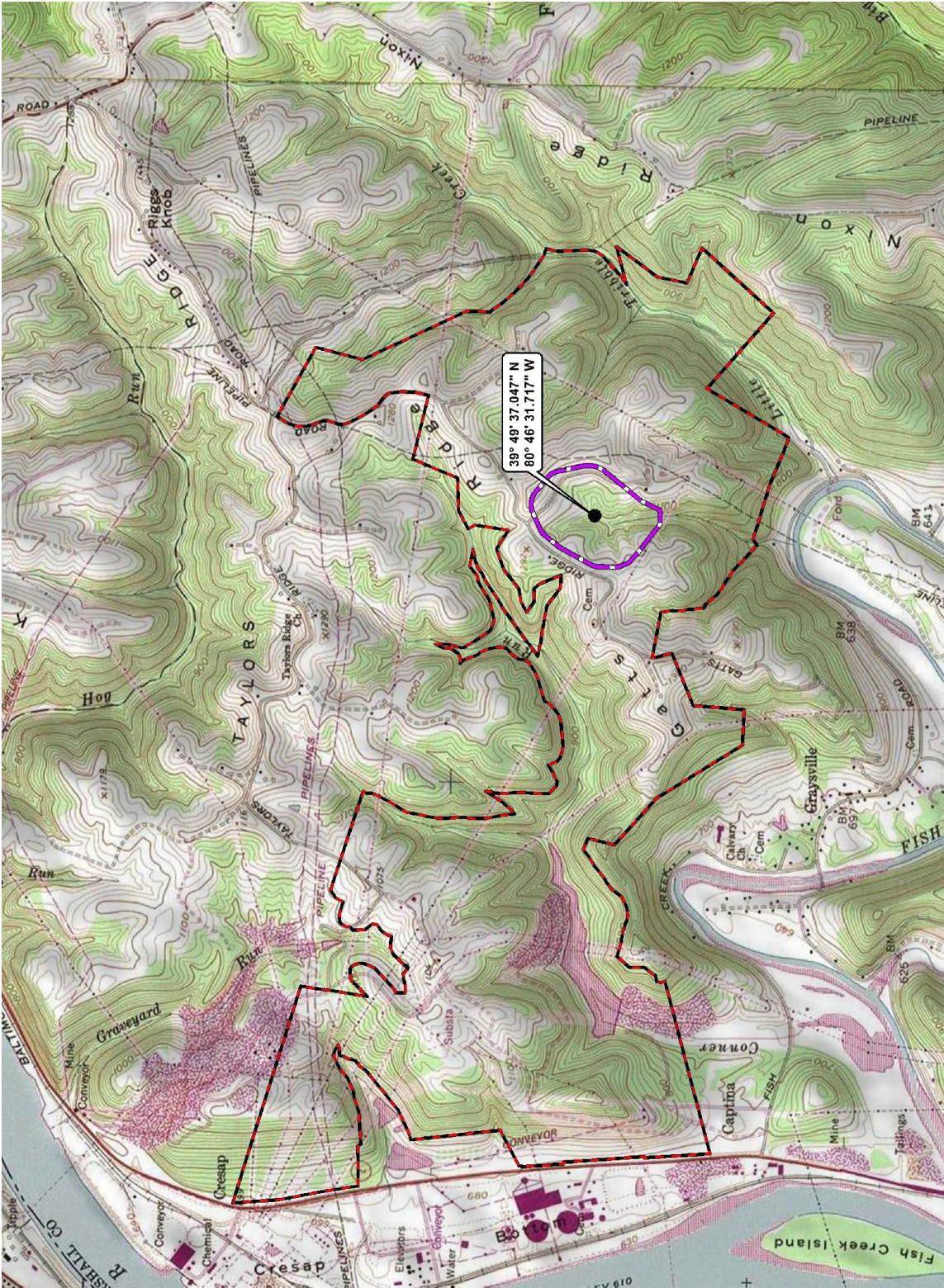
Wheeling Power Company
Mitchell Plant

Facility Boundary

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

Air Quality Services

Mitchell Plant Dry Fly Ash Landfill Boundary

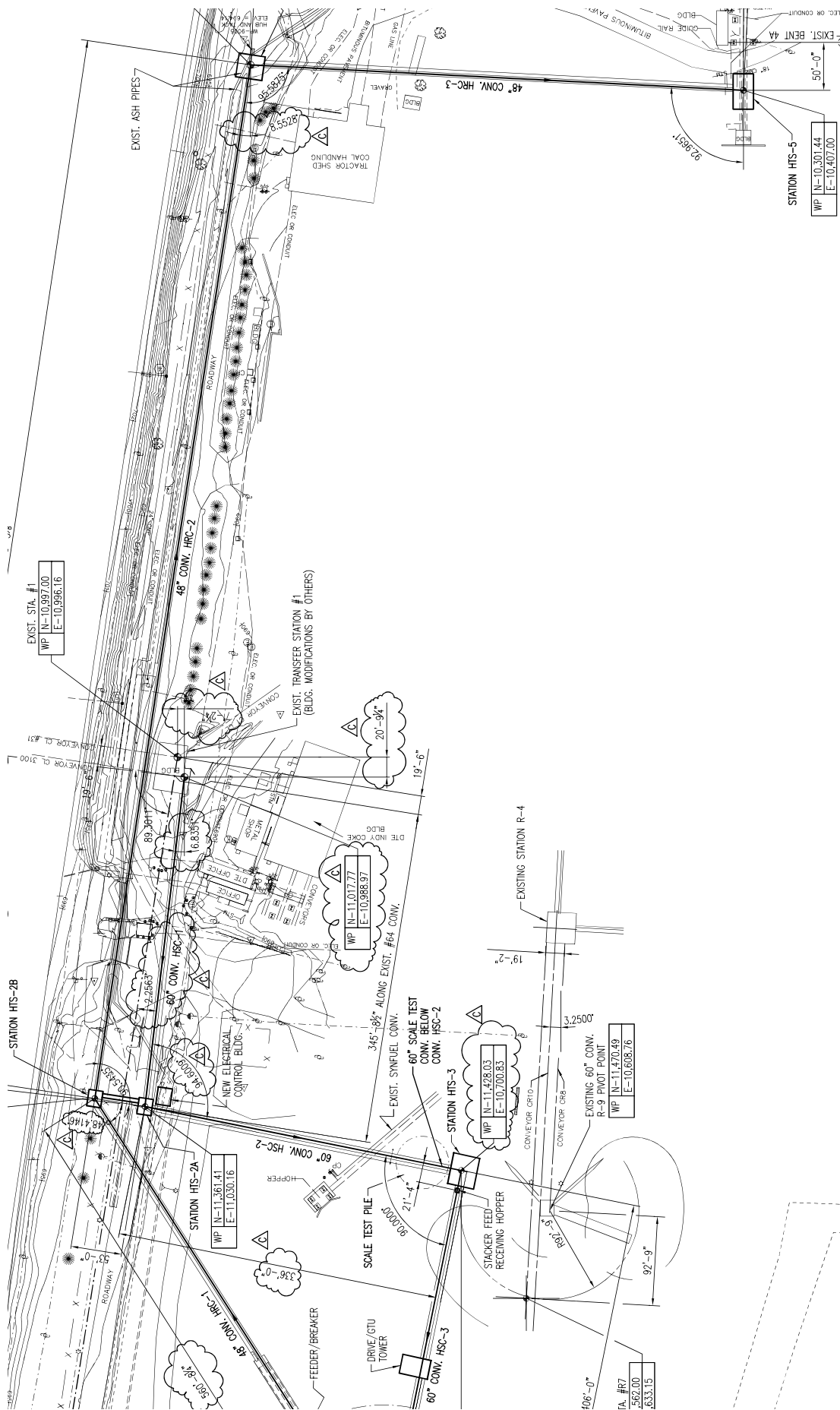


Attachment B

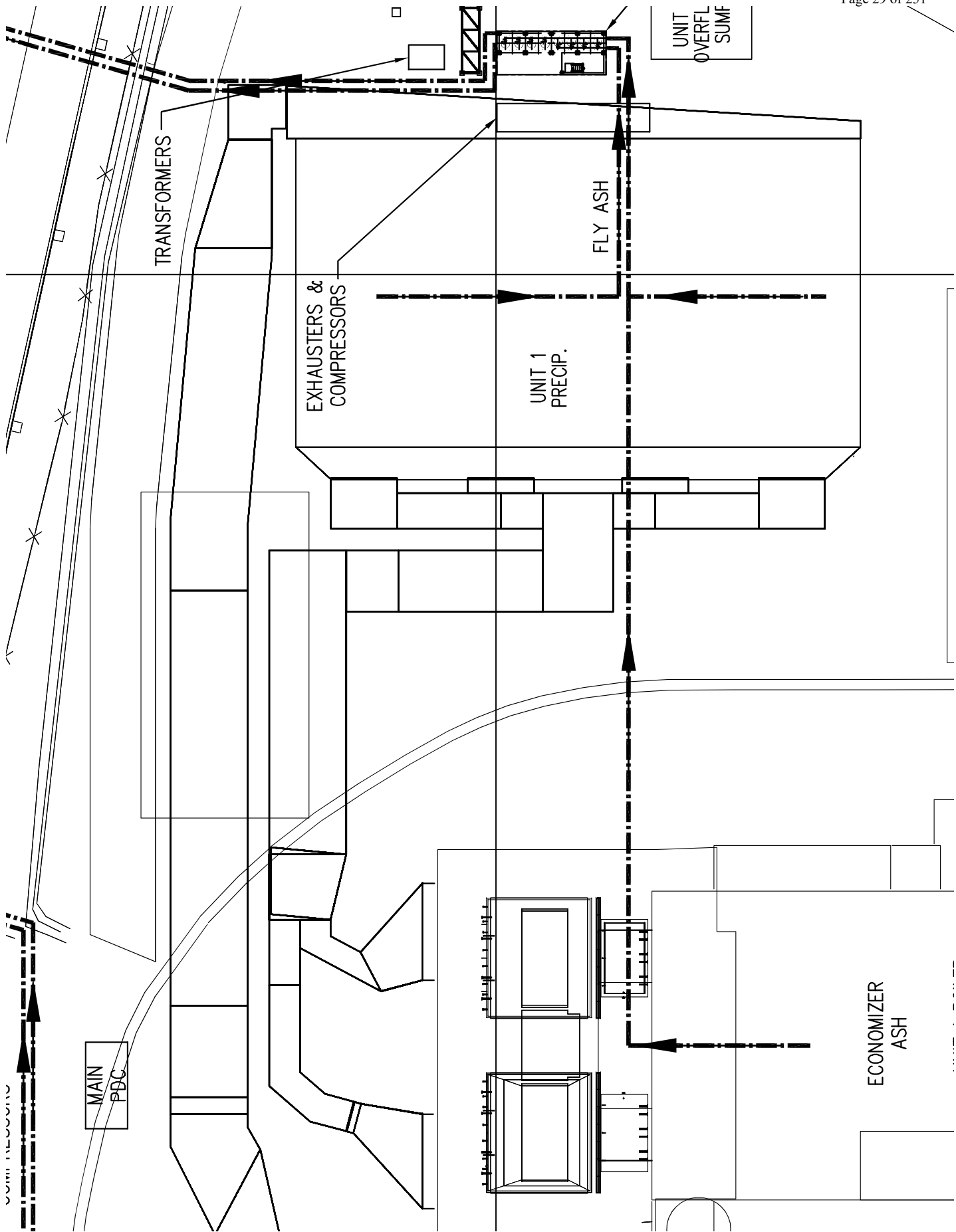
Plot Plan

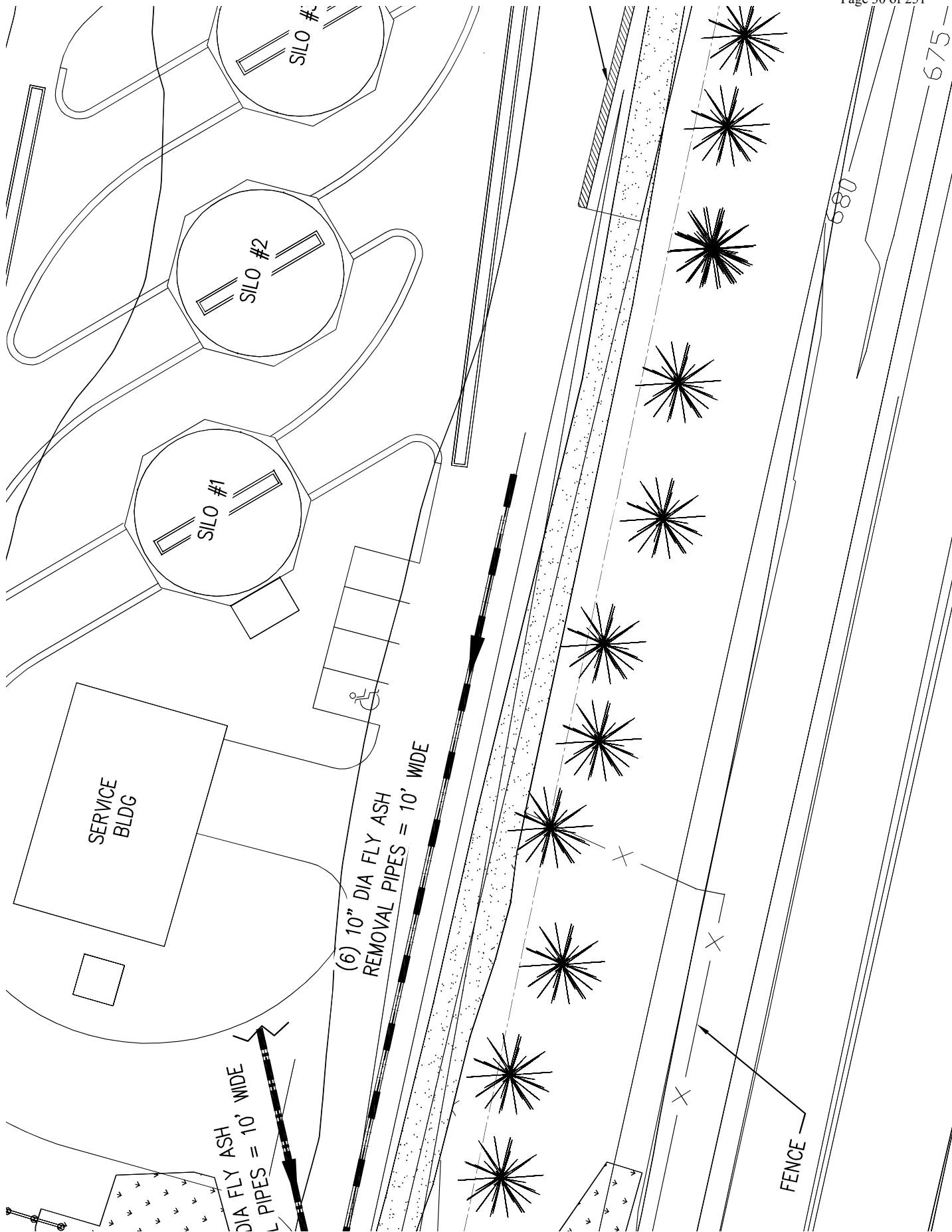
Mitchell Plant Title V Renewal
R30-05100005-2019 (MM01) Renewal
2024

DATE	RECORD	TO APPROVAL
7/18/01		





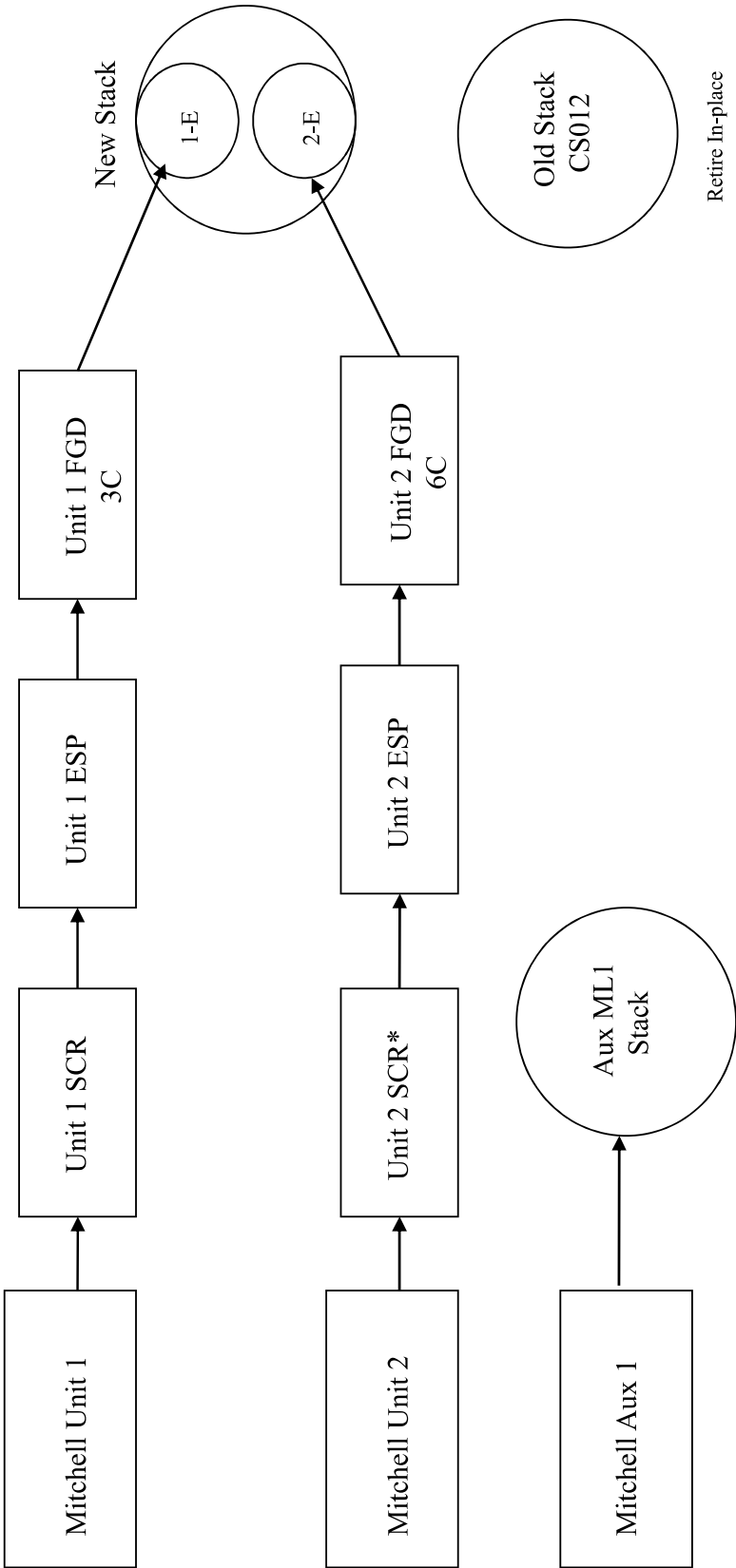




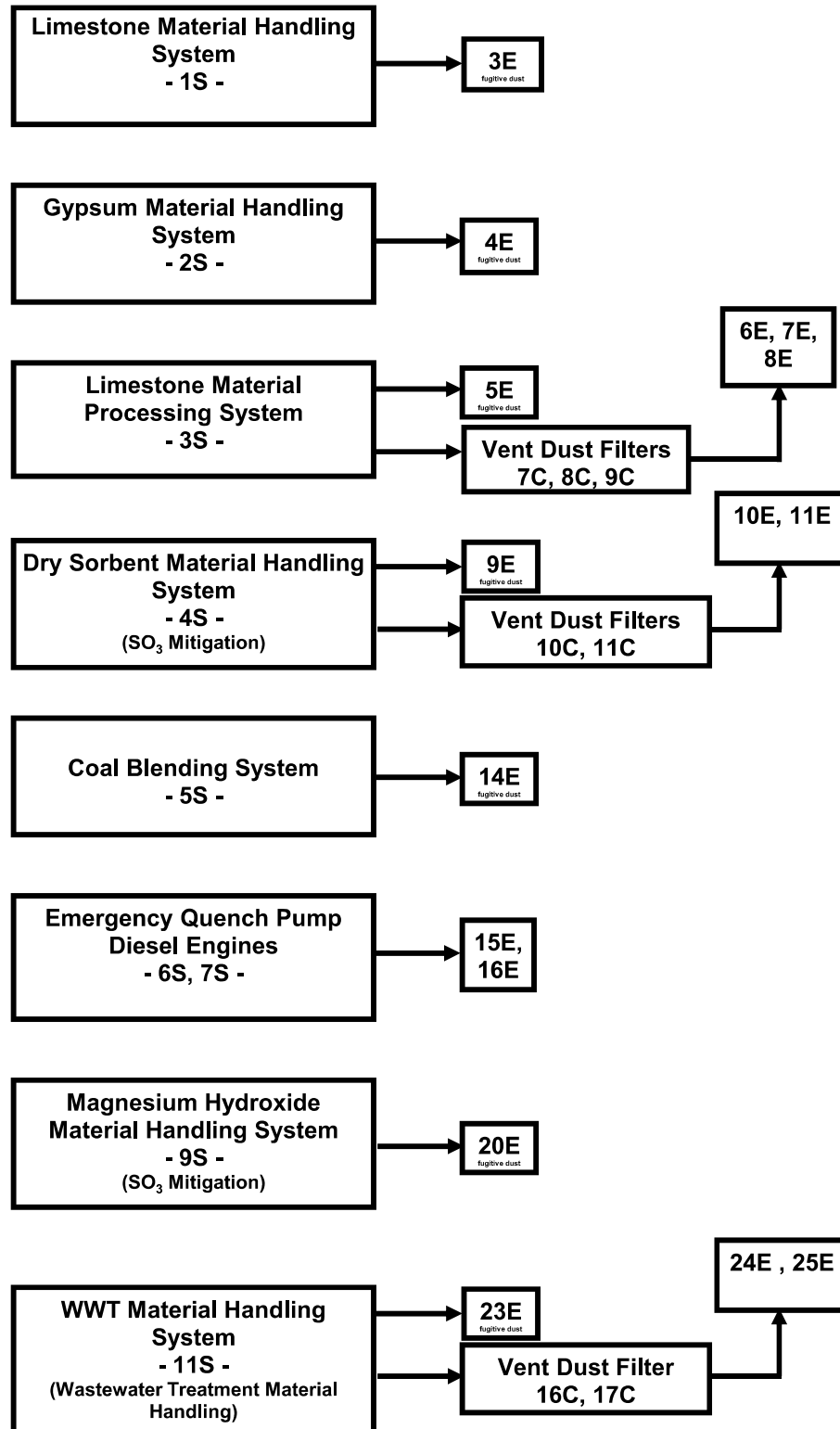
Attachment C

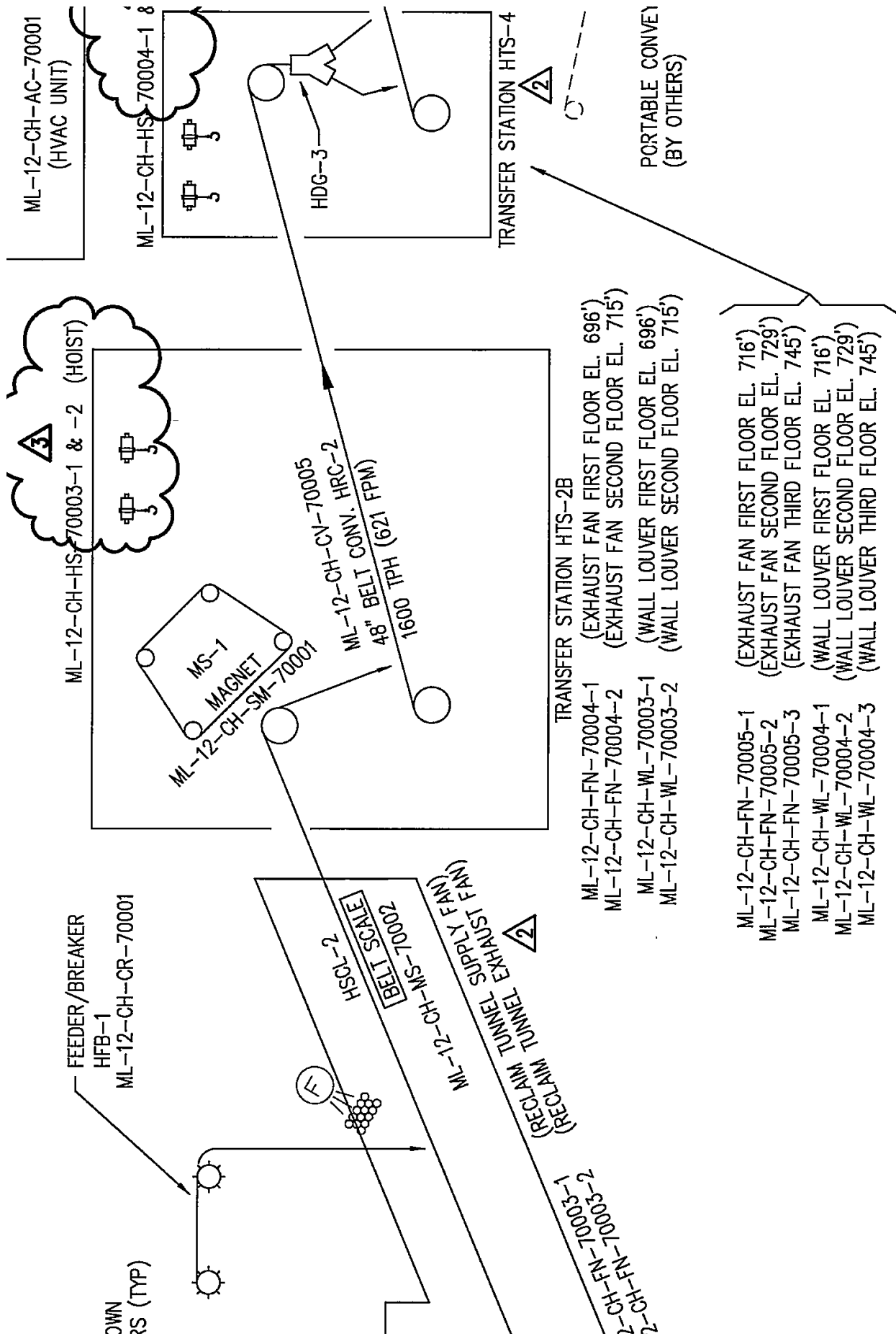
Process Flow Diagrams

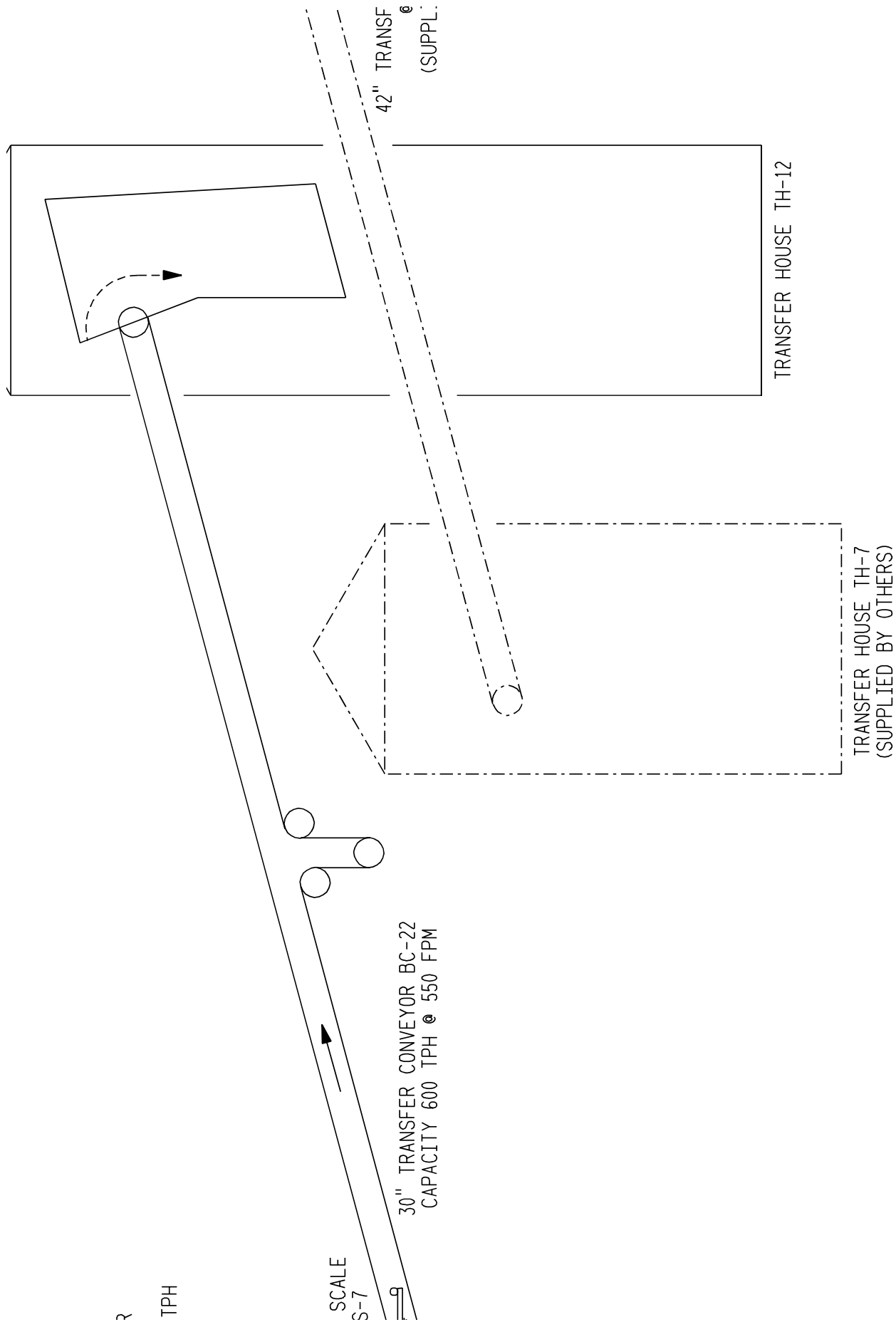
Flow Diagram:
Steam Generator and Associated Pollution Control Equipment



Process Flow Diagrams

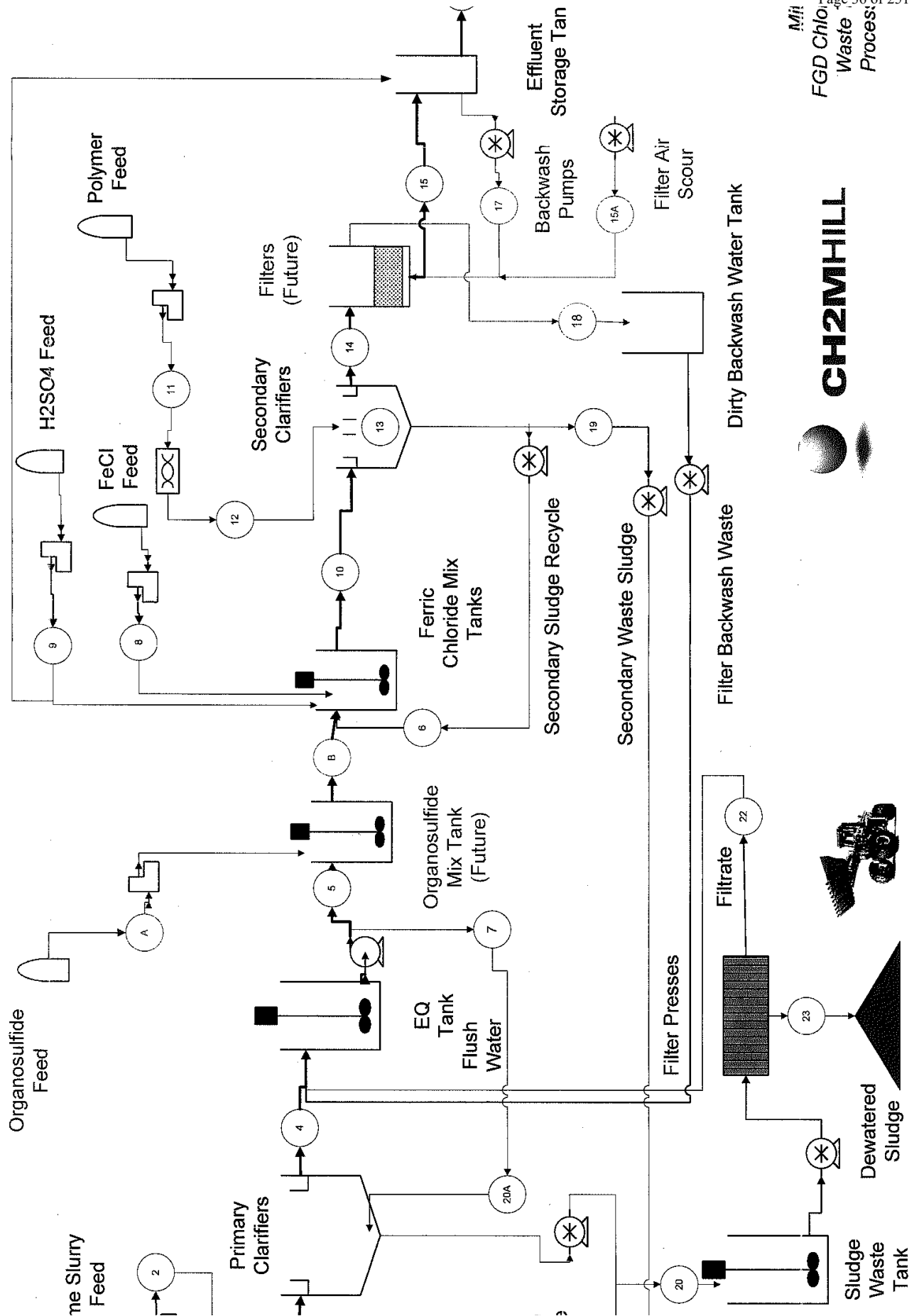
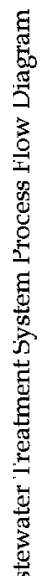






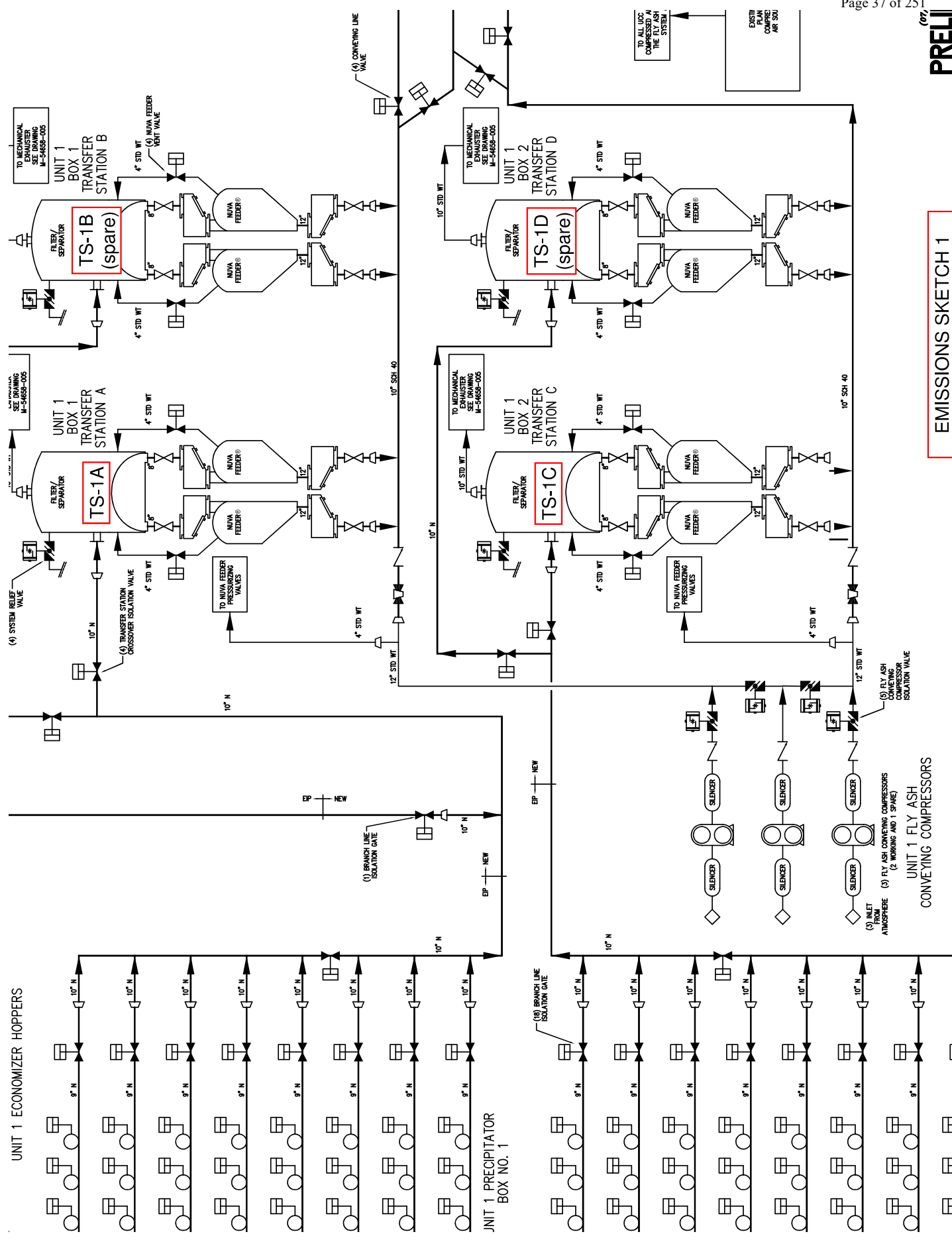
FGD Chlorine Waste Process

CH2MHILL



PRELIMINARY

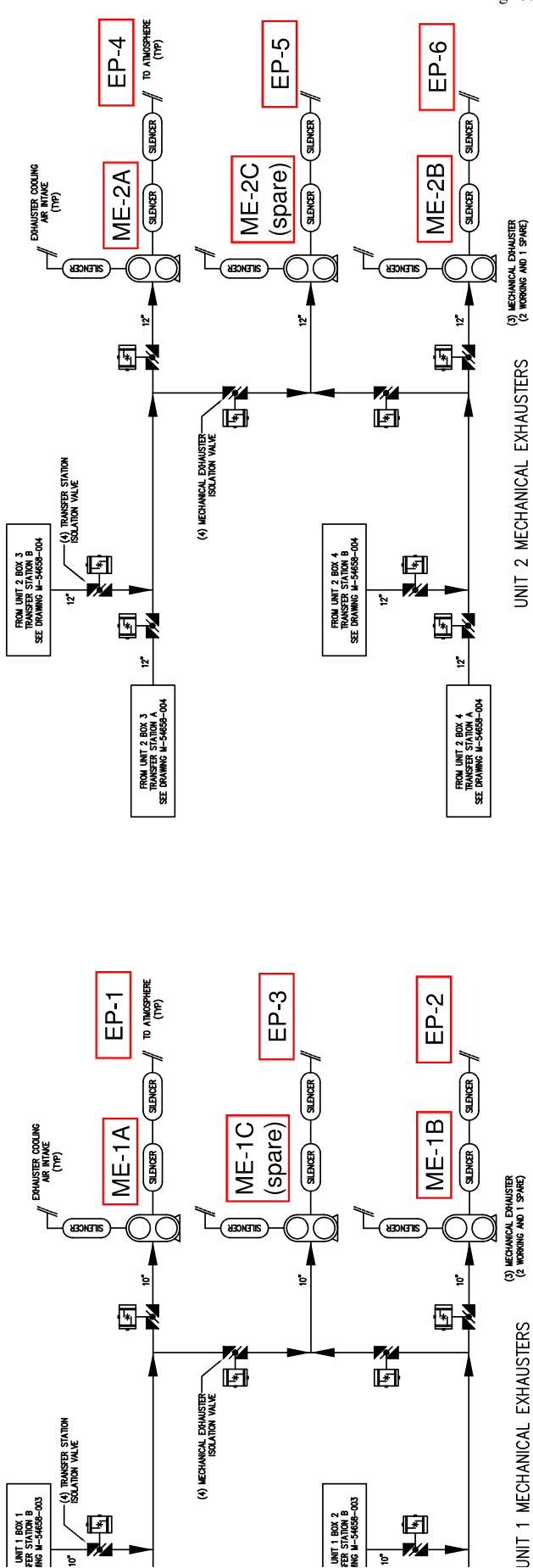
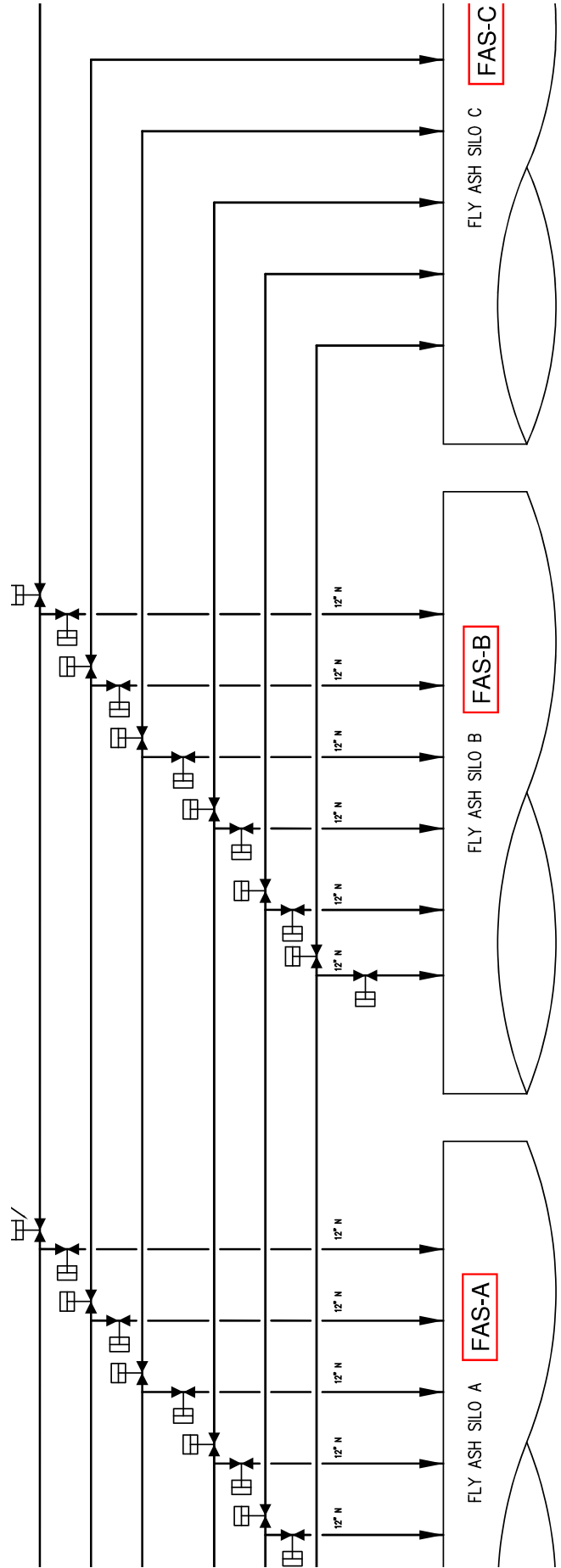
EMISSIONS SKETCH 1

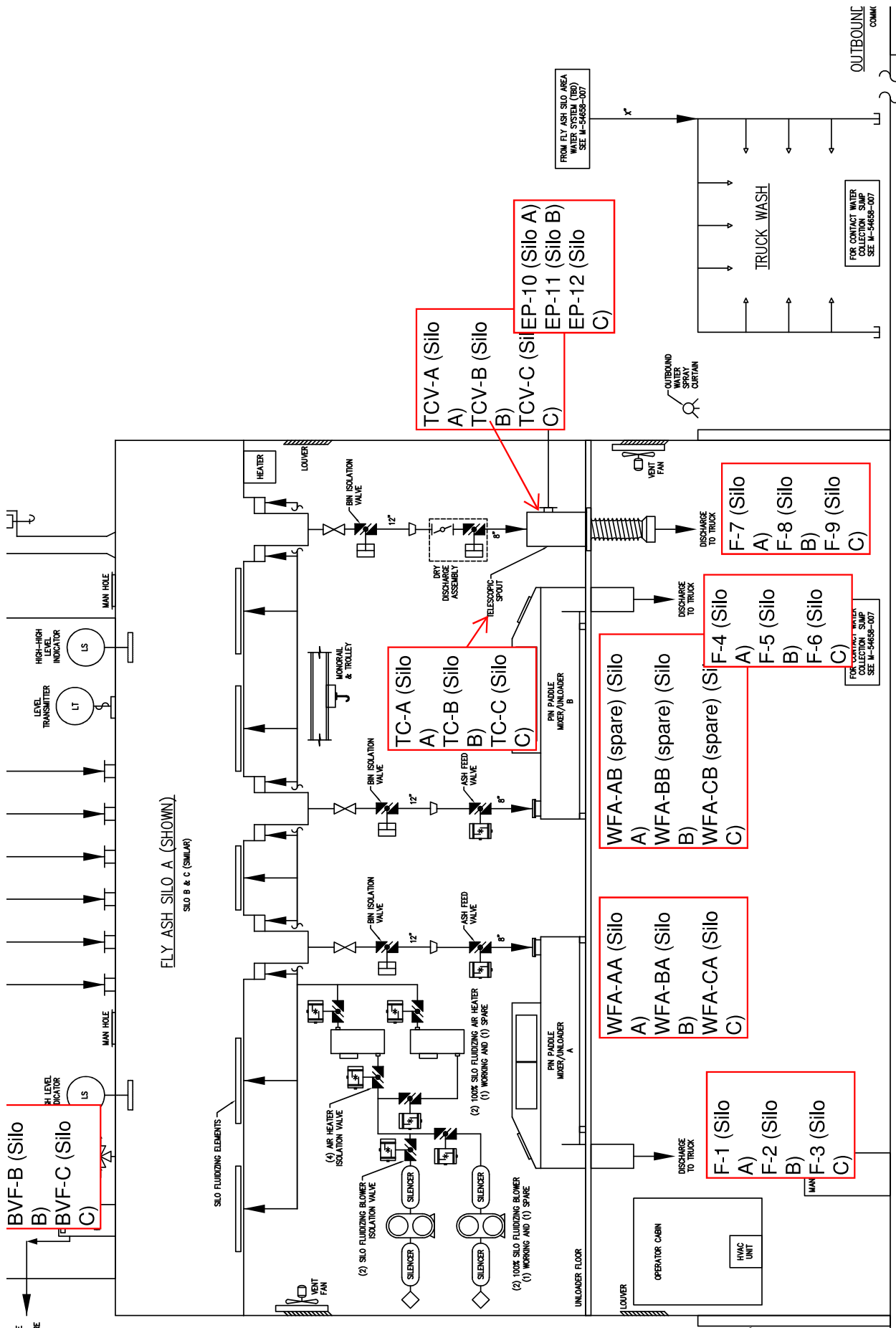




PRELIMINARY

LEGEND

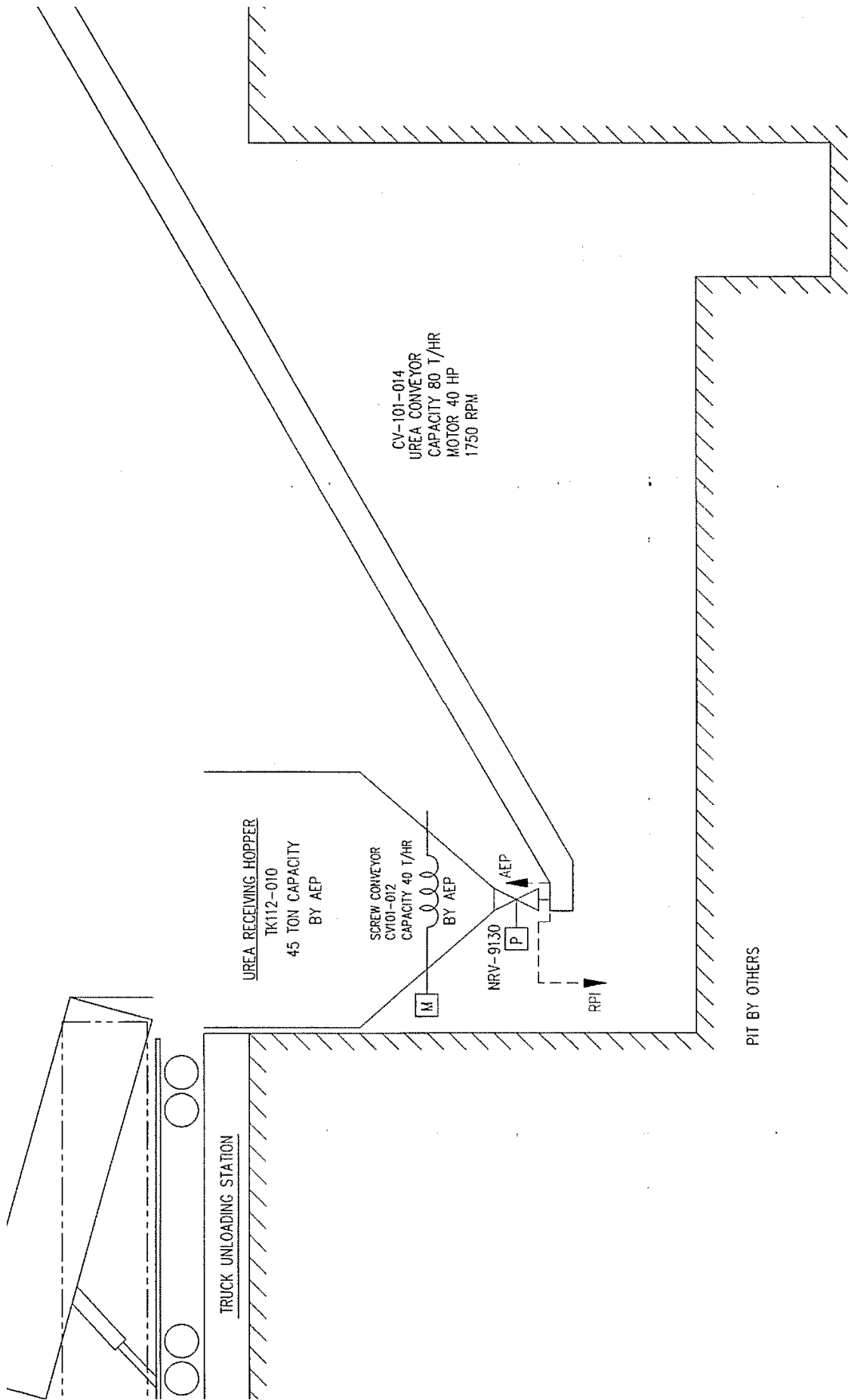


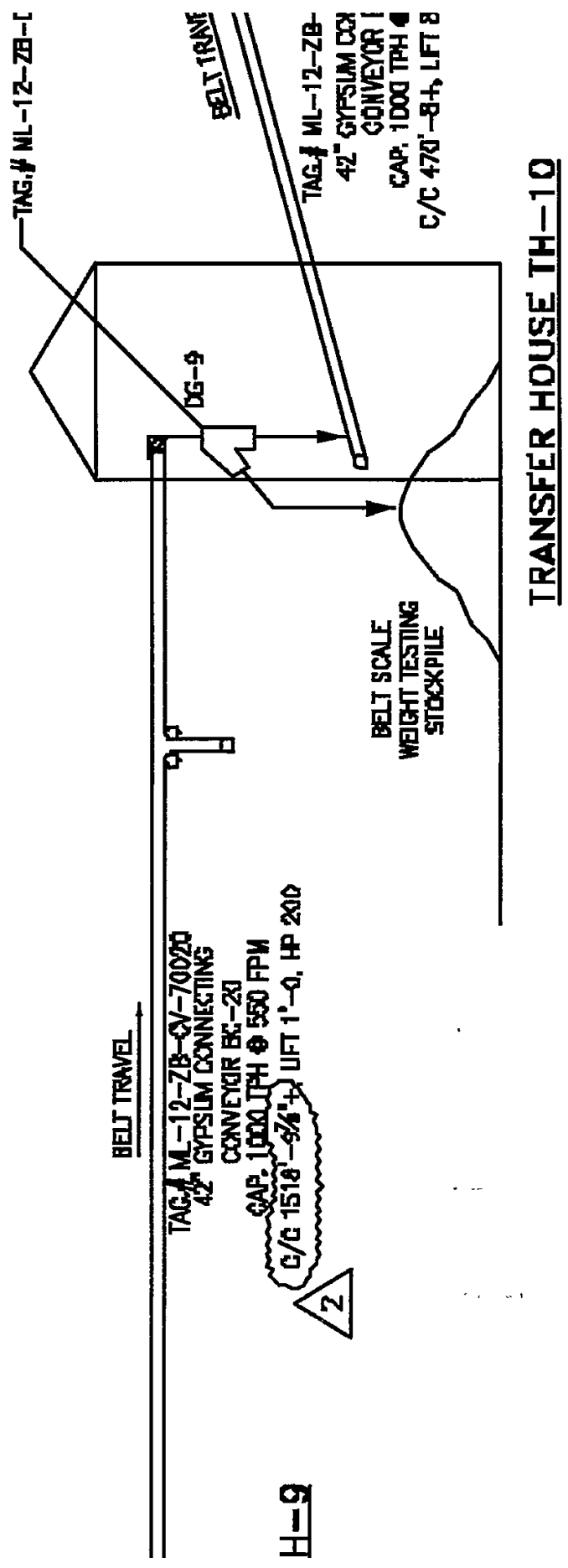


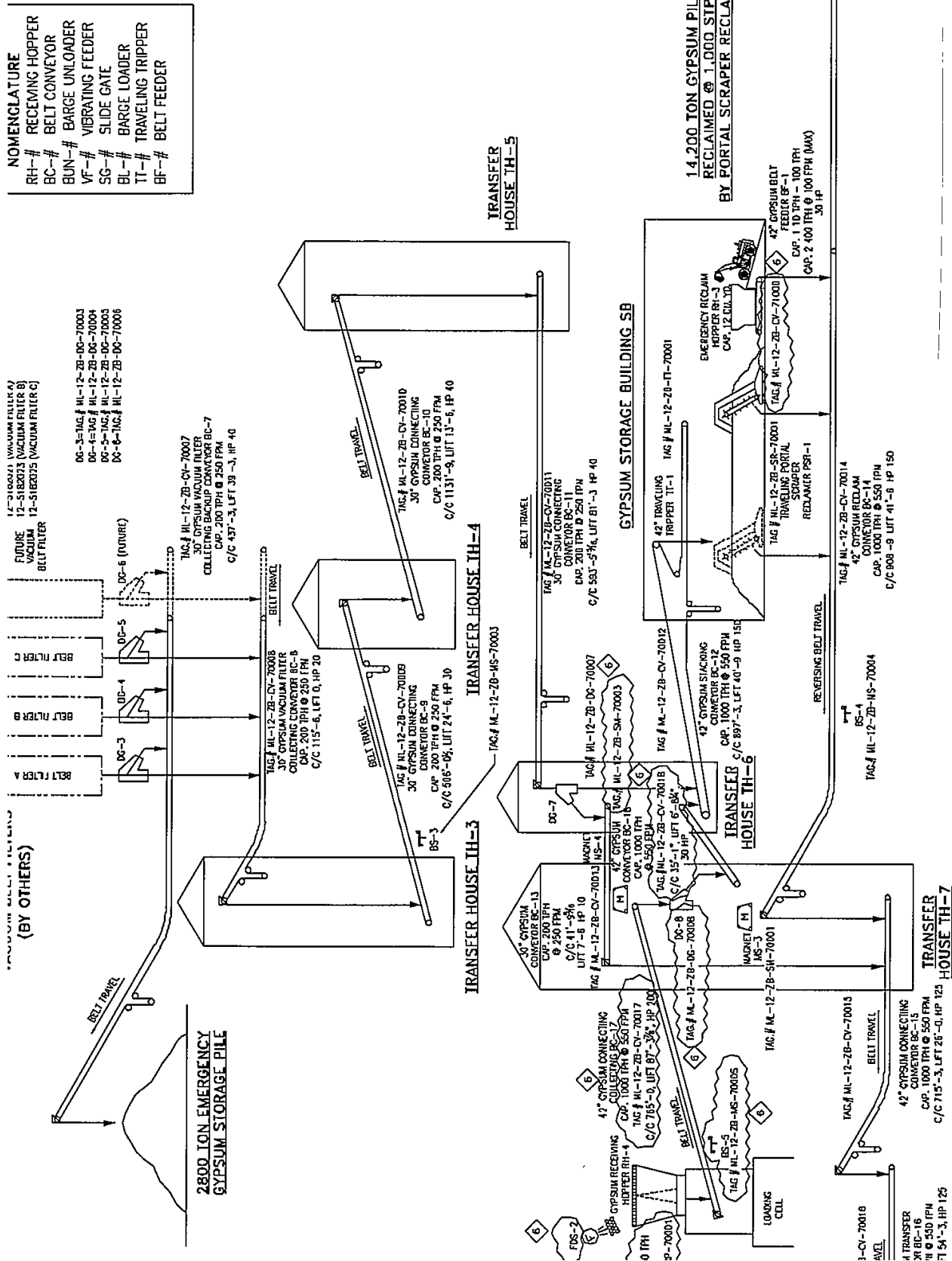
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EP EMISSION POINT

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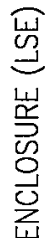


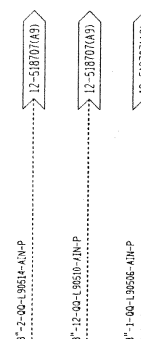


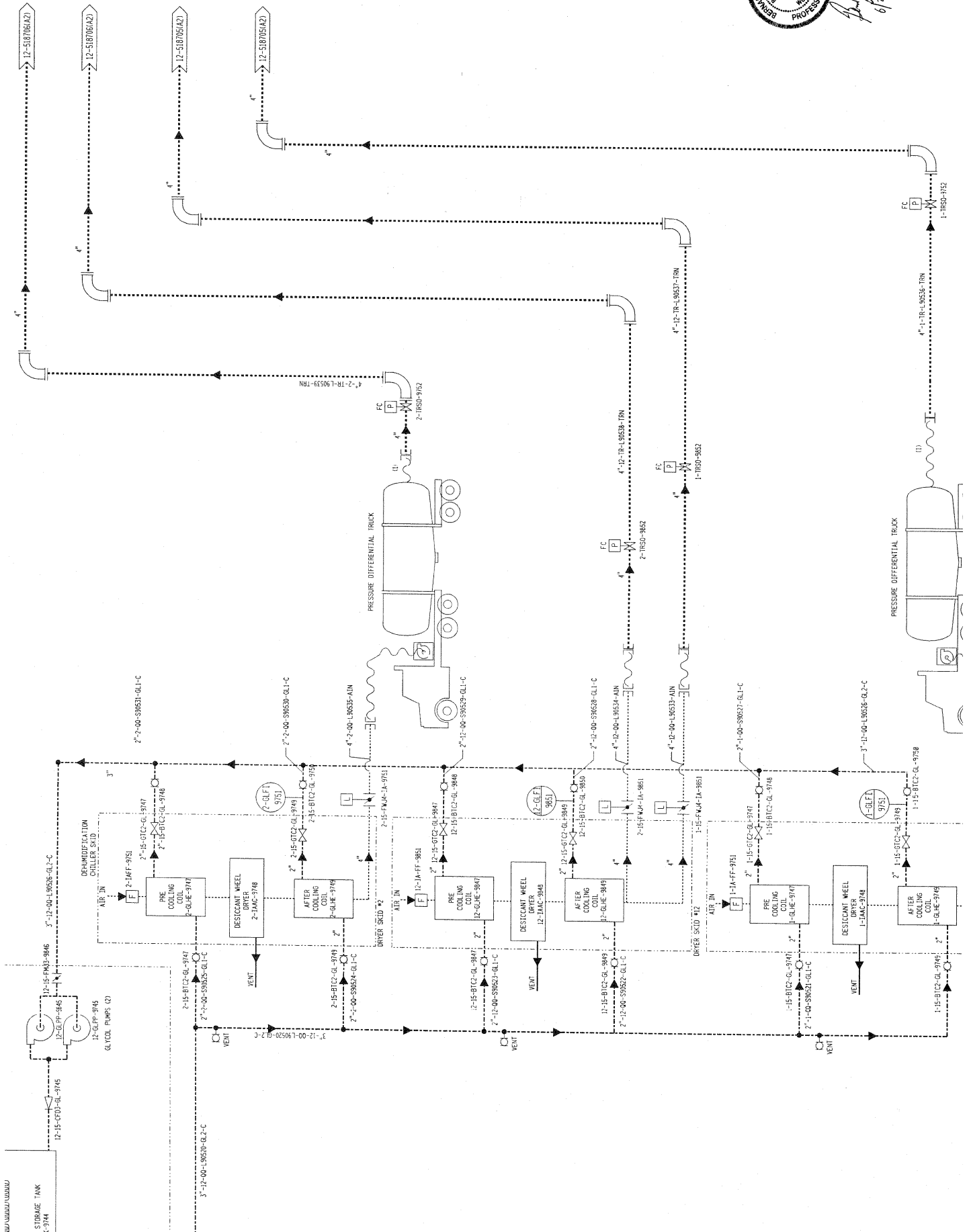


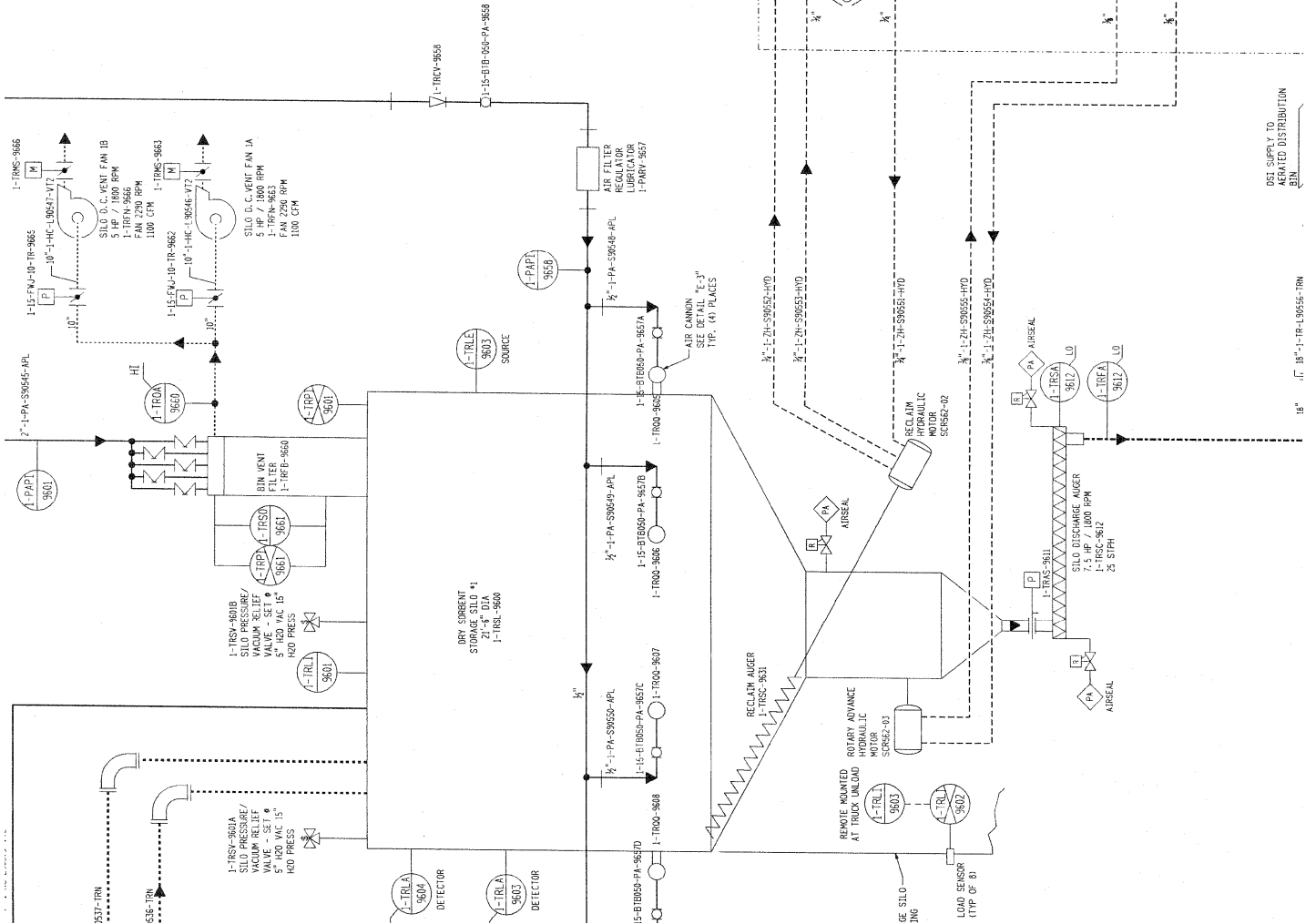
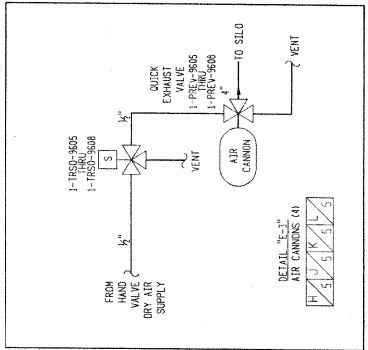
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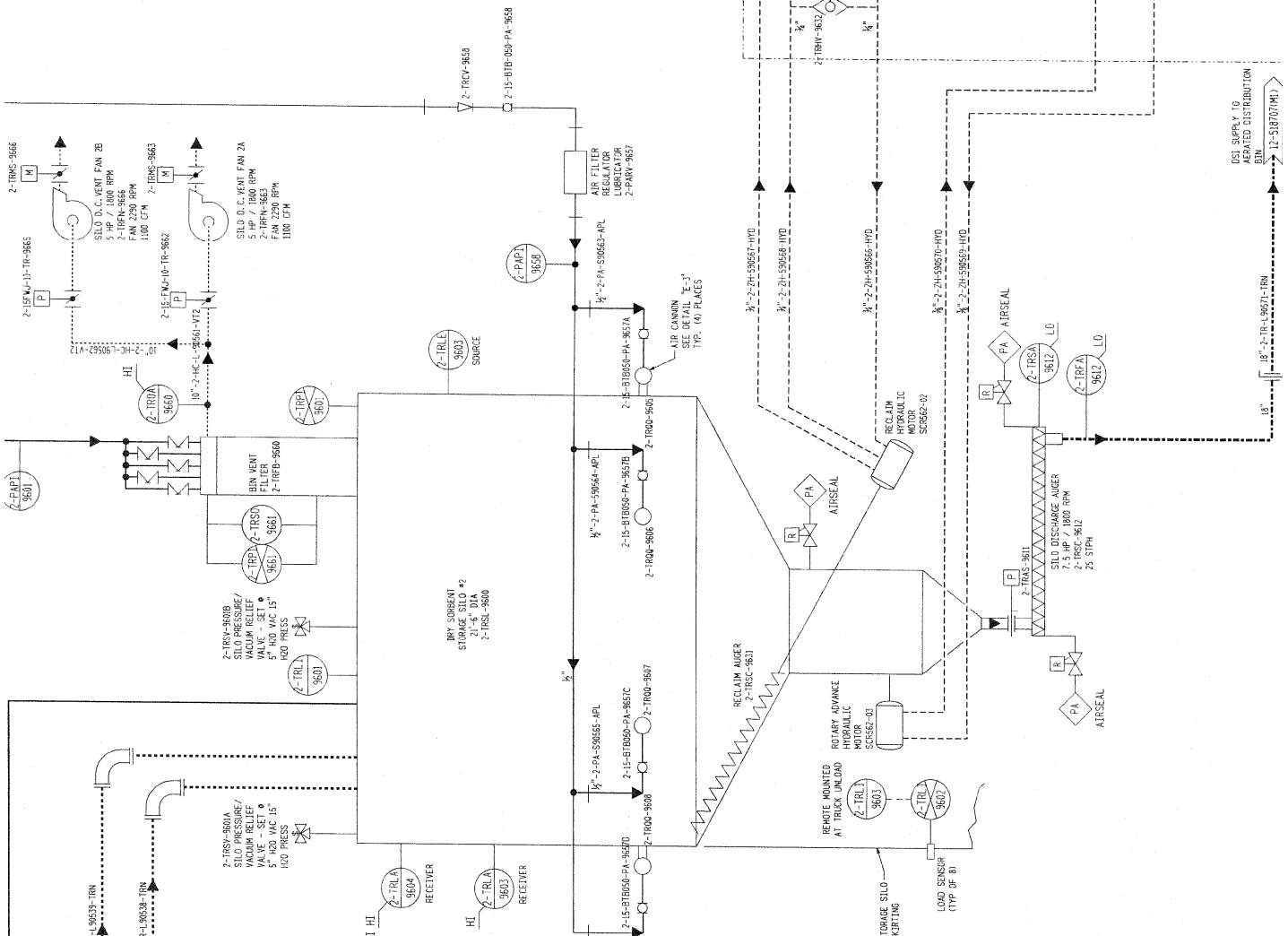
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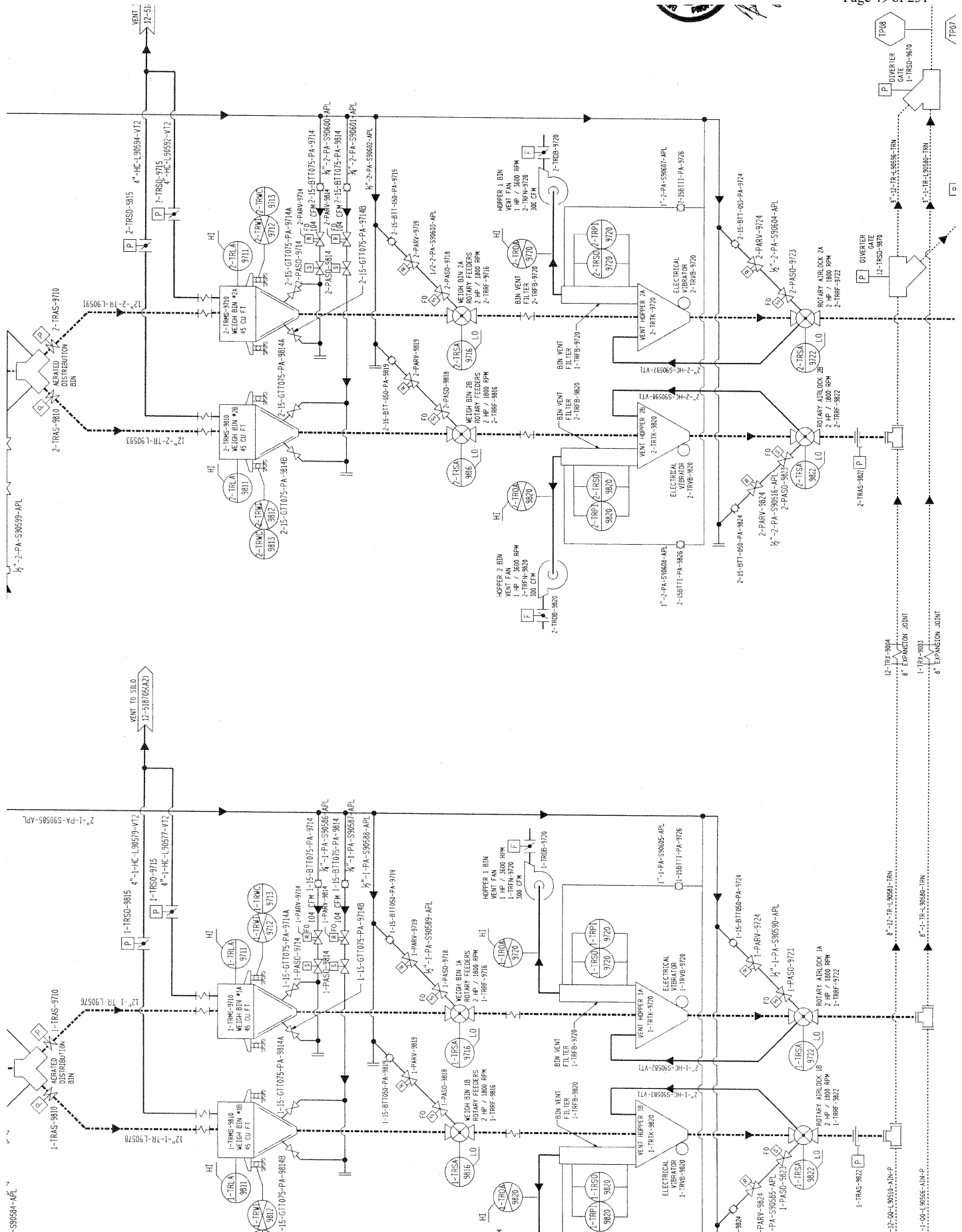


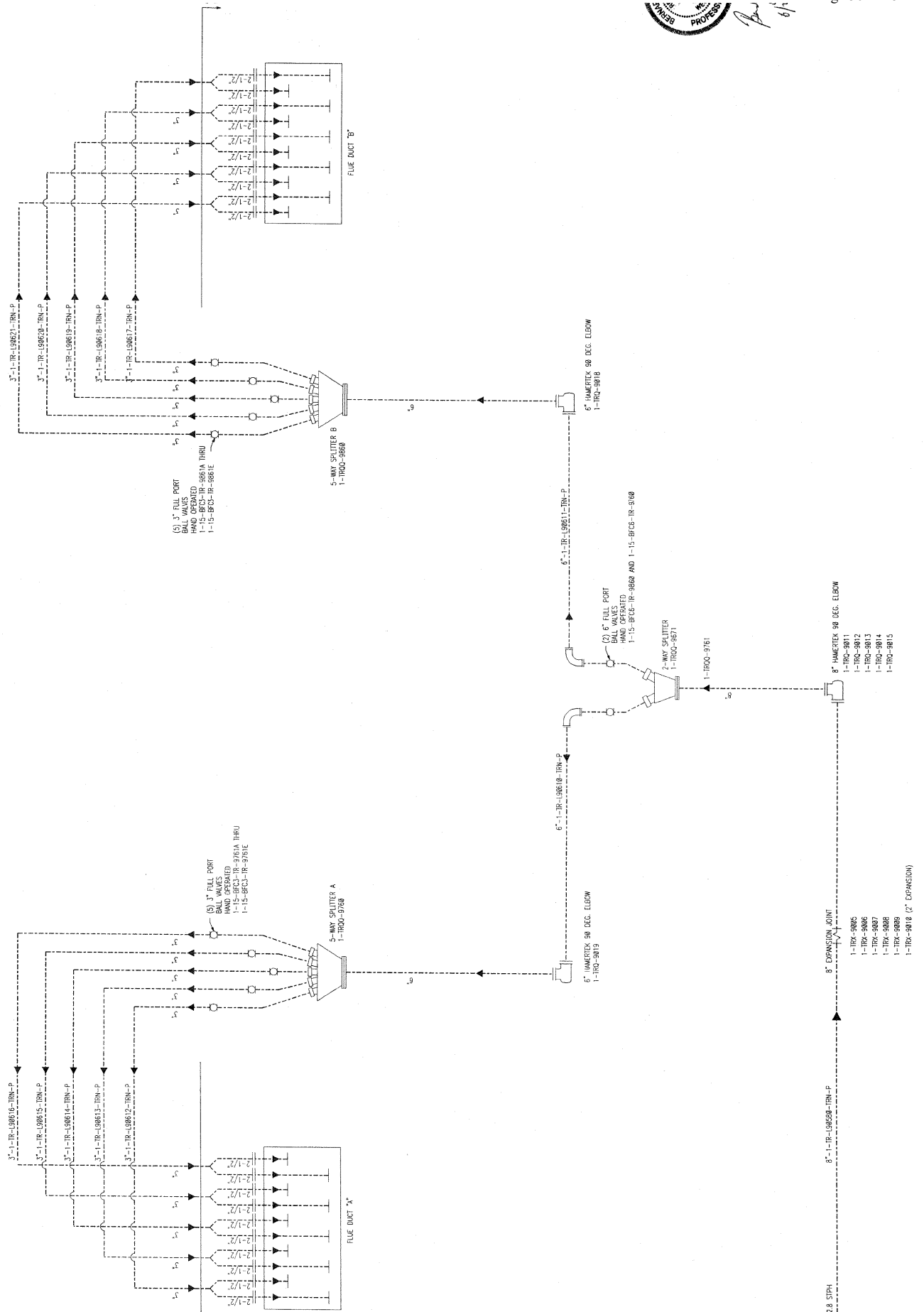


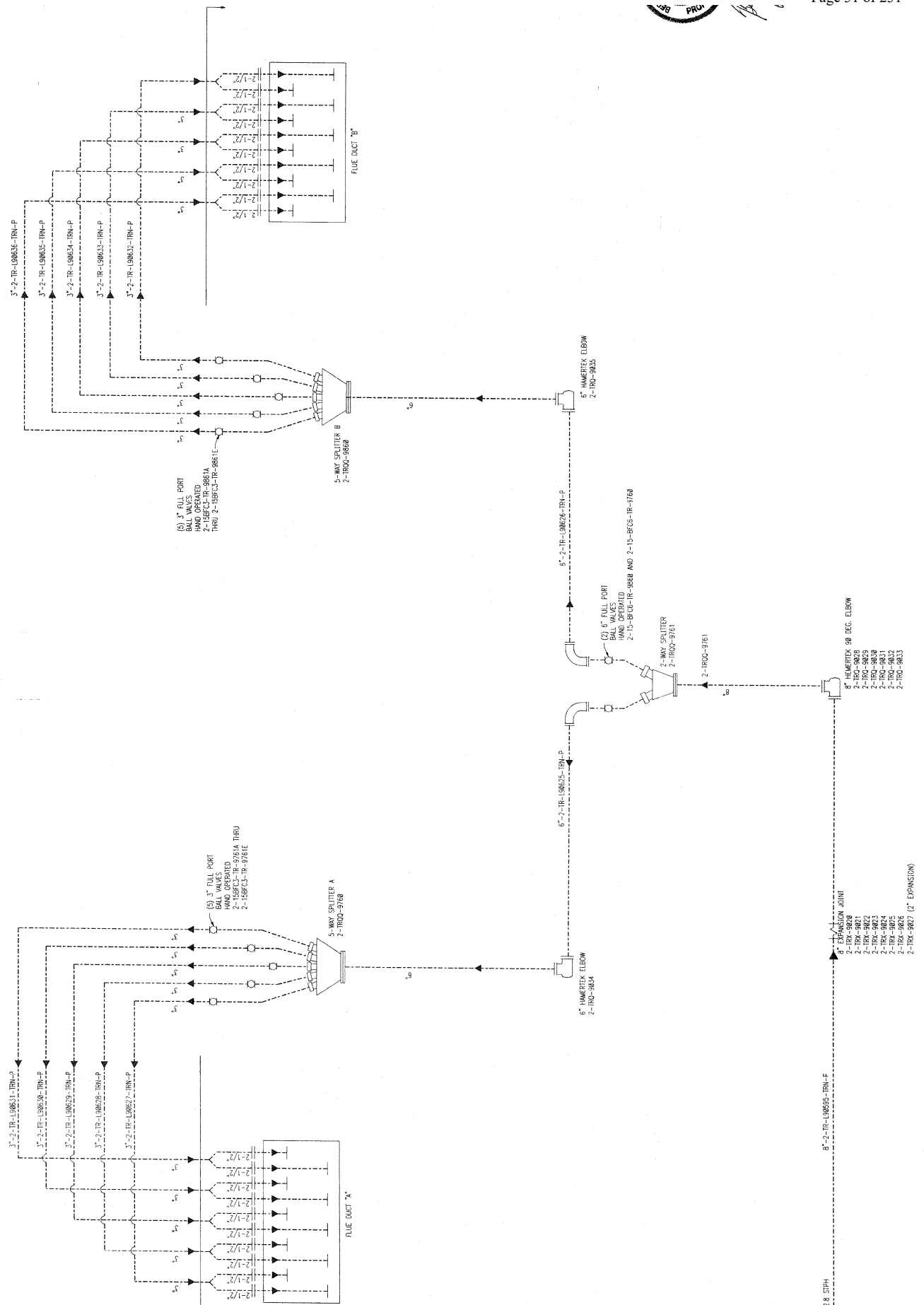


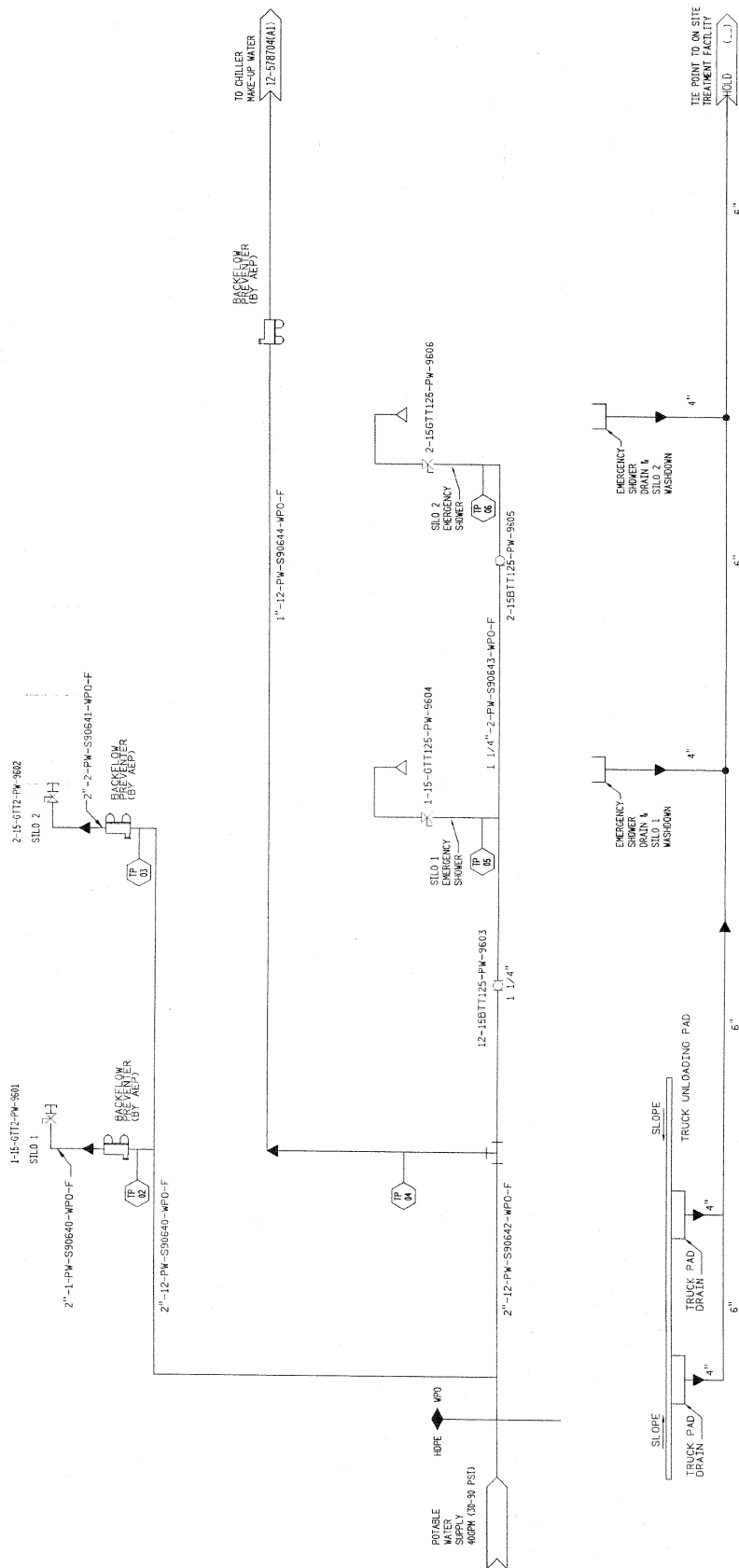






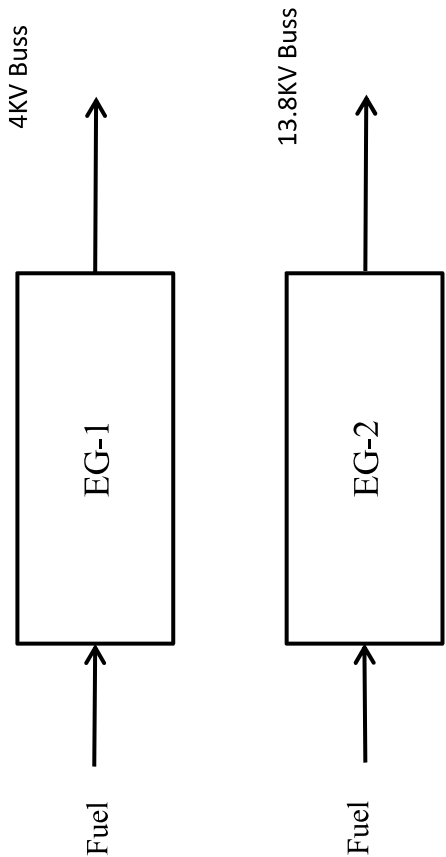


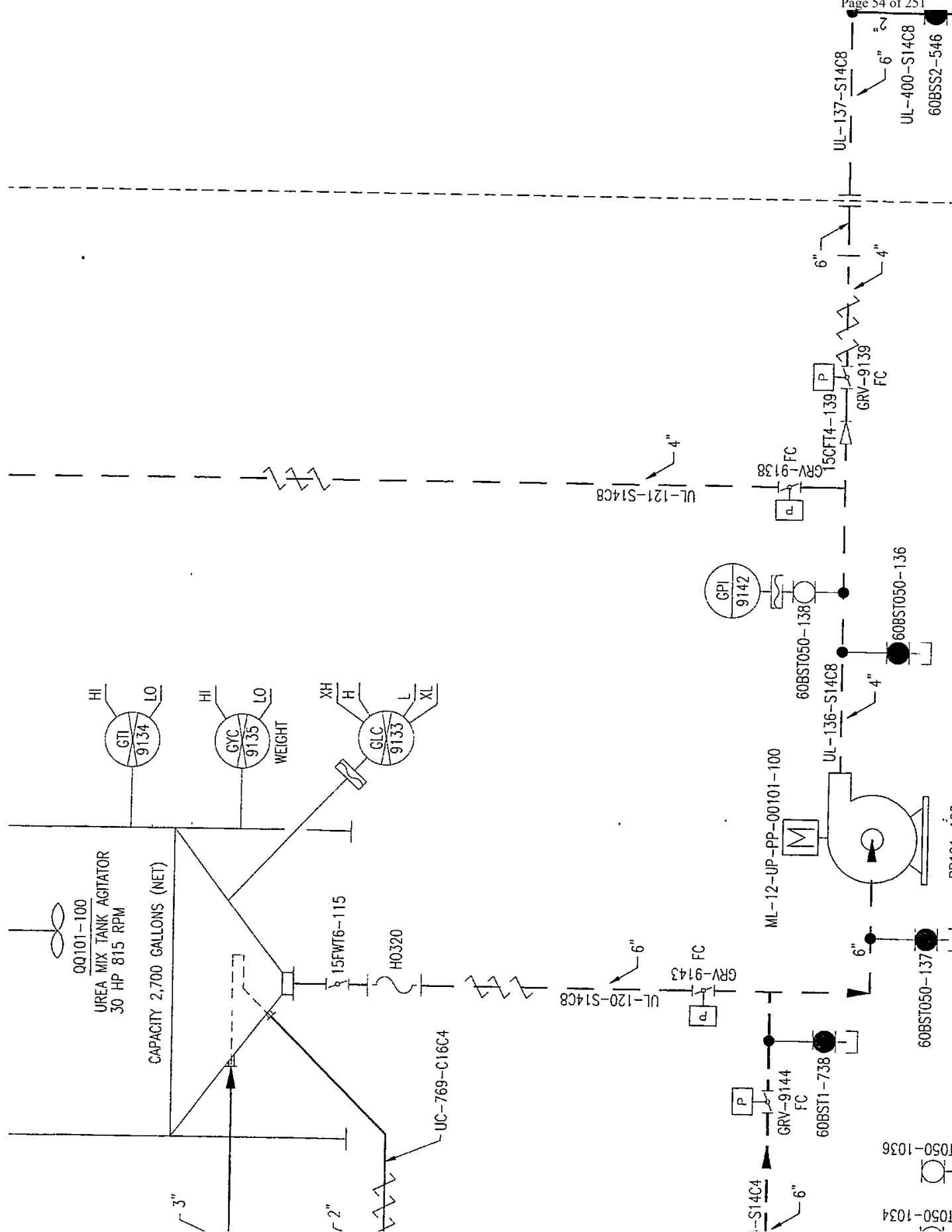




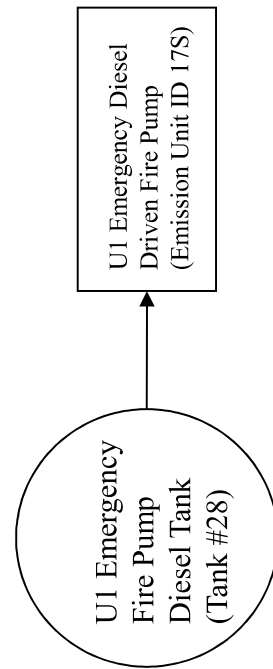
Flow Diagram

Coping Power Diesel Driven Emergency Generators

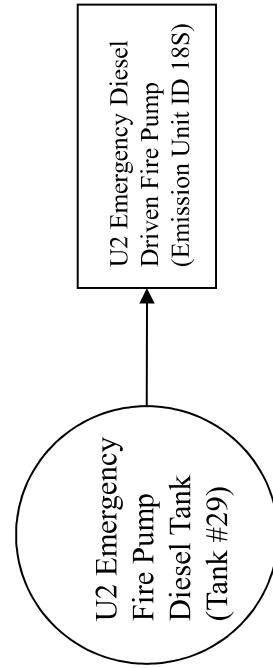




Attachment C: Mitchell Plant Unit 1 Emergency Diesel Driven Fire Pump

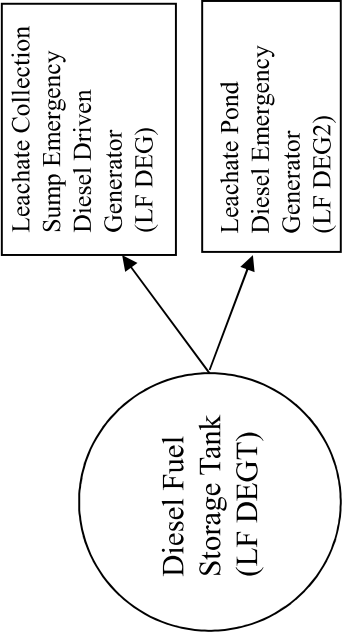


Attachment C: Mitchell Plant Unit 2 Emergency Diesel Driven Fire Pump



Attachment C:

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



Attachment D

Title V Equipment Table

Mitchell Plant Title V Renewal
R30-05100005-2019 (MM01) Renewal
2024

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 (Engrative)	None	BUN-1	Limestone Unloading Crane	1,000 TPH	2006
RH-1 (Engrative)	WS, PE	RH-1	Limestone Unloading Hopper	60 Tons	2006
VF-1 (Engrative)	FE	VF-1	Limestone Unloading Feeder	750 TPH	2006
BC-1 (Engrative)	PE	BC-1	Limestone Dock/Connecting Conveyor	750 TPH	2006
TH-1 (Engrative)	FE	TH-1	Limestone Transfer House #1	750 TPH	2006
BC-2 (Engrative)	PE	BC-2	Limestone Storage Pile Stacking Conveyor	750 TPH	2006
LSSP (Engrative)	None	LSSP	Limestone Active/Long-Term Stockpile	155,000 Tons	2006/2011
2S - Gypsum Material Handling					
BC-8 (Engrative)	PE	BC-8	Vacuum Collecting Conveyor	200 TPH	2007
TH-3 (Engrative)	FE	TH-3	Gypsum Transfer House #3	200 TPH	2007
BC-9 (Engrative)	PE	BC-9	Connecting Conveyor	200 TPH	2007
TH-4 (Engrative)	FE	TH-4	Gypsum Transfer House #4	200 TPH	2007
BC-10 (Engrative)	PE	BC-10	Connecting Conveyor	200 TPH	2007
TH-5 (Engrative)	FE	TH-5	Gypsum Transfer House #5	200 TPH	2007
BC-11 (Engrative)	PE	BC-11	Connecting Conveyor	200 TPH	2007
TH-6 (Engrative)	FE	TH-6	Gypsum Transfer House #6	200 TPH	2007
BC-12 (Engrative)	PE	BC-12	Stacking Tripper Conveyor	200 TPH	2007
GSP (Engrative)	FE	GSP	Gypsum Stockpile	15,600 tons	2007
PSR-1 (Engrative)	FE	PSR-1	Traveling Portal Scraper Reclaimer	1,000 TPH	2007
BC-14 (Engrative)	PE	BC-14	Reclaim Conveyor	1,000 TPH	2007
TH-7 (Engrative)	FE	TH-7	Transfer House #7	1,000 TPH	2007
BC-13 (Engrative)	PE	BC-13	Bypass Conveyor	200 TPH	2007
BC-15 (Engrative)	PE	BC-15	Connecting Conveyor	1,000 TPH	2007
TH-1 (Engrative)	FE	TH-1	Transfer House #1	1,000 TPH	2007
BC-16 (Engrative)	PE	BC-16	Transfer Conveyor	1,000 TPH	2007
BL-1 (Engrative)	PE	BL-1	Barge Loader	1,000 TPH	2007
BC-14 (Engrative)	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

Title V Equipment Table (equipment_table.doc)

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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

Title V Equipment Table (equipment_table.doc)

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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	40,575 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

¹For 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

Mitchell Plant Title V Renewal
R30-05100005-2019 (MM01) Renewal
2024

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description Unit 1 Main Boiler</i>			
Emission unit ID number: Unit 1 – ML1	Emission unit name: Unit 1 Boiler	List any control devices associated with this emission unit: ESP, SCR, FGD	
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: Foster Wheeler	Model number: 2-85-303	Serial number: Custom	
Construction date: MM/DD/YYYY	Installation date: 05/31/1971	Modification date(s): 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: Nominal 5,289,000 lb/hr Steam	Maximum Annual Throughput: Nominal 46,331,640,000 lb/yr Steam	Maximum Operating Schedule: 8760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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			
<i>Emission Unit Description Unit 2 Main Boiler</i>			
Emission unit ID number: Unit 2 – ML2	Emission unit name: Unit 2 Boiler	List any control devices associated with this emission unit: ESP, SCR, FGD	
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: Foster Wheeler	Model number: 2-85-304	Serial number: Custom	
Construction date: MM/DD/YYYY	Installation date: 05/31/1971	Modification date(s): 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: Nominal 5,280,000 lb/hr Steam	Maximum Annual Throughput: Nominal 46,252,800,000 lb/yr Steam	Maximum Operating Schedule: 8760 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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			
<i>Emission Unit Description Auxiliary Boiler 1</i>			
Emission unit ID number: Aux ML1	Emission unit name: Auxiliary Boiler 1	List any control devices associated with this emission unit:	
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: Foster Wheeler	Model number: SD-25	Serial number: Custom	
Construction date: MM/DD/YYYY	Installation date: 1970, Rebuild 2012	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Nominal 663 mmBtu/Hr			
Maximum Hourly Throughput: 355,000 lb/hr steam	Maximum Annual Throughput: 310,980,000 lb/yr steam	Maximum Operating Schedule: 876 hr/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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			
<i>Emission Unit Description Coal and Ash Handling</i>			
Emission unit ID number: Emission Group 003	Emission unit name: Coal & Ash Handling	List any control devices associated with this emission unit: Conveyor covers, partial and full enclosures, mechanical controls, water sprays.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): 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: Coal: Nominal 3,000 ton/hr Fly Ash: 720 ton/hr	Maximum Annual Throughput: Coal - Nominal 26,280,000 ton/yr Fly Ash – 980,000 ton/yr	Maximum Operating Schedule: 8760 hrs/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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 via 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.

Unit 1 Fly Ash Removal System

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 slag 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			
<i>Emission Unit Description Limestone Handling and Processing</i>			
Emission unit ID number: Emission Groups 1S	Emission unit name: Limestone Handling	List any control devices associated with this emission unit: Conveyor covers, partial and full enclosures, water sprays.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Limestone transfer capacity (nominal) – up to 750 ton/hr			
Maximum Hourly Throughput: Nominal 750 ton/hr	Maximum Annual Throughput: Nominal 1,100,000 ton/yr	Maximum Operating Schedule: 8760 hrs/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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 $\frac{3}{4}$ 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 $\frac{3}{4}$ 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			
<i>Emission Unit Description Limestone Handling and Processing</i>			
Emission unit ID number: Emission Groups 3S	Emission unit name: Limestone Processing	List any control devices associated with this emission unit: Conveyor covers, partial and full enclosures, baghouses, water sprays.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Limestone transfer capacity (nominal) – up to 750 ton/hr			
Maximum Hourly Throughput: Nominal 750 ton/hr	Maximum Annual Throughput: Nominal 1,100,000 ton/yr	Maximum Operating Schedule: 8760 hrs/yr	
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: 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 $\frac{3}{4}$ 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 $\frac{3}{4}$ 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			
<i>Emission Unit Description Gypsum Handling</i>			
Emission unit ID number: Emission Groups 2S	Emission unit name: Gypsum Handling	List any control devices associated with this emission unit: Conveyor covers, partial and full enclosures, water sprays.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Gypsum transfer capacity (nominal) – up to 1,000 ton/hr.			
Maximum Hourly Throughput: Nominal 1,000 ton/hr	Maximum Annual Throughput: Up to Nominal 1,912,000 ton/yr	Maximum Operating Schedule: 8760 hrs/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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 $\frac{3}{4}$ 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 $\frac{3}{4}$ cover will be utilized on the outdoor portion of Backup Collecting Conveyor BC-7.

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description WWT Handling</i>			
Emission unit ID number: Emission Groups 11S	Emission unit name: WWT Handling	List any control devices associated with this emission unit: Conveyor covers, partial and full enclosures, baghouses, water sprays.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): WWT Cake transfer capacity (nominal) up to 600 ton/hr.			
Maximum Hourly Throughput: Nominal 600 ton/hr	Maximum Annual Throughput: Nominal 212,000 ton/yr	Maximum Operating Schedule: 8760 hrs/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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: 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			
<i>Emission Unit Description Coal Blending System</i>			
Emission unit ID number: Emission Group 5S	Emission unit name: Coal Blending System	List any control devices associated with this emission unit: Conveyor covers, partial and full enclosures.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Coal transfer capacity (nominal) – up to 3,000 ton/hr.			
Maximum Hourly Throughput: Nominal 3,000 ton/hr	Maximum Annual Throughput: Nominal 5,732,544 ton/yr	Maximum Operating Schedule: 8760 hrs/yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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 $\frac{3}{4}$ 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			
<i>Emission Unit Description Emergency Quench Water System</i>			
Emission unit ID number: Emission Units 6S and 7S	Emission unit name: Emergency Quench Water System	List any control devices associated with this emission unit: Full enclosures.	
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: Clark Diesel	Model number: JU 4R-UF-19 or equal	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 60 HP (approx.),			
Maximum Hourly Throughput: 5.5 gal./hr (each)	Maximum Annual Throughput: 1,100 gal./yr (combined)	Maximum Operating Schedule: 200 hrs/yr (both engines combined)	
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: 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			
<i>Emission Unit Description Dry Sorbent Handling System</i>			
Emission unit ID number: Emission Group 4S	Emission unit name: Dry Sorbent Handling Systems	List any control devices associated with this emission unit: Full 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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 25 TPH Unloading, 500 Ton Dry Sorbent Silos			
Maximum Hourly Throughput: Nominal 25 ton/hr	Maximum Annual Throughput: Dry Sorbent 81,000 TPY Nominal	Maximum Operating Schedule: 8760 Hr/Yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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: 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:

SO₃ 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 SO₃. Subsequently, the SO₃ reacts with moisture in the stack plume and the atmosphere to support the secondary formation of H₂SO₄. If not mitigated, the increase in SO₃ and subsequent increase in the formation of H₂SO₄ 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 SO₂ to SO₃ by the SCR system. Nevertheless, a supplemental SO₃ mitigation system is needed to help reduce SO₃ concentrations. Based on AEP's evaluation of various SO₃ mitigation systems at other AEP generating facilities, it was determined that the primary SO₃ 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 SO₃ 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			
<i>Emission Unit Description Magnesium Hydroxide Handling System</i>			
Emission unit ID number: Emission Group 9S	Emission unit name: Magnesium Hydroxide Handling Systems	List any control devices associated with this emission unit: Full enclosures	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 1,000 gallon mag. hydroxide mix tanks (2)			
Maximum Hourly Throughput: 8000 gal/hr delivered	Maximum Annual Throughput: Mag. Hyd. 6,600,000 Gal./yr	Maximum Operating Schedule: 8760 Hr/Yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ___Yes <u>X</u> 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:

SO₃ 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 SO₃. Subsequently, the SO₃ reacts with moisture in the stack plume and the atmosphere to support the secondary formation of H₂SO₄. If not mitigated, the increase in SO₃ and subsequent increase in the formation of H₂SO₄ 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 SO₂ to SO₃ by the SCR system. Nevertheless, it is anticipated that a supplemental SO₃ mitigation system will be needed to help reduce SO₃ concentrations. Based on AEP's evaluation of various SO₃ mitigation systems at other AEP generating facilities, it has been determined that the primary SO₃ 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 SO₃ in the furnace in the event that Trona dry sorbent injection is 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 SO₃. 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% SO₃ 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			
<i>Emission Unit Description Urea Handling System</i>			
Emission unit ID number: N/A	Emission unit name: Urea Handling Systems	List any control devices associated with this emission unit: Full and partial enclosures.	
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: Various	Model number: Custom	Serial number: N/A	
Construction date: MM/DD/YYYY	Installation date: See equipment list in Attachment D	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 48 Ton Unloading Hopper, 200,000 gal. Urea Storage Tank.			
Maximum Hourly Throughput: Nominal 50 ton/hr	Maximum Annual Throughput: Dry urea 26,000 TPY Nominal,	Maximum Operating Schedule: 8760 Hr/Yr	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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			
<i>Emission Unit Description Diesel Engine Driven Coping Power Emergency Generators (EG-1 and EG-2)</i>			
Emission unit ID number: EG-1 EG-2	Emission unit name: Diesel Driven Coping Power Emergency Generators EG-1 and EG-2	List any control devices associated with this emission unit: 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: Caterpillar	Model number: C175-16 (EG-1); 3516C-HD TA (EG-2)	Serial number:	
Construction date: 08/2014	Installation date: 08/2014	Modification date(s): 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:	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? ☒ 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	
CO ₂	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 NO_x, 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? ☒ Yes ☐ No

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

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i>			
Emission unit ID number: 17S	Emission unit name: Unit 1 Emergency Diesel Driven Fire Pump	List any control devices associated with this emission unit: 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: Cummins	Model number: CFP7E-F60 Fire Pump / QSB6.7 Engine	Serial number:	
Construction date: MM/DD/YYYY 08/2023	Installation date: MM/DD/YYYY 08/2023	Modification date(s): MM/DD/YYYY 08/2023	
Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp): Approx. 14 gal/hr, 249 BHP			
Maximum Hourly Throughput: Approx. 14 gal/hr	Maximum Annual Throughput: 7,000 gal/yr	Maximum Operating Schedule: 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
CO ₂	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 NO_x, 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			
<i>Emission Unit Description</i>			
Emission unit ID number: 18S	Emission unit name: Unit 2 Emergency Diesel Driven Fire Pump	List any control devices associated with this emission unit: 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: Cummins	Model number: CFP7E-F60 Fire Pump / QSB6.7 Engine	Serial number:	
Construction date: MM/DD/YYYY 06/2024	Installation date: MM/DD/YYYY 06/2024	Modification date(s): MM/DD/YYYY 06/2024	
Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp): Approx. 14 gal/hr, 249 BHP			
Maximum Hourly Throughput: Approx. 14 gal/hr	Maximum Annual Throughput: 7,000 gal/yr	Maximum Operating Schedule: 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
CO ₂	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 NO_x, 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			
<i>Emission Unit Description</i>			
Emission unit ID number: LF DEG	Emission unit name: LF DEG	List any control devices associated with this emission unit: 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: Cummins	Model number: C300DQDAC gen/QLS9-G7 engine	Serial number:	
Construction date: (MM/DD/YYYY) 04 / / 2020	Installation date: (MM/DD/YYYY) 04 / / 2020	Modification date(s): (MM/DD/YYYY) / / ; / / / / ; / /	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): approx. 23.1 gal/hr, 464 Bhp, 600 gal associated fuel tank.			
Maximum Hourly Throughput: approx 23.1 gal/hr	Maximum Annual Throughput: 11,550 gal/yr	Maximum Operating Schedule: assumed 500 hr/yr, but not limited during emergency	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
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 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)	0.31	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 NO_x, 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			
<i>Emission Unit Description</i>			
Emission unit ID number: LF DEG2	Emission unit name: LF DEG2	List any control devices associated with this emission unit: 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: Cummins	Model number: QSG12	Serial number:	
Construction date: MM/DD/YYYY 07/2023	Installation date: MM/DD/YYYY 07/2023	Modification date(s): MM/DD/YYYY	
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: approx 23.2 gal/hr	Maximum Annual Throughput: 11,600 gal/yr	Maximum Operating Schedule: 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 NO_x, 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 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 G

Air Pollution Control Device Forms

Mitchell Plant Title V Renewal
R30-05100005-2019 (MM01) Renewal
2024

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 ☒ 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 ₂ O, Avg. Gas Flow Rate = 3,000x10 ³ acfm, Avg. Operating temp. = 370 °F, Design Removal Efficiency = 99.85%		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☒ 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) ☒ 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 = 2.6x10 ⁶ acfm, Outlet temperature = 128 °F, Design Removal Efficiency = 95%		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ 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) <u>Selective Catalytic Reduction</u> ☐ 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 °F, Maximum ammonia slip = 2 ppmvd at 3% O ₂		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ 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 ☒ 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 ₂ O, Avg. Gas Flow Rate = 3,000x10 ³ acfm, Avg. Operating temp. = 370 °F, Design Removal Efficiency = 99.85%		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☒ 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) ☒ 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 = 2.6x10 ⁶ acfm, Outlet temperature = 128 °F, Design Removal Efficiency = 95%		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ 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 ☒ 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 °F, Maximum ammonia slip = 2 ppmvd at 3% O ₂		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ 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
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

^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 <u>EACH</u> 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 <u>EACH</u> indicator selected for <u>EACH</u> 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 <u>MONITORING APPROACH</u> used to measure the indicators: ^b Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		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.
		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 <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy: ^c For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring: Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.): ^d Provide the <u>MONITORING FREQUENCY</u> : Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used: Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		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.
		N/A	N/A
		QA/QC is performed in accordance with 40 CFR 75.	QA/QC is performed in accordance with 40 CFR 75.
		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.)
		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.
		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.

^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 <u>EACH</u> 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 <u>EACH</u> indicator selected for <u>EACH</u> 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 <u>MONITORING APPROACH</u> used to measure the indicators: ^b Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		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.
		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 <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy: ^c For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring: Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.): ^d Provide the <u>MONITORING FREQUENCY</u> : Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used: Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		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.
		N/A	N/A
		QA/QC is performed in accordance with 40 CFR 75.	QA/QC is performed in accordance with 40 CFR 75.
		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.)
		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.
		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 $\geq$ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION	
Complete this section for <u>EACH</u> 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 <u>EACH</u> indicator and monitoring approach and <u>EACH</u> indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.	
6a) PSEU Designation: Unit 1	6b) Regulated Air Pollutant: PM
7) <u>INDICATORS AND THE MONITORING APPROACH:</u> 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 <u>short duration increase in opacity</u> 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 <u>sustained increase in opacity (or an excursion)</u> 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.	