

**Mint Farm Generating Station**

**Title V Basis Statement**

**March 1, 2023**

**DRAFT**

Southwest Clean Air Agency  
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AIR OPERATING PERMIT: SW08-15-R2

PLANT SITE: 1200 Prudential Blvd  
Longview, WA 98632

PERMIT ENGINEER: Wess Safford, AQ Engineer

REVIEWED BY: Clinton Lamoreaux, Chief Engineer  
Uri Papish, Executive Director

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**TABLE OF CONTENTS**

I. General Information and Certification..... 1

II. Emission Unit Descriptions ..... 2

III. Explanation of Insignificant Emission Unit Determinations ..... 4

IV. Explanation of Selected Permit Provisions and General Terms and Conditions.....5

V. Explanation of Operating Terms and Conditions..... 7

VI. Explanation of Monitoring and Recordkeeping Terms and Conditions ..... 12

VII. Explanation of Reporting Terms and Conditions..... 15

VIII. Explanation of Future Requirements ..... 17

IX. Explanation of Obsolete Requirements ..... 17

X. Response to Comments..... 18

XI. Facility History..... 19

XII. Explanation of Appendices ..... 21

**I. GENERAL INFORMATION AND CERTIFICATION**

**Company Name**..... Puget Sound Energy

**Facility Name** ..... Mint Farm Generating Station

**Facility Address** ..... 1200 Prudential Blvd  
Longview, WA 98632

**Mailing Address**..... 1200 Prudential Blvd  
Longview, WA 98632

**Parent Company/Address**..... Puget Sound Energy  
1200 Prudential Blvd  
Longview, WA 98632

**Unified Business Identification**..... 602-566-990

**Standard Industrial Classification** ..... 4911

**North American Industrial Classification System**..... 221112

**Responsible Official**..... Sara Kiyohara, Plant Manager

**Basis for Title V Applicability**

The Mint Farm Generating Station (Mint Farm) is subject to the Title V Air Operating Permit program because it is an affected source under the Title IV Acid Rain program. The Mint Farm Generating Station is not a major source as defined in WAC 173-401-200(19).

**Facility-wide Potential To Emit Summary**

<b>Pollutant</b>	<b>Emissions (tpy)</b>
Nitrogen oxides	97.38
Carbon monoxide	68.67
Volatile organic compounds	43.96
Sulfur dioxide	84.33
Particulate Matter	99.37
Particulate Matter (<10 micron)	99.37
Particulate Matter (<2.5 micron)	98.83
Combined HAPs	10.97
Ammonia	128.05
Formaldehyde	7.81
Toluene	1.43
Xylene	0.70

**Current Permitting Action:**

This Air Operating Permit is being issued in response to a Title V renewal application submitted by Mint Farm in accordance with the deadline contained in Air Operating Permit SW08-15-R1. This Air Operating Permit has been updated as appropriate to reflect the issuance of Air Discharge Permit 22-3528.

**AOP SW08-15-R2**

1.	Permit Application Due:	December 11, 2022
2.	Permit Application Submitted:	May 20, 2022
3.	Permit Application Deemed Complete:	June 15, 2022
4.	Permit Application Sent to EPA:	June 15, 2022
5.	Draft Permit Issued:	March 1, 2023
6.	Proposed Permit Issued:	TBD
7.	Final Permit Issued:	TBD
8.	Renewal Permit Application Due:	TBD
9.	Permit Expiration:	TBD

**Attainment Area:**

Mint Farm is located in an area which is in attainment for all criteria pollutants.

**Facility Description:**

Mint Farm is a primary power generation facility located in Longview, Washington. Mint Farm is owned by Puget Sound Energy who purchased the facility on December 5, 2008. Mint Farm is configured as a natural gas-fired combined-cycle turbine facility (NGCC) with a fired heat recovery steam generator (HRSG) and associated support equipment. The facility operates a single combustion turbine (General Electric - Frame 7FA). Mint Farm has a nominal generating capacity of 320 megawatts (average annual conditions). All plant equipment functions in direct support of the combustion turbine and steam generator system. First fire of the combustion turbine occurred on September 21, 2007. The facility has a total of three emission units consisting of the Combustion Turbine/HRSG, Cooling Tower, and Emergency Generator.

**II. EMISSION UNIT DESCRIPTIONS**

EU	Generating Equipment/Activity	Emission Control Measure
EU1	Combustion Turbine/HRSG (GE Frame 7FA – 2,052 MMBtu/hr) Duct Burners (458 MMBtu/hr)	NO <sub>x</sub> Dry Low-NO <sub>x</sub> Combustor System, SCR/Oxidation Catalyst Systems, SO <sub>2</sub> Low Sulfur Fuel
EU2	Cooling Tower (77,000 gal/min)	PM Drift Eliminators
EU3	Emergency Generator (Caterpillar – 824 bhp)	SO <sub>2</sub> Low Sulfur Fuel

**EU1 Combustion Turbine/HRSG**

One General Electric Frame 7FA natural gas fired combustion turbine equipped with dry low-NO<sub>x</sub> combustors and a power augmentation system. As originally installed, the combustion turbine had a maximum rated heat input of 1,900 MMBtu/hr and a base-load rating of 169 MW of electrical power. The

combustion turbine was equipped with General Electric's Advance Gas Path and Dry Low NO<sub>x</sub> 2.6+ upgrades in 2017, which resulted in a small increase in maximum rated heat input and power output. The combustion turbine now has a maximum rated heat input of 2,052 MMBtu/hr and a base-load rating of 194 MW of electrical power.

The combustion turbine operates in conjunction with a triple pressure heat recovery steam generator (HRSG) used to generate steam from waste heat in the turbine exhaust. The HRSG is equipped with natural gas fired duct burners rated at 458 MMBtu/hr, which are used to provide supplemental heat. Steam from the HRSG drives a steam turbine with a base-load rating of 133 MW of electrical power. Total facility output is limited to a maximum of 320 MW due to line limits.

Combustion gases from the Combustion Turbine/HRSG are discharged to the atmosphere through a common exhaust stack at 165' above ground level. Emissions consist of NO<sub>x</sub>, CO, SO<sub>2</sub>, PM, VOC, NH<sub>3</sub>, HAPs, and TAPs. NO<sub>x</sub> emissions from this unit are controlled through the use of low emission combustion controls and a selective catalytic reduction (SCR) system. CO emissions from this unit are controlled through the use of an oxidation catalyst. The SCR system uses aqueous ammonia as a reducing reagent. Both catalyst beds are located within the HRSG.

This unit is subject to applicable requirements found in 40 CFR 60 Subpart KKKK.

### **EU2 Cooling Tower**

One mechanically-induced-draft, counter-flow, multi-cell cooling tower with a design water circulation rate of 77,000 gallons per minute. This cooling tower is used to service plant cooling needs including condensation of process steam from the steam turbine. The approved operating scheme allows cooling tower water to go through a maximum of 10 cycles of concentration.

Emissions from the Cooling Tower consist of PM. PM emissions are minimized through the use of high efficiency drift eliminators guaranteed to limit drift to a maximum rate of 0.0005%.

This emission unit is not subject to any requirements from 40 CFR Parts 60, 61, or 63.

### **EU3 Emergency Generator**

One emergency electric generator with a nominal rating of 550 kW. The electric generator is powered by a Caterpillar model 3412 diesel engine (s/n BPG00392) rated at 824 brake horsepower and manufactured in November 2002. Specific fuel consumption at full load is 43 gal/hr. This unit is used to provide electrical power to vital facility systems in the event of a complete loss of utility power.

Emissions from the Emergency Generator consist of NO<sub>x</sub>, CO, SO<sub>2</sub>, PM, and VOC. SO<sub>2</sub> emissions are minimized through the use of low sulfur diesel fuel.

This unit is subject to applicable requirements found in 40 CFR 63 Subpart ZZZZ.

### **Compliance Assurance Monitoring (CAM) Applicability**

The CAM rule (40 CFR 64) requires facilities to monitor compliance indicators for emission units to provide reasonable assurance for compliance with regulatory emission limitations. When monitoring indicates the occurrence of a parameter excursion or exceedance, the facility is required to take corrective action to restore the monitoring parameter to the value range established as part of a source compliance or performance test. The facility is also required to document/report corrective actions, maintain

monitoring records, and provide an annual certification of compliance to the delegated authority that administers the Title V operating permit program.

In accordance with 40 CFR 64.2, the CAM rule applies to Pollutant Specific Emission Units (PSEU) at major sources that are required to obtain a Part 70 or 71 permit and meet all of the following criteria:

- 1) The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate);
- 2) The PSEU uses a control device to achieve compliance with the emission limit or standard; and
- 3) The PSEU has potential pre-control device emissions of the applicable regulated pollutant equal to or above the major source threshold.

In accordance with 40 CFR 64.2(b), the following are *exempt* from the CAM rule:

- 1) Emission limitation or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 and 112 of the Clean Air Act; and
- 2) Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method.

<b>PSEU</b>	<b>Pollutant</b>	<b>CAM Applicable</b>	<b>Basis of Determination</b>
EU1 Combustion Turbine/HRSG Duct Burner	NO <sub>x</sub> , CO	No	Continuous emission monitor in use.
	All Other	No	No emission control device in use.
EU2 Cooling Tower	PM	No	Potential pre-control emissions less than major threshold.
EU3 Emergency Generator	All	No	No emission control device in use.

### III. EXPLANATION OF INSIGNIFICANT EMISSION UNIT DETERMINATIONS

Each emission unit listed as insignificant in the permit has been reviewed by SWCAA to confirm its status. The numbering system used to identify these emission units is consistent with internal Centralia Plant designations and does not necessarily use consecutive numbers. Emission units were determined to be insignificant as follows:

There are no specifically identified insignificant emission units at this facility.

#### IV. EXPLANATION OF SELECTED PERMIT PROVISIONS AND GENERAL TERMS AND CONDITIONS

##### **P12. Unavoidable Excess Emissions** **SWCAA 400-107**

SWCAA 400-107 establishes criteria and procedures for determining when excess emissions are considered unavoidable. Emissions that meet the requirements to be classified as unavoidable are still considered excess emissions and are reportable but are excused and not subject to penalty. Notification of excess emissions is required as soon as possible and shall occur by the next business day following the excess emissions event. Excess emissions due to startup or shutdown conditions are considered unavoidable if the permittee adequately demonstrates the excess emissions could not have been prevented through careful planning and design. Upset excess emissions are considered unavoidable if the permittee adequately demonstrates the upset event was not caused by poor or inadequate design, operation, maintenance, or other reasonably preventable condition, and the permittee takes appropriate corrective action that minimizes emissions during the event, taking into account the total emissions impact of that corrective action.

The provisions of SWCAA 400-107 do not apply to federal standards such as NESHAP/MACT standards. Such federal standards generally have specific affirmative defense provisions that only apply to malfunctions. In addition, the U.S. Court of Appeals for the D.C. Circuit in *NRDC v. EPA* (No. 10-1371) determined that EPA lacked the authority to provide an affirmative defense against suits for violations of federal standards. It holds that if EPA lacks the authority to provide this affirmative defense, state and local agencies likewise lack the same authority over federal Clean Air Act requirements.

##### **G1. Asbestos** **40 CFR 61 Subpart M** **SWCAA 400-076**

SWCAA has established a program to control asbestos emissions from the removal, salvage, disposal, or disturbance of asbestos-containing materials for the purpose of protecting public health. The program established under SWCAA 400-476 is intended to work in conjunction with the requirements of 40 CFR 61 Subpart M. Requirements of the program are applicable when triggered by asbestos related activities at the facility. Compliance with program requirements is assured via audits of asbestos program records and compliance certification by the responsible official.

##### **G2. Chemical Accident Prevention** **40 CFR 68**

40 CFR 68 requires affected facilities to develop risk management plans for the substances and thresholds listed in 40 CFR 68.130. None of the processes at this facility currently store or handle affected substances in quantities large enough to trigger applicability of the provisions in 40 CFR 68. The primary material of concern at this facility is bulk aqueous ammonia, which is stored onsite for use in the turbine's SCR system. The existing storage tank has a physical capacity less than the applicable threshold for <20% aqueous ammonia so the regulation does not apply. The regulation has been included in the general terms of the permit in order to address future operations that may store or handle substances subject to the regulation. Compliance with program requirements is assured via audits of facility records and compliance certification by the responsible official.

**40 CFR 82 Subpart B****G3. Protection of Stratospheric Ozone****40 CFR 82 Subpart F**

The standards for recycling and emissions reduction provided in 40 CFR Part 82, Subparts B and F are intended to reduce emissions of class I and class II refrigerants and their non-exempt substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the maintenance, service, repair, and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I or class II ozone-depleting substance or their non-exempt substitutes in accordance with Title VI of the Clean Air Act. Recycling and emission reduction standards are applicable when triggered by refrigerant handling activities at the facility. Compliance with program requirements is assured via audits of facility records and compliance certification by the responsible official.

**G8. Permit Renewal****WAC 173-401-710(1)**

An Air Operating Permit has an effective term of 5 years from the date of final issuance. Pursuant to WAC 173-401-710(1), the Permit specifies a date by which a renewal application is required to be submitted to SWCAA.

A preliminary renewal application for this facility must be submitted no later than 12 months prior to permit expiration. A complete renewal application must be received no later than 6 months prior to permit expiration. Early submittal of a preliminary application is intended to provide SWCAA with the opportunity to review the application for completeness and allow the permittee sufficient time to amend the application, if necessary, prior to the final submission date.

**G10. Reporting of Emission of Greenhouse Gases****WAC 173-441**

WAC 173-441 requires owners and operators to quantify and report greenhouse gas emissions from applicable source categories if actual emissions from their facility are ten thousand metric tons CO<sub>2</sub>e or more per year. Annual greenhouse gas emissions from this facility are greater than ten thousand tons so the facility is subject to the reporting program. The greenhouse gas reporting program is administered by Ecology, and all required reports are to be submitted directly to that agency. SWCAA generally receives a copy of each report, but report review and approval of calculation methodology is performed by Ecology. Compliance with program requirements is assured via audits of records submitted to Ecology and compliance certification by the responsible official.

**G11. Climate Commitment Act Program Rule****WAC 173-446**

The Climate Commitment Act program implements the provisions of the greenhouse gas emissions cap and invest program created by RCW 70A.65.060 through 70A.65.210. The cap and invest program establishes a declining cap on greenhouse gas emissions from covered entities consistent with the limits established in RCW 70A.45.020. The program includes provisions to track, verify, and enforce compliance with the cap through the use of compliance instruments. The cap and invest program is administered by Ecology, and all required reports are to be submitted directly to that agency. SWCAA generally receives a copy of each report, but report review and approval is performed by Ecology. Compliance with program requirements is assured via audits of records submitted to Ecology and compliance certification by the responsible official.

**SWCAA 400-036****G14. Portable Sources****SWCAA 400-110(6)**

SWCAA 400-110(6) establishes procedures for approving the operation of portable sources of air emissions that locate temporarily at project sites. These requirements are general statewide standards and apply to all portable sources of air contaminants. Common equipment subject to these conditions include emergency generators, engine-powered pumps, rock crushers, concrete batch plants, and hot mix asphalt plants that operate for a short time period at a site to fulfill the needs of a specific project. Portable sources



exempt from registration under SWCAA 400-101 are also exempt from SWCAA 400-110 and not subject to the portable source requirements. Among those categories listed in SWCAA 400-101 that are exempt are operations with potential to emit less than 1 ton per year of all criteria pollutants other than PM<sub>2.5</sub>, and less than 0.5 tons per year of PM<sub>2.5</sub>.

**WAC 173-400-117**  
**WAC 173-400-720**  
**WAC 173-460**  
**SWCAA 400-072**  
**SWCAA 400-076**  
**SWCAA 400-109**  
**SWCAA 400-110**  
**SWCAA 400-820**

### **G15. New Source Review**

Construction or modification of an air pollution source is subject to review to ensure that applicable emission standards are met and appropriate control technology is employed. The program under which a new source or modification is reviewed depends on the type and quantity of potential air emissions associated with the project. New sources or modifications meeting the definition of a 'major stationary source' and located in attainment or unclassified areas are subject to review under the Prevention of Significant Deterioration (PSD) program administered by the Department of Ecology. New sources or modifications meeting the definition of a 'major stationary source' and located in a nonattainment area and minor (area) sources are subject to review under SWCAA's new source review program. New sources or modification of existing sources that increase the emission of toxic air pollutants are subject to review under SWCAA's toxic air pollutant program, which implements the February 14, 1994 version of WAC 173-460.

### **G20. Outdoor Burning**

**SWCAA 425**

WAC 173-441 requires owners and operators to quantify and report emissions of greenhouse gases from

SWCAA has established a program to implement the limited burning policy authorized by sections 743 through 765 of the Washington Clean Air Act (Chapter 70.94 RCW) and other provisions of the act that pertain to outdoor burning. The limited burning policy requires the Agency to reduce outdoor burning to the greatest extent practical, establish a permit program for limited burning that requires permits for most types of outdoor burning, and encourage development of reasonable alternatives to burning. Requirements of the program are applicable when open burning is conducted at the facility. Compliance with program requirements is assured via audits of burn program records and compliance certification by the responsible official.

## **V. EXPLANATION OF OPERATING TERMS AND CONDITIONS**

### **Reqs 1-8 General Standards for Maximum Emissions**

**SWCAA 400-040**

Req 1 through Req 8 incorporate general maximum emission standards for various air contaminants established in SWCAA 400-040. These standards apply to all emission units at the source, both EU and IEU. Pursuant to WAC 401-530(2)(c), the permit does not contain any testing, monitoring, recordkeeping, or reporting requirements for affected IEUs except those specifically identified by the underlying requirements. General monitoring provisions have been created for EUs under 'gap-filling' to provide reasonable compliance assurance.

Req 7 prohibits any concealment or masking. At present, the Permittee does not operate any equipment capable of masking emissions, therefore monitoring is limited to semi-annual compliance certification.

**Req 9 Emission Standards for Combustion and Incineration Units SWCAA 400-050**

Req 9 incorporates the particulate matter emission limit for combustion or incineration units established in SWCAA 400-050(1). This requirement applies to all combustion and incineration units at the source, both EUs and IEUs. Pursuant to WAC 401-530(2)(c), the permit does not contain any testing, monitoring, recordkeeping, or reporting requirements for affected IEUs except those specifically identified by the underlying requirements. General monitoring provisions have been created for EUs under 'gap-filling' to provide reasonable compliance assurance.

**Req 10 Emission Standards for General Process Units SWCAA 400-060**

Req 10 incorporates a particulate matter emission limit for general process units established in SWCAA 400-060. This requirement applies to all general process units at the source, both EUs and IEUs. Pursuant to WAC 401-530(2)(c), the permit does not contain any testing, monitoring, recordkeeping, or reporting requirements for affected IEUs except those specifically identified by the underlying requirements. General monitoring provisions have been created for EUs under 'gap-filling' to provide reasonable compliance assurance.

**Emission Standards for Certain Source Categories**

**Req 11 Abrasive Blasting SWCAA 400-070(8)**

Req 11 incorporates general limitations and work practice requirements for abrasive blasting that apply to any construction and/or maintenance activities at the facility that involve abrasive blasting. General monitoring provisions have been created under 'gap-filling' to provide reasonable compliance assurance with applicable requirements.

**Req 12 Operation of Pollution Control Equipment ADP 22-3528 Condition 9**

Req 12 incorporates a general permit term requiring approved pollution control equipment to be operated at all times during which the associated process equipment is in operation. Approval conditions for emission units equipped with dedicated control equipment generally assume that the control equipment is employed at all times to minimize air pollutant emissions. Bypassing or turning off control equipment circumvents the approved operating scheme. This requirement prohibits such action by the permittee. Compliance with this requirement is assured via compliance certification by the responsible official.

**Req 13 Visible Emission Limits ADP 22-3528 Condition 6**

Req 13 contains visible emissions limitations for all of the facility's emission units. The limits were established through new source review and reflect the operating scheme proposed by the permittee at the time of equipment installation. The visible emissions limit for the emergency generator allows an exception during startup periods due to the operating limitations of the generator's diesel engine. General monitoring provisions have been created under 'gap-filling' to provide reasonable compliance assurance with applicable requirements.

**40 CFR 60.11(d)**

**40 CFR 60.4333**

**Req 14 Good Air Pollution Control Practice SWCAA 400-115**

Req 14 requires the permittee to maintain and operate affected equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times. The underlying requirements are general NSPS provisions that specifically apply to the Combustion Turbine since it is the only unit at the facility

subject to a 40 CFR Part 60 performance standard. Compliance with this requirement is assured via compliance certification by the responsible official.

	<b>40 CFR 60.4320</b>
<b>Standards of Performance for Stationary</b>	<b>40 CFR 60.4330</b>
<b><u>Reqs 15, 28 Combustion Turbines</u></b>	<b><u>SWCAA 400-115</u></b>

40 CFR 60, Subpart KKKK establishes NO<sub>x</sub> and SO<sub>2</sub> emission standards for stationary gas turbines that have a heat input at peak load greater than 10.7 gigajoules per hour, and are constructed, modified or reconstructed after February 18, 2005. The Combustion Turbine is subject to this regulation and classified as a new, natural gas fired, electricity generating turbine with a peak load heat input of > 850 MMBtu/hr.

40 CFR 60.4320 requires affected facilities to comply with the applicable NO<sub>x</sub> emission limits from Table 1 of Subpart KKKK, which vary based on turbine size, function, fuel type, and geographic location. The NO<sub>x</sub> emission limits applicable to the Combustion Turbine are 15 ppm @ 15% O<sub>2</sub> or 0.43 lb/MW-hr. Unit compliance is based on a 30 operating day rolling average (combined cycle configuration) and includes periods of startup and shutdown. Compliance is demonstrated using emission data from a CEMS.

40 CFR 60.4330 requires affected facilities to comply with an SO<sub>2</sub> emission limit of 0.90 lb SO<sub>2</sub>/MWh gross output or 0.060 lb SO<sub>2</sub>/MMBtu heat input. The permittee generally demonstrates compliance with the 0.060 lb SO<sub>2</sub>/MMBtu heat input standard based on periodic sampling of fuel sulfur content.

<b><u>Reqs 16-21 Combustion Turbine BACT Limits</u></b>	<b><u>ADP 22-3528 Conditions 1-2</u></b>
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Req 16 through Req 21 contain BACT emission limits established for the Combustion Turbine via New Source Review. The emission limits apply to emissions of criteria pollutants, VOC and NH<sub>3</sub>. Emissions of all affected pollutants are subject to limits on maximum mass emission rate. Emissions of NO<sub>x</sub>, CO and NH<sub>3</sub> are subject to limits on maximum emission concentration. Compliance with this requirement is demonstrated with a combination of operational monitoring, CEMS data, fuel sampling, and periodic emission testing.

<b><u>Req 22 Short Term Emission Limit Exemption</u></b>	<b><u>ADP 22-3528 Condition 3</u></b>
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Req 22 is an exemption clause that applies to the short term emission limits established in Req 16-21. Any emission limit with an averaging time of 24-hr or less is suspended during periods of combustion turbine startup, shutdown, and approved periods of turbine adjustment/tuning. There are significant physical limitations on the ability of the combustion turbine and associated control equipment to meet specified performance levels during these transitory operational periods. Suspension of short term emission limits is intended to reasonably accommodate the physical limitations of the equipment. Suspension is only allowed for limited periods of time depending on the operating condition of the steam turbine, which has more significant physical limitations during startup and shutdown than the combustion turbine. In no case, are emission limits suspended for greater than 6 hours during startup or 30 minutes during shutdown. Compliance with this requirement is demonstrated with operational records from the Combustion Turbine/HRSG.

<b><u>Req 23 NO<sub>x</sub> Emission Control System Criteria</u></b>	<b><u>ADP 22-3528 Condition 11</u></b>
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Req 23 incorporates minimum design requirements for the NO<sub>x</sub> emission control system in use with the Combustion Turbine/HRSG. The design requirements were established via New Source Review based on the facility's original design proposal. Unless modified at some point in the future, the currently installed equipment configuration meets the requirement as demonstrated by periodic emission testing. Compliance with this requirement is assured via compliance certification by the responsible official.

**NO<sub>x</sub> Emission Control System****Reqs 24-25 Operating Requirements****ADP 22-3528 Conditions 12-13**

Req 24 and Req 25 incorporate operating restrictions for the NO<sub>x</sub> control system in use with the Combustion Turbine/HRSG. The restrictions were established in the facility's original construction permit and were intended to maintain ongoing NO<sub>x</sub> emission concentrations at the lowest level practical. Compliance with these requirements is demonstrated via operational monitoring and CEMS data.

At the time the facility was originally permitted, operational data from similar facilities indicated that NO<sub>x</sub> control systems were typically operated at, or near, the NO<sub>x</sub> emission limit of the associated combustion turbine rather than at the highest practical level of control. In the interest of minimizing emissions on an ongoing basis, the permittee is required to operate the NO<sub>x</sub> control system at the highest practical level of control on a continuing basis. The highest practical level of control is determined by conducting annual emission trials to demonstrate the contemporaneous capabilities of the NO<sub>x</sub> control system. Based on information from the trials, the permittee selects operating parameters to minimize the arithmetic sum of NO<sub>x</sub> and NH<sub>3</sub> emissions concentrations.

Control system efficiency generally degrades as the catalyst ages and actual emission concentrations (NO<sub>x</sub>/NH<sub>3</sub>) are expected to rise over time until the catalyst bed degrades enough to require replacement. To ensure that catalyst replacement is performed in a timely fashion, the permittee is required to take affirmative action to address performance degradation whenever the control system can no longer maintain NH<sub>3</sub> emission concentrations below 5.0 ppmv. The action taken is left to the permittee's discretion, and will vary depending upon the specific situation.

**Req 26 Ammonia Content Limit****ADP 22-3528 Condition 15**

Req 26 limits the ammonia content of aqueous ammonia used in the Combustion Turbine's ammonia injection system to less than 20%. The primary purpose of this requirement is to keep the facility from becoming subject to the provisions of the Chemical Accident Prevention program (40 CFR 68). Aqueous ammonia with a concentration of less than 20% ammonia is not regulated under that program. Compliance with this requirement is assured by maintaining material delivery records.

**Req 27 Acid Rain Standard Requirements****40 CFR 72.9(c)(1)  
WAC 173-406-106(3)(a)**

Req 27 requires the facility to hold SO<sub>2</sub> allowances not less than the total annual emissions in tons of SO<sub>2</sub> from the Combustion Turbine beginning with calendar year 2000. This facility is an "affected source" under the Acid Rain Program Mint Farm and does not receive an allocation of allowances. All SO<sub>2</sub> allowances used to meet the facility's program obligations are obtained through open market allowance trading. Compliance with this requirement is assured via compliance certification by the responsible official and review of reports submitted to EPA's Clean Air Markets Division.

**Req 29 Combustion Turbine/HRSG Fuel Limitation****ADP 22-3528 Condition 16**

Req 29 specifies natural gas as the only allowable fuel for the Combustion Turbine/HRSG. This restriction is taken from the original permit application and forms the basis for associated BACT determinations at the time of original approval. Compliance with this requirement is assured via compliance certification by the responsible official.

**Req 30 Cooling Tower Emission Limit** **ADP 22-3528 Condition 4**

Req 30 incorporates a limit on the maximum annual mass emission rate of PM from the Cooling Tower. The emission limit is a BACT limit established via New Source Review based on information submitted in the original permit application for the unit. Compliance with the emission limit is determined based on recorded operation and technical information for Cooling Tower components.

**Reqs 31-32 Emergency Generator Emission Limits** **ADP 22-3528 Conditions 5, 18**

Req 31 incorporates limits on the maximum annual mass emission rate of NO<sub>x</sub>, CO, and PM from Emergency Generator operation. The emission limits are BACT limits established via New Source Review. The emission limits reflect operation for the purposes of testing and emergency use only, consistent with the operating scheme proposed in the original permit application. Compliance with the emission limits is determined based on recorded operation and emission factors from the manufacturer.

Req 32 contains a limit on the maximum fuel sulfur content of fuel oil fired in the Emergency Generator. The fuel sulfur content limit is a BACT limit established via New Source Review. Compliance with this requirement is assured by maintaining fuel delivery records.

**40 CFR 63.6625(f)****Req 33 Emergency Generator Hour Meter** **ADP 22-3528 Condition 17**

Req 33 requires the permittee to equip the Emergency Generator with a non-resettable hour meter. Installation and maintenance of an hour meter is a specific requirement of applicable local and federal regulations. The purpose of the hour meter is provide a reliable record of unit operation that can be used to demonstrate compliance with applicable operational limits. Compliance with this requirement is assured via compliance certification by the responsible official.

**40 CFR 63.6625(h)****40 CFR 63.6640(f)****Reqs 34-36 Emergency Generator Operating Limits** **ADP 22-3528 Condition 17**

Req 34 through Req 36 contain various operational limits applicable to the Emergency Generator. The operational limits restrict overall unit operation and minimize idle and startup periods. The 170 hr/yr limitation in Req 34 is a BACT limit imposed through New Source Review. This restriction of operation was established as part of the original approval action for the unit. The operating limits in Req 35 are taken from the applicable MACT (40 CFR 63, Subpart ZZZZ). The Emergency Generator is classified as an existing emergency CI RICE located at an area source of HAP emissions. Compliance with these requirements is assured by hour meter readings and facility operating records.

**40 CFR 63.6603(a)****40 CFR 63.6605(b)****40 CFR 63.6625(e)****Reqs 37-38 Emergency Generator Operation and Maintenance** **40 CFR 63.6640(a)**

Req 37 and Req 38 contain general requirements for operation and maintenance of the Emergency Generator. The requirements are taken from the applicable MACT (40 CFR 63, Subpart ZZZZ). The Emergency Generator is classified as an existing emergency CI RICE located at an area source of HAP emissions. Req 37 implements operational standards applicable to the diesel engine. As provided for in 40 CFR 63.6625(e), the permittee has opted to implement a facility specific maintenance plan that provides for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. The maintenance plan includes annual inspection and/or replacement of critical engine components. Req 38 contains unit specific requirements taken from Subpart ZZZZ, Table 2d. Compliance with these requirements is assured by facility operating and maintenance records.

## **VI. EXPLANATION OF MONITORING AND RECORDKEEPING TERMS AND CONDITIONS**

The monitoring terms listed below incorporate formal monitoring taken from applicable regulations as well as 'gap-fill' monitoring designed to assure compliance for requirements that do not contain formal monitoring.

### **M1. General - Recordkeeping**

This monitoring section cites recordkeeping requirements drawn from provisions in WAC 173-401-615(2) and ADP 22-3528. Recordkeeping requirements have been separated into sub-categories for easier reference. The Acid Rain Program requires that pertinent records be maintained for at least three years from the date of the record. This period has been extended to five years as required by the general recordkeeping provisions of WAC 173-401-615(2)(c).

### **M2. Continuous Emission Data Recordkeeping**

This monitoring section cites recordkeeping requirements drawn from applicable sections of 40 CFR 75 and ADP 22-3528. The type and format of data to be recorded is specified for operating conditions and emissions of Acid Rain affected units.

### **M3. General - Visible Emissions Monitoring**

This monitoring section is applicable to general requirements drawn from SWCAA 400-040 and ADP 22-3528. The applicable requirements limit visible emissions, but do not establish a specific regime of monitoring or recordkeeping so SWCAA has implemented monitoring requirements under the "gap filling" provisions of WAC 173-401-615.

The monitoring scheme specified by this requirement is designed to provide periodic assurance of compliance, and identify potential visible emission violations in a timely fashion, prompting corrective action when necessary. A monthly inspection frequency is considered adequate to assure compliance with applicable opacity requirements based on this source's history of continued compliance and the fact that operation of the primary emission units at this facility (Combustion Turbine/HRS, Cooling Tower, Emergency Generator) is not likely to cause visible emissions.

### **M4. General - Fugitive Emissions/Fallout Monitoring**

This monitoring section is applicable to general requirements drawn from SWCAA 400-040, SWCAA 400-070, and ADP 22-3528. These requirements do not establish a specific regime of monitoring or recordkeeping so SWCAA has implemented monitoring requirements under the "gap filling" provisions of WAC 173-401-615.

This monitoring requirement is designed to assure compliance through periodic visual inspections of the facility and prompt corrective action. A lack of visual emissions or material accumulation is considered indicative of compliance with the applicable particulate matter emission limits and work practices.

### **M5. General - Particulate Matter Monitoring**

This monitoring section is applicable to PM emission limits taken from SWCAA 400-050 and SWCAA 400-060. These requirements are general standards that do not include a specific regime of monitoring or recordkeeping so SWCAA has implemented monitoring and recordkeeping requirements under the "gap filling" provisions of WAC 173-401-615.

This monitoring requirement is designed to assure compliance through periodic facility inspections and prompt corrective action. Affected equipment is generally in compliance with the applicable emission limits unless the units are experiencing an upset of some type. A visual inspection of each unit while in operation provides a reasonable assurance that the equipment is not experiencing an upset. If evidence of an upset is observed, corrective action requirements result in the affected unit being promptly repaired or taken out of operation.

#### **M6. Complaint Monitoring**

This monitoring section is applicable to general requirements from SWCAA 400-040 and ADP 22-3528. These requirements do not directly establish any specific regime of monitoring or recordkeeping so SWCAA has implemented monitoring requirements under the "gap filling" provisions of WAC 173-401-615.

Most of the affected applicable requirements prohibit unacceptable impacts on neighboring properties and/or surrounding populations. While many of the prohibited impacts might be observed from the facility itself, compliance with all provisions cannot be assured by onsite observations alone (e.g., offsite odor impact). Therefore, this monitoring scheme relies on input from affected parties. The monitoring is designed to assure compliance through prompt complaint response and corrective action.

#### **M7. Compliance Certification**

This monitoring section is applicable to requirements that have one-time applicability or are primarily related to equipment design or installation. There are few, if any, operational records relevant to demonstrating compliance. SWCAA relies upon facility records and compliance certification by the responsible official to provide compliance assurance.

#### **M8. Combustion Turbine/HRSG - Operations Monitoring**

The applicable requirements cited in this monitoring section are requirements from 40 CFR 60, 40 CFR 75, and ADP 22-3528. The affected requirements primarily involve monitoring and recording of operational parameters and CEMS data for the Combustion Turbine/HRSG. Calibration, audit, and maintenance activities related to the CEMS are also recorded under this monitoring provision. The information collected by this monitoring provision is used directly in calculating hourly emissions from the Combustion Turbine/HRSG and assuring compliance with applicable emission limits.

#### **M9. Combustion Turbine/HRSG - SO<sub>2</sub>, VOC, and PM Emission Monitoring**

The applicable requirements cited in this monitoring section are from 40 CFR 60, 40 CFR 75, SWCAA 400-040, and ADP 22-3528. The section is intended to assure compliance with SO<sub>2</sub>, PM, and VOC emission limits applicable to the Combustion Turbine/HRSG.

SO<sub>2</sub> emissions are quantified by calculating hourly emissions based on recorded heat input and emission factors derived from the results of periodic fuel sulfur monitoring. The permittee has also opted to comply with the provisions of 40 CFR 75.11(d) by using the procedures in 40 CFR 75, Appendix D.

PM and VOC emissions are quantified by calculating hourly emissions based on recorded heat input and the most recent emission test data available expressed in units of lb/MMBtu.

#### **M10. Combustion Turbine/HRSG - NO<sub>x</sub>, CO, and NH<sub>3</sub> Continuous Emissions Monitoring**

This monitoring section is based on requirements from ADP 22-3528 Conditions 14 and 28 and Appendix B. The primary intent of the monitoring is to assure compliance with applicable emission limits from ADP 22-3528 Conditions 1 and 2. In addition, the specified monitoring fulfills applicable monitoring requirements from 40 CFR 75 and 40 CFR 60.4340 through the installation and maintenance of a CEMS for NO<sub>x</sub>/CO.

NO<sub>x</sub> emissions are quantified by calculating hourly emissions based on recorded heat input and CEMS data expressed in units of lb/MMBtu. The emission calculations are consistent with the methodology required for NO<sub>x</sub> calculations by 40 CFR 75.12 (40 CFR 75, Appendix F). ADP 17-3230, Appendix B requires the NO<sub>x</sub> CEMS to be maintained in accordance with the specifications of 40 CFR 75 and 40 CFR 60, Appendices B (Performance Specification 2) and F.

CO emissions are quantified by calculating hourly emissions based on recorded heat input and CEMS data expressed in units of lb/MMBtu. The emission calculations are consistent with the methodology in Equation 19-1 of 40 CFR 60, Appendix A. ADP 17-3230, Appendix B requires the CO CEMS to be maintained in accordance with the specifications of 40 CFR 60, Appendices B (modified Performance Specification 4A) and F.

NH<sub>3</sub> emissions are quantified by calculating hourly emissions based on recorded emission concentration (ppmv) and calculated stack flowrate. Stack flowrate is calculated using EPA Method 19 fuel factors and recorded heat input.

#### **M11. Combustion Turbine/HRSG - Emission Testing**

This monitoring section is based on requirements from ADP 22-3528 Condition 27 and Appendix A. The purpose of this testing is to periodically quantify emissions of NO<sub>x</sub>, CO, NH<sub>3</sub>, PM, and VOC from the combustion turbine exhaust stack and to demonstrate compliance with applicable requirements.

The permittee is required to conduct periodic emission testing in accordance with Appendix A of the Permit. The testing protocol requires permittee to operate at base load with duct burners firing during the required testing. The permittee must emission test for NO<sub>x</sub>, CO, and NH<sub>3</sub> on an annual basis. Emission testing for VOC and PM must be performed every 5 years. Initial emission testing for all affected pollutants was conducted on February 19-20, 2008.

#### **M12. Combustion Turbine/HRSG - Startup and Shutdown Emissions**

This monitoring section is intended to identify all periods of Combustion Turbine/HRSG startup and shutdown and quantify associated air emissions. Identification of each period of startup and shutdown serves as the basis for confirming compliance with applicable time limitations. The short term emission limits established in ADP 22-3528 for the Combustion Turbine/HRSG do not apply during periods of startup and shutdown, but air emissions during these events are still counted when determining compliance with applicable long term (annual) emission limits. Startup or shutdown emissions may be outside the measurement range of the corresponding CEMS, which may preclude the collection of validated emission data. In such cases, data substitution needs to be used to quantify emissions.

#### **M13. Combustion Turbine/HRSG - NO<sub>x</sub> Emission Control System Trials**

This monitoring section is based on requirements from ADP 22-3528 Condition 29 and Appendix C. The permittee is required to conduct emission trials for the Combustion Turbine/HRSG to establish the contemporary relationship between NO<sub>x</sub> and NH<sub>3</sub> emission concentrations over a range of operational conditions. Emission trials are to be conducted annually, no later than the end of the first calendar quarter.

The emission trials are intended to support compliance with ADP 22-3528 Condition 12, which requires the permittee to operate the NO<sub>x</sub> control system for the combustion/HRSG in such a manner as to minimize the arithmetic sum of NO<sub>x</sub> and NH<sub>3</sub> emission concentrations. Monitoring the performance of the NO<sub>x</sub> control system over a range of targeted NO<sub>x</sub> emission levels allows the facility to quantify corresponding NH<sub>3</sub> slip as well as identify age/use related degradation of the system capabilities.



**M14. Cooling Tower - Emission Monitoring**

This monitoring section is based on requirements from ADP 22-3528 Condition 31. Permittee is required to record water circulation rate and hours of operation as well as periodically determine the Total Dissolved Solids (TDS) level of the cooling tower water. PM emissions are quantified by calculating monthly emissions based on recorded operation, circulation rate and tested solids content.

**M15. Emergency Generator - Emission Monitoring**

This monitoring section is drawn from 40 CFR 63, Subpart ZZZZ and ADP 22-3528 Condition 26. Periodic testing is not required for this unit due to its status as emergency use only. Unit operation and maintenance must be documented in accordance with 40 CFR 63.6655 and 63.6660. Compliance with emission limits from ADP 22-3528 is demonstrated based on recorded hours of operation and emission factors taken from the associated Technical Support Document.

To assure compliance with applicable SO<sub>2</sub> and fuel sulfur limitations, the permittee is required to maintain records of the sulfur content of fuel burned in the diesel engine. Fuel supplier certifications may be used in lieu of direct testing.

**M16. Combustion Turbine/HRSG – NH<sub>3</sub> Concentration Monitoring**

This monitoring section is based on requirements from ADP 22-3528 Condition 25. The NO<sub>x</sub> emission control system for the Combustion Turbine/HRSG uses ammonia as an input to the catalyst system. The permittee uses aqueous ammonia for this purpose, and has opted to avoid the Risk Management Plan requirements of 40 CFR 68 by limiting the concentration of aqueous ammonia stored and used onsite to less than the exemption threshold of 20% by weight (40 CFR 68.130). This limitation is formalized as a permit limit in Req 26 (ADP 22-3528 Condition 15). 40 CFR Part 68 does not require any specific monitoring to substantiate compliance with the exemption threshold so SWCAA has implemented monitoring requirements under the "gap filling" provisions of WAC 173-401-615 to assure compliance. The permittee is required to record the ammonia concentration of each material shipment received by the facility to demonstrate that only aqueous ammonia with a concentration of less than 20% is in use.

**VII. EXPLANATION OF REPORTING TERMS AND CONDITIONS****R1. Deviations from Permit Conditions**

This reporting section is based on requirements in WAC 173-401-615(3), SWCAA 400-107, and ADP 22-3528 Conditions 34-35 and 37. Reporting timelines vary depending on the type of deviation involved, as follows :

- General deviation reports - No later than 30 days following the end of the month of discovery (WAC 173-401-615(3), ADP 22-352 Condition 34).
- Deviations for which the permittee wishes to claim excess emissions as unavoidable – No later than 48 hours after discovery (SWCAA 400-107, ADP 22-3528 Condition 35).
- Deviations that pose a potential threat to human health and safety – No later than 12 hours after discovery (WAC 173-401-615(3), ADP 22-3528 Condition 35).
- Combustion turbine/HRSG startup and shutdown events that exceed the time periods specified in Req 22 – No later than 24 hours after occurrence (ADP 22-3528 Condition 37).

Permit deviations are also to be identified in the subsequent quarterly report. In all cases, SWCAA may request a full written report of any deviation if determined to be necessary.

## **R2. Complaint Reports**

This reporting section is based on requirements from WAC 173-401-615(3) and SWCAA's definition of "prompt" for reporting of complaints. The intent is to ensure a timely and effective response to complaints by either the facility or SWCAA.

## **R3. Quarterly Reports**

This reporting section is based on requirements from WAC 173-401-615(3) and the Acid Rain Program. WAC 173-401-615(3) requires monitoring records and certification to be reported at least semi-annually, but quarterly reporting of specified monitoring records is required by the Acid Rain Program and ADP 22-3528. Consequently, Section R3 requires quarterly reporting. The type of data to be reported, and the format by which it is to be reported, is specified as "General Information" and "Acid Rain Data". The "General Information" elements are taken from WAC 173-401-615(3) and ADP 22-3528 Condition 36. The "Acid Rain" elements are derived from requirements found in 40 CFR 75.64.

## **R4. Semi-Annual Reports**

This reporting section is based on requirements from WAC 173-401-615(3) and 40 CFR 63.6650(f). The permittee must submit a list of all deviations from permit conditions that have occurred in the preceding semi-annual period, and a Responsible Official must certify all reports previously submitted during the preceding semi-annual period if they have not otherwise been certified. No semi-annual report is necessary if all required information has been included in corresponding quarterly reports.

## **R5. Annual Compliance Certification**

The permittee is required to report and certify compliance with all permit terms and conditions on an annual basis pursuant to SWCAA 401-630(5) and 40 CFR 72.90 (for the Combustion Turbine/HRSG). Compliance certification must include Acid Rain Program requirements. Since 2005, a separate Acid Rain Program certification has not been required. The permittee is required by 40 CFR 60.11(g) to consider credible evidence when submitting compliance certifications for NSPS affected units (Combustion Turbine/HRSG).

## **R6. Emission Inventory Reports**

This reporting requirement is drawn from SWCAA 400-105 and ADP 22-3528 Condition 33. The permittee is required to submit an emissions inventory report to SWCAA by March 15<sup>th</sup> for the previous calendar year. A complete emissions inventory includes quantification of criteria pollutant, hazardous air pollutant, and toxic air pollutant emissions from all emission units at the facility. SWCAA's Executive Director may extend the submittal date by up to 60 days, pursuant to SWCAA 400-105(1).

## **R7. Combustion Turbine/HRSG - Fuel Sulfur Content Reports**

This reporting requirement is taken directly from ADP 22-3528 Condition 38. The permittee is required to submit fuel sulfur content monitoring results (ADP 22-3528 Condition 30) to SWCAA within 45 days of test completion.

## **R8. Combustion Turbine/HRSG - Emission Test Plans/Reports**

This reporting requirement is taken from ADP 22-3528 Condition 38 and Appendices A and B. The permittee is required to notify SWCAA in advance of all required emission testing in order to allow agency representatives an opportunity to observe testing. A comprehensive test plan must be submitted prior to testing to ensure the correct test protocol will be used. Emission test results and contemporaneous operational data must be reported to SWCAA within 45 days of test completion.

**R9. Combustion Turbine/HRSG - NO<sub>x</sub> Emission Trial Reports**

This reporting requirement is taken from ADP 22-3528 Condition 38 and Appendix C. Emission test results and associated operational data must be reported to SWCAA within 45 days of test completion.

**R10. General Acid Rain Reports**

This reporting requirement incorporates general Acid Rain reporting requirements found in 40 CFR 75.60, 75.61 and 75.63. Advance notification within specified time periods is required for the date each unit commences commercial operation, CEMS/COMS certification and recertification tests, and relative accuracy test audits for Acid Rain affected units. The reports identified in 40 CFR 75.61 and 75.63 concern notification and application for CEMS certification and recertification for affected units. An application for certification or recertification is required for Acid Rain affected units. Each certification application is to be submitted in electronic or paper format as specified by the EPA Administrator.

**VIII. EXPLANATION OF FUTURE REQUIREMENTS**

No future requirements have been identified.

**IX. EXPLANATION OF OBSOLETE REQUIREMENTS****NSPS Notification and Record Keeping****40 CFR 60.7**

The Combustion Turbine/HRSG is subject to an NSPS regulation (40 CFR 60, Subpart KKKK), and must provide notifications as provided in 40 CFR, Section 60.7. These requirements have been met as described below.

Combustion Turbine

Notification of construction:	Submitted via letter dated April 26, 2006
Notification of anticipated startup:	Submitted via letter dated August 28, 2007
Notification of actual startup:	Submitted via letter dated September 16, 2007

**NSPS Initial Performance Test – Subpart KKKK****40 CFR 60.8**

The Combustion Turbine at this facility is subject to the NO<sub>x</sub> standard described in 40 CFR 60.332. Therefore, the unit is also subject to the performance testing requirements of 40 CFR, Section 60.8. These requirements have been met as described below.

Initial source test:	Performed February 19-20, 2008
Source test report:	Received by SWCAA on April 4, 2008

**General Acid Rain Recordkeeping Provisions****40 CFR 75.50**

The general Acid Rain recordkeeping provisions of 40 CFR 75.50 are no longer valid as of January 1, 1996, and are replaced by the general recordkeeping provisions of 40 CFR 75.54. The Acid Rain Program provided an optional set of recordkeeping requirements with only slightly different provisions prior to January 1, 1996, but disallows their use from January 1996 onward.

**Acid Rain Notifications****40 CFR 75.61**

The Combustion Turbine is subject to the requirements of 40 CFR Part 75.61 "Notifications". These requirements have been met as described below.

Actual startup date:	SWCAA notified August 28, 2007 (startup - 9/16/07)
Initial CEMS certification:	SWCAA notified January 16, 2008 (test plan submittal)
Initial CEMS certification test:	Completed – March 5, 2008

**Acid Rain Monitoring Plan****40 CFR 75.62**

The Combustion Turbine is subject to the requirements of 40 CFR, Section 75.62 "Monitoring Plan". The initial monitoring plan was submitted to SWCAA and EPA on November 20, 2007.

**Regulatory Orders and Air Discharge Permits**

SWCAA has issued a total of eight air discharge permits to Mint Farm since initial proposal. As identified in Section XI below, only the newest air discharge permit (ADP 22-3528) is active at this time. Approval conditions in the previous seven permits have been superseded or have become obsolete as described below.

**ADP 17-3230** – Issued May 25, 2017. Superseded in its entirety by ADP 22-3528.

**ADP 10-2929** – Issued April 29, 2010. Superseded in its entirety by ADP 17-3230.

**ADP 04-2571R2** – Issued February 25, 2008. Superseded in its entirety by ADP 10-2929.

**ADP 04-2571R1** – Issued November 28, 2006. Superseded in its entirety by ADP 04-2571R2.

**ADP 04-2571** – Issued September 16, 2004. Superseded in its entirety by ADP 04-2571R1.

**ADP 01-2342R1** – Issued on May 6, 2002. Expired upon lapse of an 18 month construction window.

**ADP 01-2342** – Issued on June 4, 2001. Superseded in its entirety by ADP 01-2342R1.

**X. RESPONSE TO COMMENTS****Response to Public Comments**

This section to be completed after the public comment period concludes.

**Response to EPA Comments**

This section to be completed after EPA's review of the proposed permit.

**XI. FACILITY HISTORY****Permit/Regulatory Order Actions**

The following table lists each Air Discharge Permit and/or Consent Order issued for this facility. Permits or Orders in italics contain no active requirements. The requirements may have been superseded, may have been of limited duration, or affected equipment may have been removed.

<b><u>Permit Number</u></b>	<b><u>Permit Application</u></b>	<b><u>Issue Date</u></b>	<b><u>Description</u></b>
22-3528	CO-1054	July 27 2022	This permitting action: <ul style="list-style-type: none"> <li>Modified the existing fuel sulfur monitoring protocol to reduce the number of required samples from three to one.</li> </ul>
<b><u>Obsolete/Superseded</u></b>			
<i>17-3230</i>	<i>CO-975</i>	<i>May 25 2017</i>	<i>This permitting action:</i> <ul style="list-style-type: none"> <li><i>Approved installation of General Electric's Advance Gas Path Upgrade on the Combustion Turbine.</i></li> <li><i>Approved installation of General Electric's Dry Low NOx 2.6+ Combustion Upgrade on the Combustion Turbine.</i></li> <li><i>Approved installation of new attemperation piping and instrumentation changes in the HRSG.</i></li> <li><i>Approved replacement of the first compressor row blades in the Combustion Turbine with upgraded components.</i></li> <li><i>Removed Fuel Preheater emission unit.</i></li> </ul>
<i>10-2929</i>	<i>CO-888</i>	<i>April 4 2010</i>	<i>This permitting action:</i> <ul style="list-style-type: none"> <li><i>Removed Fire Pump emission unit.</i></li> <li><i>Clarified Combustion Turbine/HRSG startup and shutdown provisions.</i></li> <li><i>Revised NH<sub>3</sub> monitoring requirements and NO<sub>x</sub>/NH<sub>3</sub> minimization protocol.</i></li> </ul>
<i>04-2571R2</i>	<i>CO-843</i>	<i>February 25 2008</i>	<i>This permitting action:</i> <ul style="list-style-type: none"> <li><i>Revised equipment specifications for the previously approved emergency diesel generator.</i></li> </ul>
<i>04-2571R1</i>	<i>CO-821</i>	<i>November 11 2006</i>	<i>This permitting action:</i> <ul style="list-style-type: none"> <li><i>Approved installation of an 8.7 MMBtu/hr fuel pre-heater.</i></li> </ul>
<i>04-2571</i>	<i>CO-777</i>	<i>September 16 2004</i>	<i>This permitting action:</i> <ul style="list-style-type: none"> <li><i>Renewed project approval as originally proposed in ADP Application CO-724.</i></li> </ul>

<u>Permit Number</u>	<u>Permit Application</u>	<u>Issue Date</u>	<u>Description</u>
01-2342R1	CO-724	May 6 2002	<i>This permitting action:</i> <ul style="list-style-type: none"> <li>• <i>Approved the addition of duct firing and an increase in nominal plant rating to 319 MW.</i></li> <li>• <i>Permit was voided after expiration of 18 month construction window.</i></li> </ul>
01-2342	CO-689	June 4 2001	<i>This permitting action:</i> <ul style="list-style-type: none"> <li>• <i>Approved construction of a combined cycle combustion turbine power plant with nominal plant rating of 248 MW.</i></li> </ul>

### **Title V Permit Actions**

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#### **Renewal Permit (SW08-15-R2)**

Renewal permit application received:	May 20, 2022
Permit application deemed complete:	June 15, 2022
Permit application sent to EPA:	June 15, 2022
Draft permit issued:	March 1, 2023
Proposed permit issued:	TBD
Final permit issued:	TBD

#### **Renewal Permit (SW08-15-R1)**

Renewal permit application received:	June 12, 2015
Permit application deemed complete:	July 2, 2015
Permit application sent to EPA:	July 2, 2015
Draft permit issued:	February 22, 2018
Proposed permit issued:	April 11, 2018
Final permit issued:	June 11, 2018

#### **Initial Permit (SW08-15-R0)**

Renewal permit application received:	September 9, 2008
Permit application deemed complete:	September 19, 2008
Permit application sent to EPA:	September 24, 2008
Draft permit issued:	April 25, 2011
Proposed permit issued:	June 7, 2011
Final permit issued:	June 13, 2011

**Compliance History**

The following Notices of Violation (NOV) or Notices of Correction (NOC) were issued during the last permit term (June 11, 2018 to present):

<u>NOC/NOV</u>	<u>Issue Date</u>	<u>Description</u>
10384	March 9 2021	NOX and CO emissions in excess of applicable emission limits in violation of SW08-15-R1, Req 15 and Req 16. This event was caused by the steam turbine tripping offline in conjunction with the loss of the associated Bentley Nevada vibration system. This event was evaluated as unavoidable and excusable from civil penalties per the criteria of SWCAA 400-107(2) and found to qualify according to the criteria of SWCAA 400-107(2)(e) for excess emissions that occur during upsets or malfunctions not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition. SWCAA did not issue a civil penalty.
6148	July 23 2019	CO emissions in excess of applicable limits in violation of Air Discharge Permit (ADP) SW08-15-R1, Requirement 17. This event occurred while the combustion turbine was transitioning to a low load operating mode. This event was evaluated as unavoidable and excusable from civil penalties per the criteria of SWCAA 400-107(2) and found to qualify according to the criteria of SWCAA 400-107(2)(d) for excess emissions that occur during upsets or equipment malfunctions considered unavoidable. SWCAA did not issue a civil penalty.

**XII. EXPLANATION OF APPENDICES****Appendix A Combustion Turbine/HRSG - Emission Testing Requirements**

Appendix A contains an emission testing protocol to be used when conducting periodic testing of the Combustion Turbine/HRSG. The testing protocol is taken directly from ADP 22-3528 Appendix A *Emission Testing Requirements Combustion Turbine/HRSG*.

**Appendix B Combustion Turbine/HRSG - Continuous Monitoring Requirements**

Appendix B contains performance specifications for the continuous monitoring systems installed on the Combustion Turbine/HRSG. The specifications are applicable to the CEMS for NO<sub>x</sub>, O<sub>2</sub>, and CO, and the PEMS for NH<sub>3</sub>. The performance specifications are taken directly from ADP 22-3528 Appendix B *Continuous Monitoring Requirements Combustion Turbine/HRSG*.

**Appendix C Combustion Turbine/HRSG - Fuel Sulfur Monitoring Requirements**

Appendix C contains a monitoring protocol to be used in determining the fuel sulfur content of fuel gas fired in the Combustion Turbine/HRSG. The testing protocol is taken directly from ADP 22-3528 Appendix D *Fuel Sulfur Monitoring Requirement Combustion Turbine/HRSG*.

**Appendix D Combustion Turbine/HRSG - NO<sub>x</sub> Control System Emission Trials**

Appendix D contains a testing protocol to be used in determining the contemporaneous relationship between NO<sub>x</sub> and NH<sub>3</sub> emission concentrations over a range of operating conditions in the Combustion Turbine/HRSG. The monitoring protocol is taken directly from ADP 22-3528 Appendix C *NO<sub>x</sub> Control System Emission Trials Combustion Turbine/HRSG*.

**Appendix E      Acid Rain Permit No. SW-ARP-3-R2**

Appendix E contains Mint Farm's renewal Acid Rain Application and Permit. The renewal permit (SW-ARP-3-R2) will be issued concurrent with this Air Operating Permit, and will remain effective through the expiration date of this Air Operating Permit.