# Clark Public Utilities
# River Road Generating Plant

## Title V Basis Statement

## July 11, 2024

Southwest Clean Air Agency
11815 NE 99th Street, Suite 1294
Vancouver, WA 98682-2322
Telephone: (360) 574-3058

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| | |
|---|---|
| AIR OPERATING PERMIT: | SW99-9-R4 |
| PLANT SITE: | 5201 NW Lower River Road<br>Vancouver, WA 98660 |
| PERMIT ENGINEER: | Wess Safford, AQ Engineer |
| REVIEWED BY: | Clinton Lamoreaux, Chief Engineer<br>Uri Papish, Executive Director |

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# I. GENERAL INFORMATION AND CERTIFICATION

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|---|---|
| **Company Name** | Clark Public Utilities |
| **Facility Name** | River Road Generating Plant |
| **Facility Address** | 5201 NW Lower River Road<br>Vancouver, WA 98660 |
| **Mailing Address** | 5201 NW Lower River Road<br>Vancouver, WA 98660 |
| **Parent Company/Address** | Clark Public Utilities<br>5201 NW Lower River Road<br>Vancouver, WA 98660 |
| **Unified Business Identification** | 065002678 |
| **Standard Industrial Classification** | 4911 |
| **North American Industrial Classification System** | 221112 |
| **Responsible Official** | Terry Toland, Energy Resources Manager |

**Basis for Title V Applicability**
The facility is subject to the Title V Air Operating Permit program because it is an affected source under the Title IV Acid Rain program. The River Road Generating Plant is not a major source as defined in WAC 173-401-200(19).

**Facility-wide Potential To Emit Summary**

| Pollutant | Emissions (tpy) |
|---|---|
| Nitrogen oxides | 96.83 |
| Carbon monoxide | 87.90 |
| Volatile organic compounds | 29.41 |
| Sulfur dioxide | 41.91 |
| Particulate Matter | 79.26 |
| Particulate Matter (<10 micron) | 79.26 |
| Particulate Matter (<2.5 micron) | 79.26 |
| Combined HAPs | 7.43 |

**Current Permitting Action:**
The purpose of the current permitting action is to renew the Title V permit for this facility. SWCAA has not issued any New Source Review permits for this facility and no significant physical changes have been made to facility equipment since the last Title V Permit was issued.

| AOP SW99-9-R4 | |
|---|---|
| Permit Application Due: | October 3, 2023 |
| Permit Application Submitted: | March 7, 2023 |
| Permit Application Complete: | April 5, 2023 |
| Permit Application Sent to EPA: | April 5, 2023 |
| Draft Permit Issued: | March 13, 2024 |
| Proposed Permit Issued: | May 3, 2024 |
| Final Permit Issued: | July 11, 2024 |
| Renewal Permit Application Due: | July 11, 2028 |
| Permit Expiration: | July 11, 2029 |

**Attainment Area:**
The River Road Generating Plant is located within the Portland-Vancouver ozone and CO maintenance area. The area was redesignated for carbon monoxide in October 1996 and for ozone in April 1997. The area is in attainment for all other pollutants.

**Facility Description:**
The River Road Generating Plant (River Road) is a primary power generation facility owned by Clark Public Utilities (Clark PU). River Road is configured as a natural gas-fired combined-cycle turbine facility (NGCC) with inlet fogging and an unfired heat recovery steam generator (HRSG). The facility has a total of five emission units consisting of a Combustion Turbine, a Startup Boiler, a Fuel Gas Heater, a backup generator and an engine driven fire pump.

The River Road Generating Plant generates electricity for the sole use of Clark PU. Nominal generating capacity of the facility is 248 megawatts (MW) with all plant equipment functioning in direct support of the combustion turbine/generator system. Daily operation of the plant is conducted by a third party working under contract to Clark PU.

## II. EMISSION UNIT DESCRIPTIONS

| EU # | Generating Equipment | Emission Control Measure |
|---|---|---|
| EU1 | Combustion Turbine<br>(GE Frame 7A – 1,700 MMBtu/hr) | $NO_X$ Dry Low-$NO_X$ Combustor System, SCR/Oxidation Catalyst Systems,<br>$SO_2$ Low Sulfur Fuel |
| EU2 | Startup Boiler<br>(Nebraska – 103.5 MMBtu/hr) | $NO_X$ Low-$NO_X$ Burner<br>$SO_2$ Low Sulfur Fuel |
| EU3 | Fuel Gas Heater<br>(GasTech – 2.5 MMBtu/hr) | $NO_X$ Low-$NO_X$ Burner<br>$SO_2$ Low Sulfur Fuel |
| EU4 | Emergency Generator<br>(Detroit Diesel – 568 bhp) | $SO_2$ Low Sulfur Fuel |
| EU5 | Emergency Fire Pump<br>(Detroit Diesel – 110 bhp) | $SO_2$ Low Sulfur Fuel |

**EU1 Combustion Turbine**

The Combustion Turbine powers a single electrical generator in conjunction with a dedicated steam turbine (single-shaft design). The Combustion Turbine is a General Electric model 7A1PFA28-1 turbine (serial #296845) with a maximum rated heat input of 1,700 MMBtu/hr and a nominal electrical generating capacity of 179 MW. Exhaust gases from the Combustion Turbine are sent to a single unfired heat recovery steam generator (HRSG). Steam from the HRSG drives a single steam turbine to produce approximately 69 MW of power. The permittee operates the unit to produce baseload electrical power. Initial firing of the Combustion Turbine occurred on August 9, 1997. Emissions from the Combustion Turbine consist of $NO_X$, CO, $SO_2$, PM, VOC, $NH_3$, and HAPs/TAPs. Exhaust gases from the Combustion Turbine/HRSG are discharged to the atmosphere through an 18-foot diameter, 198 foot tall stack.

The Combustion Turbine was originally approved to fire on both natural gas and low sulfur distillate oil. The capacity to fire distillate oil was not installed, and the unit fires only on natural gas. During initial firing of the turbine, exhaust temperatures are controlled to meet the prescribed steam conditions of the steam turbine. Startup time depends on various factors, including the metal temperature of the steam turbine, and can take up to 16 hours. Gas admission is regulated by fuel control valves to minimize emissions.

The Combustion Turbine is equipped with dry low-NOx combustor technology. The combustor has an annular can-type configuration employing 14 small diameter, high mixing, dry low-$NO_X$ combustors to minimize $NO_X$ formation. Air emissions are further controlled through the use of oxidation catalyst (CO, VOC) and selective catalytic reduction ($NO_X$). Aqueous ammonia is stored on-site for use by the NOx control system.

The Combustion Turbine is subject to applicable requirements found in 40 CFR 60 Subpart GG.

**EU2 Startup Boiler**

The Startup Boiler is a Nebraska Boiler model NS-E-76SH (s/n D-3570) steam boiler with a rated steam generating capacity of 70,000 pounds per hour. The Startup Boiler is equipped with a Coen BMS-2000 burner management system and Coen Quantum low $NO_X$ burners. The Coen burners have a rated heat input of 103.5 million British thermal units per hour (MMBtu/hr). Emissions from the Startup Boiler consist of $NO_X$, CO, $SO_2$, PM, VOC, and TAPs. Exhaust gases from the Startup Boiler are discharged to the atmosphere through a 4-foot diameter, 83 foot tall stack.

The Startup Boiler was originally approved to fire on both natural gas and low sulfur distillate oil. The capacity to fire distillate oil was not installed, and the unit fires only on natural gas. The Startup Boiler supplies sealing steam for establishing a vacuum seal on the main steam turbine and cooling steam to the main steam turbine during startup/shutdown. The Startup Boiler does not operate during regular operation of the Combustion Turbine/HRSG.

The Startup Boiler is subject to applicable requirements found in 40 CFR 60 Subpart Db.

**EU3 Fuel Gas Heater**

The Fuel Gas Heater is used to raise the temperature of incoming fuel gas supplied to the turbine to improve combustion efficiency. The Fuel Gas Heater heats a water and anti-freeze solution that in turn heats the incoming natural gas to 70 degrees F prior to being admitted to the main combustion turbine. The Fuel Gas Heater was manufactured in 1997 by GasTech Engineering Corporation (serial #D-2055) and fires on natural gas. The Fuel Gas Heater is equipped with low-$NO_X$ burners with a rated heat input of 2.5 MMBtu/hr. Emissions from the Fuel Gas Heater consist of $NO_X$, CO, $SO_2$, PM, VOC, and TAPs.

The Fuel Gas Heater is not subject to any requirements from 40 CFR Parts 60, 61, or 63.

**EU4 Emergency Generator**

The Emergency Generator is a diesel-fired generator that supplies emergency power for vital plant systems on a shutdown. Routine operation is limited to testing and maintenance. The Emergency Generator is powered by a Detroit Diesel engine (serial #378162) rated at 568 brake horsepower and manufactured in 1996. Emissions from the Emergency Generator consist of $NO_X$, CO, $SO_2$, PM, and VOC.

The Emergency Generator is subject to applicable requirements found in 40 CFR 63 Subpart ZZZZ. The applicable requirements became effective May 3, 2010, with a compliance date of May 3, 2013.

**EU5 Emergency Fire Pump**

The Emergency Fire Pump is a diesel-fired water pump that provides water pressure to the facility's fire suppression system in the event of a fire. Routine operation is limited to testing and maintenance. The Emergency Fire Pump is powered by a Detroit Diesel (Perkins) model PDFD-L6YT2504 engine (serial #U630355B) rated at 110 brake horsepower and manufactured in 1996. Emissions from the Emergency Fire Pump consist of $NO_X$, CO, $SO_2$, PM, and VOC.

The Emergency Fire Pump is subject to applicable requirements found in 40 CFR 63 Subpart ZZZZ. The applicable requirements became effective May 3, 2010, with a compliance date of May 3, 2013.

**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.

| PSEU | Pollutant | CAM Applicable | Basis of Determination |
|---|---|---|---|
| EU1 Combustion Turbine | $NO_X$, CO | No | Continuous emission monitor in use. |
| | All Other | No | No emission control device in use. |
| EU2 Startup Boiler | $NO_X$ | No | Potential pre-control emissions less than major source threshold. |
| | All Other | No | No emission control device in use. |
| EU3 Fuel Gas Heater | $NO_X$ | No | Potential pre-control emissions less than major source threshold. |
| | All Other | No | No emission control device in use. |
| EU4 Emergency Generator | All | No | No emission control device in use. |
| EU5 Emergency Fire Pump | 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. Emission units were determined to be insignificant as follows:

**IEU1 Combustion Turbine Lube Oil Tank Vent**

Lubricating oil for the main turbine is stored in a single lube oil tank. Lubricating oil storage tanks are categorically exempt under WAC 173-401-532(3).

**IEU2 Cooling Towers**

Primary cooling of the water used to condense process steam takes place at the cooling towers. The cooling towers process only non-contact cooling water and are categorically exempt under WAC 173-401-532(121).

**IEU3 Blast Cabinet**

A single blast cabinet is installed in one of the maintenance shops at the facility. The cabinet is used to surface prep (sand blast) small items in the course of general maintenance operations. The blast cabinet is exhausted to a dedicated abrasive separator/cartridge collector. Emissions from the blast cabinet are estimated to less than the 0.75 ton $PM_{10}$/yr threshold of WAC 173-401-530(4)(e) so this unit is considered insignificant.

**IEU4 Emergency Generator Fuel Storage Tank**

This fuel storage tank has a capacity of 300 gallons and supplies the Emergency Generator. Storage tanks not greater than 1,100 gallons capacity with maximum vapor pressure of 550 mmHg are defined in WAC 173-401-533(2)(b) to be insignificant emission units.

**IEU5 Emergency Fire Pump Fuel Storage Tank**

This fuel storage tank has a capacity of 285 gallons and supplies the Emergency Fire Pump. Storage tanks not greater than 1,100 gallons capacity with maximum vapor pressure of 550 mmHg are defined in WAC 173-401-533(2)(b) to be insignificant emission units.

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

### P11. 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. Additional descriptions of potential excess emissions and how the permittee is expected to respond to those events are provided in requirements M9 and M15 - Startup, Shut Down, and Outage Operation Procedures.

The provisions of SWCAA 400-107 do not apply to federal standards such as NESHAP/MACT standards. Such federal standards often have specific, and often more restrictive, 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. On May 22, 2015, EPA issued a SIP call to 36 states, including Washington, to modify affirmative defense provisions consistent with the *NRDC v. EPA* decision.

### 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 SCR system of the Combustion Turbine. 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.

**G3. Protection of Stratospheric Ozone** **40 CFR 82 Subpart B**
**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 $CO_2e$ 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.

**G13. Portable Sources** **SWCAA 400-036**
**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 $PM_{2.5}$, and less than 0.5 tons per year of $PM_{2.5}$.

**G14. New Source Review** **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**

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 provisions of WAC 173-460.

**G19. Outdoor Burning** **SWCAA 425**

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. Compliance with Req 7 is assured via compliance certification by the responsible official.

**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 the 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.

**Req 11 Emission Standards for Certain Source Categories SWCAA 400-070(8)**
**Abrasive Blasting**

Req 11 incorporates general limitations and work practice requirements for abrasive blasting established in SWCAA 400-070(8). The limitations and requirements apply to any construction and/or maintenance activities at the facility that involve abrasive blasting. IEU3 is subject to these requirements, but consistent with WAC 401-530(2)(c), the permit does not contain any testing, monitoring, recordkeeping, or reporting requirements for the affected IEU except those specifically identified by the underlying requirements. General monitoring provisions have been created under 'gap-filling' to provide reasonable compliance assurance with applicable requirements.

**Reqs 12-17 Plantwide Emission Limits ADP 95-1800R5 Condition 1**

Requirements 12 through 17 are plantwide emission limits for all of the criteria pollutants and ammonia. These limits reflect the operating scheme proposed by the permittee at the time of facility permitting, and apply to combined air pollutant emissions from all identified EUs at the facility. The emission limits constitute enforceable limits on potential to emit and are designed to keep the facility a minor source. Compliance with these requirements is assured via emission testing and facility operating records.

**Req 18 Vertical Discharge Requirement ADP 95-1800R5 Condition 9**

Requirement 18 prohibits the installation of rain caps that inhibit vertical discharge during active operation. This is a general permit condition contained in SWCAA's air discharge permits. The intent of the requirement is to maximize dispersion and dissipation of exhaust streams from affected emission units. SWCAA has relied upon compliance certification by the responsible official to provide compliance assurance with this requirement. Compliance with this requirement is assured via compliance certification by the responsible official.

**Req 19 Operation of Pollution Control Devices ADP 95-1800R5 Condition 8**

Requirement 19 requires the permittee to operate pollution control devices whenever the associated processing equipment is in operation, and maintain pollution control devices in accordance with manufacturer's specifications. This is a general permit condition contained in SWCAA's air discharge permits. The intent of the requirement is to ensure that control devices are properly maintained and employed. SWCAA has relied upon compliance certification by the responsible official to provide compliance assurance with this requirement. Compliance with this requirement is assured via compliance certification by the responsible official.

**Req 20 Good Air Pollution Control Practices 40 CFR 60.11(d)**
**SWCAA 400-115**

Requirement 20 is taken from 40 CFR 60.11(d), which requires the permittee to maintain and operate affected equipment in a manner that is consistent with good air pollution control practices to minimize emissions. 40 CFR 60.11(d) is a general requirement that applies specifically to emission units EU1 and EU2, which are the only units at the facility subject to a 40 CFR Part 60 performance standard. SWCAA 400-115 applies to all permitted emission units. Compliance with this requirement is assured via compliance certification by the responsible official.

**Req 21 Combustion Turbine Natural Gas Fuel Limitation 40 CFR 60.44b(j)&(k)**
**ADP 95-1800R5 Condition 10**

Requirement 21 specifies natural gas as the only allowable fuel for the Combustion Turbine, Startup Boiler and Fuel Gas Heater. This restriction is consistent with the original permit application for the affected equipment and formed part of the basis for the associated BACT determinations at the time of original approval. The use of natural gas fuel is also a prerequisite for the low use exemption found in 40 CFR 60.44b(j)&(k). Compliance with this requirement is assured via compliance certification by the responsible official.

**Req 22 Combustion Turbine Exhaust Discharge ADP 95-1800R5 Condition 11**

Requirements 22 specifies a minimum discharge height and vertical orientation for exhaust from the Combustion Turbine. This requirement reflects the equipment configuration proposed in the original permit application and was relied upon in reviewing the likely ambient impact of emissions from the units. Compliance with this requirement is assured via facility construction records and compliance certification by the responsible official.

**Req 23 Combustion Turbine Emission Limit - $NO_X$ 40 CFR 60.332, 60.334(c)**
**SWCAA 400-115**
**ADP 95-1800R5 Condition 3**

Requirement 23 contains $NO_X$ emission limits for the Combustion Turbine based on BACT. This requirement establishes a maximum hourly mass emission rate and two maximum emission concentrations (24 hr avg, 12 mth avg). The maximum emission concentrations are lower than the applicable $NO_X$ emission

standard described below from 40 CFR 60, Subpart GG. Compliance with this requirement is assured via continuous emission monitoring.

The Combustion Turbine is subject to 40 CFR 60, Subpart GG. Pursuant to 40 CFR 60.332, the Combustion Turbine is subject to a $NO_X$ emission limit based on the turbine's size and type. The Combustion Turbine is classified as an electric utility stationary gas turbine with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired. 40 CFR 60.332(b) specifies calculation of the applicable $NO_X$ standard using the equation provided in 40 CFR 60.332(a)(1).

$$STD = \frac{(0.0075 * 14.4)}{Y} + F = \frac{0.0075*14.4}{10.1} + 0 = 0.0107\% \ (107 \text{ ppmv})$$

STD = Allowable $NO_X$ emission (percent by volume, dry, @ 15% $O_2$)
Y = Manufacturers rated heat rate at peak load (kj/w-hr) = 10.1
F = $NO_X$ emission allowance for fuel bound nitrogen = 0

The calculated $NO_X$ standard is 107 ppmvd @ 15% $O_2$ using a Y factor of 10.1 and an F factor of 0.

Daily monitoring of fuel nitrogen content as described in 40 CFR 60.334(h)(2) is required for any turbine that claims an allowance for fuel bound nitrogen. The permittee has not claimed any allowance for fuel bound nitrogen for the turbine at this facility, so this provision is not in use.

**Reqs 24-28 Combustion Turbine Emission Limits ADP 95-1800R5 Condition 3**
**CO/VOC/$SO_2$/$NH_3$**

Requirements 24 through 28 are emission limits for the Combustion Turbine based on BACT. The emission limits apply to emissions of CO, $SO_2$, PM, VOC, and $NH_3$. The requirements establish maximum hourly mass emission rates for all affected pollutants and maximum emission concentrations for CO and $NH_3$. Compliance with CO emission limits is assured via continuous emission monitoring. Compliance with $SO_2$, PM, VOC, and $NH_3$ emission limits is assured via emission testing and facility operating records.

**Req 29 Startup and Shutdown Period Exemption ADP 95-1800R5 Condition 3**

Requirement 29 is an exemption clause that applies to the short-term emission limits established in Requirements 23 through 28. Any emission limit with an averaging time of less than 24-hr is suspended during periods of turbine startup or shutdown. The intent of this provision is to make practical allowance for the physical limitations of the turbine and control equipment during these transitory operational periods. Suspension of short-term limits is not allowed for greater than 12 hours during startup and 4 hours during shutdown. Compliance with this requirement is assured via facility operating records.

**Req 30 Combustion Turbine Visible Emissions Limit ADP 95-1800R5 Condition 2**

Requirement 30 limits visible emissions from the Combustion Turbine consistent with proper operation of the unit. Little or no opacity is expected from operation of this unit due to its use of natural gas fuel. Compliance with this requirement is assured via periodic visible emission monitoring.

**Req 31 Combustion Turbine Fuel Sulfur Content Limit 40 CFR 60.333(b)**
**SWCAA 400-115**

Requirement 31 limits the fuel sulfur content of any fuel fired in the Combustion Turbine. The Combustion Turbine is subject to 40 CFR 60, Subpart GG, which establishes an $SO_2$ emission standard. Pursuant to 40 CFR 60.333, affected facilities may comply with the $SO_2$ standard by means of an $SO_2$ emission limit or a

fuel sulfur content limit. This facility has opted to comply with the 0.8% wt fuel sulfur content limit specified in 40 CFR 60.333(b). The use of pipeline natural gas fuel complies with this requirement. Compliance with this requirement is assured via fuel sulfur sampling.

**Req 32 Aqueous Ammonia Requirement ADP 95-1800R5 Conditions 13-14**

Requirement 32 restricts the facility to using only aqueous ammonia in the Combustion Turbine's ammonia injection system. The requirement also limits the maximum amount of aqueous ammonia that may be stored onsite at any one time. The primary purpose of this requirement is to keep the ammonia injection system from becoming subject to the provisions of the Chemical Accident Prevention program (40 CFR 68). Compliance with this requirement is assured via facility operating records.

**Req 33 Acid Rain $SO_2$ Allowances 40 CFR 72.9(c)(1)**
**WAC 173-406-106(3)(a)(i)**

The River Road Generating Plant is an "affected source" under the Acid Rain Program. 40 CFR 72.40 and WAC 173-406-400 require that the facility hold $SO_2$ allowances not less than the total annual emissions in tons of $SO_2$ from the Combustion Turbine beginning with calendar year 2000. The River Road facility does not receive an allocation of allowances. All $SO_2$ allowances used to meet its 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 34 Startup Boiler Exhaust Discharge ADP 95-1800R5 Condition 11**

Requirement 34 specifies a minimum discharge height and vertical orientation for exhaust from the Startup Boiler. This requirement reflects the equipment configuration proposed in the original permit application and was relied upon in reviewing the likely ambient impact of emissions from the units. Compliance with this requirement is assured via facility construction records and compliance certification by the responsible official.

**Reqs 35-39 Startup Boiler Emission Limits ADP 95-1800R5 Condition 4**

Requirements 35 through 39 are emission limits for the Startup Boiler based on BACT. The emission limits apply to emissions of criteria pollutants, VOC and $NH_3$. The requirements establish a maximum hourly mass emission rate for each affected pollutant. Compliance with these requirements is assured via emission testing and facility operating records.

**Req 40 Startup Boiler Visible Emissions Limit ADP 95-1800R5 Condition 2**

Requirement 40 limits visible emissions from the Startup Boiler consistent with proper operation of the unit. Little or no opacity is expected from operation of this unit due to its use of natural gas fuel. Compliance with this requirement is assured via periodic visible emission monitoring.

**Req 41 Startup Boiler Capacity Factor 40 CFR 60.44b(j)&(k)**
**SWCAA 400-115**
**ADP 95-1800R5 Condition 15**

Requirement 41 limits the operating capacity of the Startup Boiler to 10% or less. This limit is intended to ensure compliance with the emission limit exemption conditions specified in 40 CFR 60.44(j)&(k). The Startup Boiler is an affected facility under 40 CFR 60, Subpart Db, which establishes $NO_X$, $SO_2$, PM and opacity standards for industrial-commercial-institutional steam generating units with heat input capacities greater than 100 MMBtu/hr and installed after June 19, 1984. Pursuant to 40 CFR 60.44b(k), the Startup Boiler is not subject to the applicable $NO_X$ emission limit because it has a heat input capacity less than 250

MMBtu/hr and meets the exemption criteria outlined in 40 CFR 60.44b(j) (combusts natural gas only, annual capacity factor ≤ 10%). Compliance with this requirement is assured via facility operating records.

**Reqs 42-45 Fuel Gas Heater Emission Limits ADP 95-1800R5 Condition 5**

Requirements 42 through 45 are emission limits for the Fuel Gas Heater based on BACT. The emission limits apply to emissions of selected criteria pollutants ($NO_X$, CO, PM, VOC). The requirements establish a maximum annual mass emission rate for each affected pollutant. Compliance with this requirement is assured via facility operating records.

**Req 46 Fuel Gas Heater Visible Emissions Limit ADP 95-1800R5 Condition 2**

Requirement 46 limits visible emissions from the Fuel Gas Heater consistent with proper operation of the unit. Little or no opacity is expected from operation of this unit due to its use of natural gas fuel. Compliance with this requirement is assured via periodic visible emission monitoring.

**Req 47 Emergency Generator Operational Limit ADP 95-1800R5 Condition 16**

Requirement 47 limits operation of the Emergency Generator. A maximum of 24 hr/yr of operation is allowed for the purposes of readiness checks and routine maintenance. Emergency service is not counted toward the allowed operating hours. This operational limit was established as part of the original approval action for the unit, and is more stringent than the 100 hr/yr maintenance and testing allowance found in 40 CFR 63.6640(f). Compliance with this requirement is assured via hourmeter readings and facility operating records.

**Req 48 Emergency Fire Pump Operational Limit ADP 95-1800R5 Condition 17**

Requirement 48 limits operation of the Emergency Fire Pump. A maximum of 28 hr/yr of operation is allowed for the purposes of readiness checks and routine maintenance. Emergency service is not counted toward the allowed operating hours. This operational limit was established as part of the original approval action for the unit, and is more stringent than the 100 hr/yr maintenance and testing allowance found in 40 CFR 63.6640(f). Compliance with this requirement is assured via hourmeter readings and facility operating records.

**National Emission Standards for Hazardous Air Pollutants 40 CFR 63, Subpart ZZZZ**
**Stationary Reciprocating Internal Combustion Engines**

40 CFR 63, Subpart ZZZZ establishes standards for stationary reciprocating internal combustion engines (RICE). The Emergency Generator and Emergency Fire Pump at this facility are subject to this regulation. The units are classified as emergency engines.

**Req 49 Emergency Engine Operational Limit 40 CFR 63.6640(f)**
**SWCAA 400-115**

Requirement 49 limits Emergency Generator and Emergency Fire Pump operation, consistent with the provisions of 40 CFR 63.6640(f). The Emergency Generator and Emergency Fire Pump must comply with these limitations in order to be considered emergency engines under 40 CFR 63, Subpart ZZZZ. Compliance with this requirement is assured via hourmeter readings and facility operating records.

**Req 50 Emergency Engine Hour Meter 40 CFR 63.6625(f)**
**SWCAA 400-115**

Requirement 50 requires the Emergency Generator and Emergency Fire Pump to be equipped with a non-resettable hour meter, consistent with the provisions of 40 CFR 63.6625(f). The purpose of the hour meter is to 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.

**Req 51 Emergency Engine Startup and Idle Time** **40 CFR 63.6625(h), Table 2c**
**SWCAA 400-115**

Requirement 51 requires the Permittee to minimize the time each emergency engine spends idling and starting up, consistent with the provisions of 40 CFR 63.6625(h). Compliance with these requirements is assured by hour meter readings and facility operating records.

**Req 52 Emergency Engine Good Air Pollution Control Practice** **40 CFR 63.6605(b)**
**40 CFR 63.6625(e)**
**40 CFR 63.6640(a), Table 6**

Requirement 52 requires the Permittee to operate and maintain each emergency engine in a manner consistent with good air pollution control practices for minimizing emissions. Maintenance of emergency engines must be in accordance with manufacturer's written instructions or an equivalent facility specific maintenance plan. 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 requires annual inspection and/or replacement of critical engine components. Compliance with these requirements is assured by hour meter readings and facility operating records.

**Req 53 Emergency Engine Maintenance** **40 CFR 63.6603(a), Table 2d**
**40 CFR 63.6640(a)**

Requirement 53 implements operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ. The Emergency Generator and Emergency fire Pump are both classified as an existing emergency CI RICE located at an area source of HAP emissions. The requirements are 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

### M1. General Recordkeeping

This monitoring section cites recordkeeping requirements drawn from provisions in WAC 173-401-615 and ADP 95-1800R5. 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 95-1800R5. The type and format of data to be recorded is specified for operating conditions and emissions of Acid Rain affected units.

### M3. Visible Emissions Monitoring

This monitoring section is applicable to general requirements drawn from SWCAA 400-040 and ADP 95-1800R5. 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, Startup Boiler, Fuel Gas Heater) is not likely to cause visible emissions.

### M4. Fugitive Emissions and Fallout Monitoring

This monitoring section is applicable to general requirements drawn from SWCAA 400. 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. Complaint Log and Investigation

This monitoring section is applicable to general requirements from SWCAA 400 and ADP 95-1800R5. 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.

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 ensure compliance through prompt complaint response and corrective action. The facility is required to maintain records documenting the nature of each complaint, the complainant (if known), and corresponding corrective action (if any).

## M6. Combustion Turbine Operations Monitoring

This monitoring section implements requirements drawn from 40 CFR 75 and ADP 95-1800R5. The affected requirements primarily involve the monitoring and recording of operational parameters and CEMS data for the Combustion Turbine. 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 and is an important part of assuring compliance with applicable emission limits.

## M7. Combustion Turbine General Emissions Monitoring

The applicable requirements cited in this monitoring section are drawn from 40 CFR 60.334(h)(3), 40 CFR 72, 40 CFR 75.11(d)(2), WAC 173-406-106, and ADP 95-1800R5. The section is intended to assure compliance with $SO_2$, PM, VOC, and $NH_3$ emission limits applicable to the Combustion Turbine.

$CO_2$ emissions are quantified using one of the procedures specified in 40 CFR 75.10(a)(3).

$SO_2$ emissions are quantified by calculating hourly emissions based on recorded heat input and emission factors drawn from periodic fuel sulfur monitoring data. 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, VOC, and $NH_3$ 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.

## M8. Combustion Turbine $NO_X$ and CO Emissions Monitoring

This monitoring section is based on requirements from ADP 95-1800R5, Conditions 21 and 30. The monitoring section assures compliance with applicable emission limits from ADP 95-1800R5, Conditions 1 and 3 and fulfills applicable monitoring requirements from 40 CFR 75 and 40 CFR 60.334(b)(2) through the installation and maintenance of a CEMS/DAHS for $NO_X$ and CO.

$NO_X$ 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 $NO_X$ calculations by 40 CFR 75.12 (40 CFR 75, Appendix 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. The CEMS is maintained in accordance with the specifications of 40 CFR 60, Appendices B and F.

## M9. Combustion Turbine Startup and Shutdown Emissions

Pursuant to ADP 95-1800R5, Condition 3, short term emission limits for the Combustion Turbine do not apply during startup and shutdown. These emission limits are suspended because compliance cannot be maintained due to the physical limitations of the turbine and emission control equipment. However, pollutant emissions during these events must still be counted when determining compliance with long term (annual) emission limits for the Combustion Turbine and the facility. This monitoring section requires the permittee to clearly identify all startup and shutdown periods, and record corresponding emissions consistent with ADP 95-1800R5, Conditions 22 and 25(d).

## M10. Combustion Turbine Emission Testing

This monitoring section is drawn from SWCAA 95-1800R5, Condition 29 and Appendix A. The prescribed test loads required for emission testing were revised under ADP 95-1800R5. The new test conditions require testing at greater than 95% load rather than a range of four different loads as originally specified by 40 CFR 60, Subpart GG.

Initial emission testing for the Combustion Turbine occurred on September 11-12, 1997 and October 23, 1997. The initial test quantified emissions of $NO_X$, CO, $SO_2$, PM, VOC, and $NH_3$. Subsequent periodic emission testing is required for $NO_X$, CO and $NH_3$. Since the VOC and PM emission profiles of the Combustion Turbine are not likely to change significantly with time, periodic emission testing for these pollutants is not required. Emission test data is used to generate emission factors for VOC, PM, and $NH_3$, which are then used to calculate emissions.

## M11. Combustion Turbine Ammonia Concentration Monitoring

The permittee has opted to avoid the Risk Management Plan requirements of 40 CFR 68 by limiting actual onsite aqueous ammonia storage to less than the applicable threshold of 20,000 lbs. Since 40 CFR Part 68 does not require any specific monitoring to substantiate compliance with the exemption threshold, SWCAA has implemented monitoring requirements under the "gap filling" provisions of WAC 173-401-615 to assure compliance with the exemption threshold.

The storage capacity of the current storage tank is less than 19,500 pounds so compliance assurance measures focus on substantiating that only aqueous ammonia is in use at the facility. This is accomplished by recording ammonia concentration information for each material shipment.

## M12. Startup Boiler Operations Monitoring

This monitoring section is drawn from 40 CFR 60.49b and SWCAA 95-1800R5, Condition 26.

To assure compliance with the provisions of 40 CFR 60.49b, Startup Boiler heat input is monitored and recorded on a daily basis. The unit's annual capacity factor is calculated for each calendar quarter on a 12-month rolling basis. Recorded heat input is used with applicable emission factors to quantify emissions and demonstrate compliance with applicable emission limits.

## M13. Startup Boiler Emission Testing

This monitoring section is drawn from SWCAA 95-1800R5, Condition 32 and Appendix C. Emission test data is used to generate emission factors for $NO_X$, CO, PM, and VOC. No emission testing is required for $SO_2$. The emission factor for $SO_2$ is taken from AP-42, Section 1.4.

The initial emission test for the Startup Boiler occurred on October 25, 1997 and tested emissions of $NO_X$, CO, PM, and VOC. Periodic emission testing is required for $NO_X$ and CO. Since the VOC and PM emission profiles of this unit are not likely to change significantly with time, periodic emission testing for these pollutants is not required.

## M14. Fuel Gas Heater Operations Monitoring

This monitoring section is drawn from SWCAA 95-1800R5, Condition 27. Emission testing is not required for the Fuel Gas Heater due to its relatively small size. Compliance with applicable emission limits is demonstrated based on recorded fuel consumption and emission factors as cited in the Technical Support Document for ADP 95-1800R5.

## M15. Emergency Generator / Emergency Fire Pump Operations Monitoring

This monitoring section is drawn from 40 CFR 63.6655 and SWCAA 95-1800R5, Condition 28. Operation and maintenance requirements from 40 CFR 63, Subpart ZZZZ have been incorporated into the monitoring requirements as appropriate.

Periodic testing is not required for these units due to their status as emergency use only. Compliance with applicable emission limits is demonstrated based on recorded hours of operation and emission factors taken from the Technical Support Document for ADP 95-1800R5.

## M16. 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.

## M17. Greenhouse Gas Emission Monitoring

This monitoring section is designed to document compliance with applicable greenhouse gas emission requirements from WAC 173-441. The Permittee is required to maintain a record of applicable data elements specified in WAC 173-441-050(6)(a)-(h). Greenhouse gas emissions are to be calculated using the methodologies specified in relevant sections of WAC 173-441. SWCAA relies upon facility records to provide compliance assurance.

## VII. EXPLANATION OF REPORTING TERMS AND CONDITIONS

### R1. Deviations from Permit Conditions

The permittee is required to promptly report all permit deviations pursuant to WAC 173-401-615(3), SWCAA 400-107, and ADP 95-1800R5. Reporting timelines vary depending on the type of deviation involved.

- The general timeline for deviation reporting (within 30 days following the end of the month of discovery) is cited in WAC 173-401-615(3) and ADP 95-1800R5 Condition 35.
- The timeline for reporting if the permittee wishes to claim excess emissions as unavoidable (within 48 hours of discovery) is defined in SWCAA 400-107.
- The timeline for deviations that pose a potential threat to human health and safety (within 12 hours of discovery) is taken directly from WAC 173-401-615(3).

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

### R2. Complaint Reports

The permittee is required to report all complaints to SWCAA within three business days of receipt. This reporting section is based on 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. Startup and Shutdown Reports

The permittee is required to report each startup and shutdown event for the Combustion Turbine. This reporting section is taken directly from ADP 95-1800R5, Condition 39.

### R4. Quarterly Reports

This reporting section is based on requirements from WAC 173-401-615(3) and the Acid Rain Program. Semi-annual reporting of monitoring records and certification of monitoring records is required by WAC 173-401-615(3). Quarterly reporting of specified monitoring records is required by the Acid Rain Program and ADP 95-1800R5. Consequently, Section R4 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 95-1800R5, Requirement 36. The "Acid Rain" elements are derived from requirements found in 40 CFR 75.64.

### R5. Semi-annual Reports

The permittee is required to submit a list of all deviations from permit conditions that have occurred in the preceding semi-annual period consistent with WAC 173-401-615(3). 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.

### R6. 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). The permittee is required by 40 CFR 60.11(g) to consider credible evidence when submitting compliance certifications to NSPS affected units (Combustion Turbine and Startup Boiler).

In the annual compliance certification for each Acid Rain affected unit, the permittee or designated representative must indicate whether the unit held allowances in its compliance subaccount not less than the unit's total $SO_2$ emissions during the calendar year covered by the annual report. The permittee is required to indicate in the certification whether the monitoring plan is current, the monitors are properly certified, and all emissions were accounted for by either direct monitoring or missing data procedures.

**R7. Emission Inventory Reports**

This reporting requirement is drawn from SWCAA 400-105 and ADP 95-1800R5, Condition 33. The permittee is required to submit an emissions inventory report to SWCAA by March 15th for the previous calendar year. A complete emissions inventory includes quantification of 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).

**R8. Fuel Sulfur Content Reports**

This reporting requirement is taken directly from ADP 95-1800R5, Condition 38. The permittee is required to submit the results of periodic fuel sampling (ADP 95-1800R5, Condition 31) to SWCAA within 45 days of test completion.

**R9. Emission Test/RATA Plans and Reports**

This reporting requirement is taken from ADP 95-1800R5, Condition 38 and Appendices A and C. The permittee is required to notify SWCAA in advance of all required source testing so that SWCAA personnel may be present during testing. A comprehensive test plan must be submitted prior to testing to ensure the correct test protocol will be used. 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.

**R11. Greenhouse Gas Emission Reports**

This reporting requirement incorporates the annual greenhouse gas (GHG) emission reporting requirements contained in WAC 173-441-050(3). The report and certificate or representation must be submitted in accordance with the requirements of WAC 173-441-050 and 173-441-060 and in a format specified by Ecology. Each annual report and any other submission under Chapter 173-441 WAC must be certified, signed, and submitted by the designated representative or any alternate designated representative.

## VIII. EXPLANATION OF FUTURE REQUIREMENTS

No future requirements have been identified.

## IX. EXPLANATION OF OBSOLETE REQUIREMENTS

**NSPS Notification – Subpart Db 40 CFR 60.7**

The Startup Boiler is subject to NSPS regulations (40 CFR 60, Subpart Db). Therefore, the unit is subject to the notification requirements of 40 CFR, Section 60.7. These requirements have been met as described below.

Startup Boiler

| | |
|---|---|
| Notification of construction: | Submitted to SWCAA via letter dated February 4, 1997 |
| Notification of anticipated startup: | Submitted to SWCAA via letter dated May 12, 1997 |
| Notification of actual startup: | Submitted to SWCAA via letter dated July 14, 1997 |

**NSPS Notification – Subpart GG 40 CFR 60.7**

The Combustion Turbine is subject to NSPS regulations (40 CFR 60, Subpart GG). Therefore, the unit is subject to the notification requirements of 40 CFR, Section 60.7. These requirements have been met as described below.

Combustion Turbine

| | |
|---|---|
| Notification of construction: | Submitted to SWCAA via letter dated February 4, 1997 |
| Notification of anticipated startup: | Submitted to SWCAA via letter dated May 12, 1997 |
| Notification of actual startup: | Submitted to SWCAA via letter dated August 12, 1997 |

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

The Combustion Turbine at this facility is subject to the $NO_X$ 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 on September 11-12 and October 23, 1997 |
| Source test report: | Submitted to SWCAA on November 20, 1997 |

**NSPS Fuel Monitoring – Subpart GG 40 CFR 60.8**

40 CFR 60 Subpart GG was modified effective July 8, 2004. The modified rule no longer requires natural gas fired sources to monitor for fuel nitrogen or sulfur content, even if fuel sulfur monitoring was required by an alternative fuel monitoring schedule. Both WAC 173-460-115 and SWCAA 400-115 have adopted this new version of Subpart GG. Therefore, the Permittee is no longer required to follow the Alternative Fuel Monitoring Schedule issued by EPA on July 11, 1995.

**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 12, 1997 |
| Initial CEMS certification: | SWCAA notified June 23, 1997 |
| Initial CEMS certification test: | Completed on September 11, 1997 |

**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 June 6, 1997.

**Regulatory Orders and Air Discharge Permits**

SWCAA has issued a total of six air discharge permits for the River Road Generating Plant. As identified in Section XI below, only the newest permit is still active (ADP 95-1800R5). The approval conditions in the previous five permits have been superseded or have become obsolete as described below.

**ADP 95-1800R4** – Issued September 16, 1998. Superseded in its entirety by ADP 95-1800R5.

**ADP 95-1800R3** – Issued January 19, 1998. Superseded in its entirety by ADP 95-1800R4.

**ADP 95-1800R2** – Issued August 21, 1997. Superseded in its entirety by ADP 95-1800R3.

**ADP 95-1800R1** – Issued dated April 7, 1997. Superseded in its entirety by ADP 95-1800R2.

**ADP 95-1800** – Issued October 25, 1995. Superseded in its entirety by ADP 95-1800R1.

## X. RESPONSE TO COMMENTS

**Response to Public Comment**

The public comment period for this permit began on March 15, 2024, and ended on April 15, 2024. No comments were received from the public, Affected States, or EPA during the comment period.

**Response to EPA Comment**

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.

| Permit Number | Permit Application | Issue Date | Description |
|---|---|---|---|
| ADP 95-1800R5 | CL-1634 | 4/28/04 | Revision of approval conditions to remove distillate oil firing, modify emission testing requirements, and clarify startup and shutdown provisions. |
| *Obsolete/Superseded* | | | |
| *ADP 95-1800R4* | *CL-1371* | *9/16/98* | *Establishment of enforceable limits on quantity of ammonia storage at facility. Superseded by ADP 95-1800R5.* |
| *ADP 95-1800R3* | *CL-1328* | *1/19/98* | *Modification of approval to construct and operate a 248 megawatt gas-fired combined cycle power plant. Superseded by ADP 95-1800R4.* |
| *ADP 95-1800R2* | *CL-1307* | *8/21/97* | *Modification of approval to construct and operate a 248 megawatt gas-fired combined cycle power plant. Superseded by ADP 95-1800R3.* |
| *ADP 95-1800R1* | *CL-1280* | *4/7/97* | *Modification of approval to construct and operate a 248 megawatt gas-fired combined cycle power plant. Superseded by ADP 95-1800R2.* |
| *ADP 95-1800* | *CL-1164* | *10/25/95* | *Construction & operation of a 248 megawatt gas-fired combined cycle power plant. Superseded by ADP 95-1800R1.* |

### Title V Permit Actions

**AOP SW99-9-R3 (Permit Renewal)**

| | |
|---|---|
| Application received: | March 30, 2015 |
| Application complete: | July 2, 2015 |
| Application sent to EPA: | July 2, 2015 |
| Draft permit issued: | December 5, 2018 |
| Proposed permit issued: | January 23, 2019 |
| Final permit issued: | April 3, 2019 |

**AOP SW99-9-R2 (Permit Renewal)**

| | |
|---|---|
| Application received: | February 11, 2008 |
| Application complete: | March 13, 2008 |
| Application sent to EPA: | March 14, 2008 |
| Draft permit issued: | December 22, 2010 |
| Proposed permit issued: | February 3, 2011 |
| Final permit issued: | April 5, 2011 |

**AOP SW99-9-R1 (Permit Renewal)**

| | |
|---|---|
| Application received: | October 30, 2003 |
| Application complete: | December 30, 2003 |
| Application sent to EPA: | January 2, 2004 |
| Draft permit issued: | April 30, 2004 |
| Proposed permit issued: | June 16, 2004 |
| Final permit issued: | August 11, 2004 |

**AOP SW99-9-R0 (Initial Permit)**

| | |
|---|---|
| Application received: | May 29, 1998 |
| Application complete: | June 12, 1998 |
| Application sent to EPA: | January 12, 1999 |
| Draft permit issued: | January 12, 1999 |
| Proposed permit issued: | April 20, 1999 |
| Final permit issued: | May 12, 1999 |
| Administrative change: | June 1, 1999 |

## Compliance History

SWCAA has not issued any Notices of Violation (NOV) to this facility during the last permit term (April 3, 2019 through present day).

## XII. EXPLANATION OF APPENDICES

**Appendix A Emission Testing Requirements / Combustion Turbine**

Appendix A contains the complete text of ADP 95-1800R5, Appendix A *Emission Testing Requirements / Combustion Turbine*.

**Appendix B Emission Testing Requirements / Startup Boiler**

Appendix B contains the complete text of ADP 95-1800R5, Appendix C *Emission Testing Requirements / Startup Boiler*.

**Appendix C Acid Rain Permit No. SW-ARP-2-R4**

Appendix C contains the most recent Acid Rain Application and Permit for the River Road Generating Plant. The facility's current Acid Rain Permit (number SW-ARP-2-R3) expires concurrent with AOP SW99-9-R3. The renewal permit (number SW-ARP-2-R4) will be issued concurrent with this Air Operating Permit, and will be effective through the expiration date of this Air Operating Permit.