

# TECHNICAL SUPPORT DOCUMENT

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN  
APPLICATION FOR A PART 70 OP

APPLICATION SUBMITTED BY

Nevada Power Company, dba NV Energy

For

Walter M. Higgins III Generating Station

**Part 70 OP Number: 1550  
(Renewal)**

SIC Code - 4911: Electric Utility Services  
NAICS Code – 221112: Fossil Fuel Electric Power Generation



Clark County  
Department of Air Quality  
Permitting Section

**January, 2016**

## EXECUTIVE SUMMARY

Walter M. Higgins III Generating Station, owned by Nevada Power Company, dba NV Energy (NPC), is an electric power generating plant located at 1275 East Primm Boulevard, Primm, Nevada 89019 in the Ivanpah Valley (North) airshed, hydrographic basin number 164A, which is designated as attainment for all pollutants. Walter M. Higgins III Generating Station is classified as a Categorical Stationary Source, as defined by AQR 12.2.2(j)(1). Walter M. Higgins III Generating Station is a major source of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub> and CO and a minor source of SO<sub>x</sub>, VOC and HAP. Walter Higgins is also a source of GHG emissions.

The source consists of two natural gas-fired stationary gas turbines, two Heat Recovery Steam Generators (HRSGs) with natural gas fired duct burners for supplemental firing and a steam turbine generator. The facility also operates one natural gas-fired auxiliary boiler and one emergency fire pump. The following table summarizes the source PTE for each regulated air pollutant for all emission units addressed by this Part 70 OP:

### Source PTE (tons per year)

PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP	GHG <sup>1</sup>
144.91	144.91	158.58	194.04	10.44	43.53	7.21	2,218,704

<sup>1</sup>GHG is expressed as CO<sub>2</sub>e for information only.

The Clark County Department of Air Quality has delegated authority to implement the requirement of the Part 70 OP program.

The previous renewal for the Part 70 OP was issued on December 30, 2010. This Part 70 OP is issued based the Title V renewal application submitted on April 28, 2015. Based on the information submitted by the applicant and a technical review performed by the Air Quality staff, the Air Quality proposes the renewal of a Part 70 OP to Nevada Power Company, Walter M. Higgins III Generating Station.

*This Technical Support Document (TSD) accompanies the proposed Part 70 OP for Walter M. Higgins III Generating Station.*

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## I. ACRONYMS

**Table I-1: List of Acronyms**

<b>Acronym</b>	<b>Term</b>
Air Quality	Clark County Department of Air Quality
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CTG	Combustion Turbine-Generator
DLN	Dry Low-NO <sub>x</sub>
EPA	United States Environmental Protection Agency
EU	Emission Unit
HAP	Hazardous Air Pollutant
HHV	Higher Heating Value
HP	Horse Power
kW	kilowatt
LHV	Lower Heating Value
MACT	Maximum Achievable Control Technology
MMBtu	Millions of British Thermal Units
M/N	Model Number
MW	Megawatt
NAICS	North American Industry Classification System
NO <sub>x</sub>	Nitrogen Oxides
NRS	Nevada Revised Statutes
OP	Operating Permit
PM <sub>10</sub>	Particulate Matter less than 10 microns
PM <sub>2.5</sub>	Particulate Matter less than 2.5 microns
ppm	Parts per Million
ppmvd	Parts per Million, Volumetric Dry
PTE	Potential to Emit
QA/AC	Quality Assurance/Quality Control
RATA	Relative Accuracy Test Audits
RICE	Reciprocating Internal Combustion Engine
RMP	Risk Management Plan
scf	Standard Cubic Feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
S/N	Serial Number
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>x</sub>	Sulfur Oxides
TCS	Toxic Chemical Substance
VOC	Volatile Organic Compound

## II. SOURCE INFORMATION

### A. General

Permittee	Nevada Power Company, dba NV Energy Walter M. Higgins III Generating Station
Mailing Address	6226 West Sahara Avenue, MS #30 Las Vegas, Nevada 89146
Contact	Kimberly Williams, Manager, Environmental Services
Phone Number	(702) 402-2184
Fax Number	(702) 402-2051
Source Location	1275 East Primm Boulevard Primm, Nevada 89019
Hydrographic Area	164A
Township, Range, Section	T27S, R59E, Section 10
SIC Code	4911: Electric Services
NAICS Code	221112: Fossil Fuel Electric Power Generation

### B. Description of Process

The Walter M. Higgins III Generating Station facility has a two-on-one combined cycle configuration. The two-on-one unit consists of two natural gas-fired stationary gas turbines (EUs: A01 and A03), two Heat Recovery Steam Generators (HRSGs) with natural gas fired duct burners (EUs: A02 and A04) for supplemental firing and a steam turbine generator. The facility also operates one natural gas-fired auxiliary boiler (EU: A05) and one emergency fire pump (EU: A06). All fuel-fired equipment, with the exception of the diesel-fired emergency fire pump, uses pipeline quality natural gas as the sole fuel source.

### C. Permitting History

The application for this permit renewal was received on April 28, 2015 and deemed complete on June 17, 2015. The Part 70 OP will be issued under the authority of AQR Section 12.5.

#### Permitting Actions Since the Last Title V Operating Permit Renewal

Walter M. Higgins III Generating Station is regulated by Air Quality and has a Part 70 OP. The most recent Part 70 OP was issued December 30, 2010 as a renewal. There have been no permitting actions since that date.

## Permitting Actions Addressed with this Renewal

### Changes Requested by Source:

- *Emission Unit (EU) A06 is incorrectly listed as a 500 hp diesel emergency fire pump. EU A06 is a 265 hp fire pump. The Emission Unit Information Worksheet for Internal Combustion Engines for the emergency fire pump attached to this permit renewal application in Appendix B correctly identifies the rating and emissions for this unit. NV Energy respectfully requests the information for this emission unit be updated.*

Discussion: The engine has been identified as being 500 hp in previous documents. The correction will be made and the emissions recalculated using 500 hours and manufacturer's emission factors. The change in emissions is due to a change in policy, and a correction. Therefore no controls analysis will be triggered.

- *Condition III.B.2.d limits the hours of operation for the emergency fire pump (EU: A06) to up to 1 hour per day and 52 hours per rolling 12-month period for testing and maintenance purposes. NV Energy requests this condition be revised to be consistent with the federal requirements (40 CFR 63, Subpart ZZZZ) by allowing up to 100 hours per calendar year for testing and maintenance purposes. Additionally, operation of emergency engines during emergency situations is not limited in 40 CFR 63 subpart ZZZZ. The operating hours for this unit in emergency situations is not intended to be limited in the air permit either. Therefore, NV Energy requests that the annual PTE for the emergency fire pump not be identified as a limit in the air permit. The creation of annual emission limits creates a de facto limit on emergency situation operation hours, which is not appropriate for this unit. NV Energy requests the PTE for this unit be noted as an estimate only, based on 500 hours of annual operation which has been identified in EPA guidance as a value that is expected to cover most situations.*

Discussion: See also above discussion. The PTE for the fire pump will be removed from the limits tables, except the annual PTE table for classification purposes in the TSD, as has been done for recent permitting actions. The operational limit for testing and maintenance will be made annual.

- *NV Energy requests the removal of condition III.D.4 which states that the Permittee shall conduct performance tests on the auxiliary boiler (EU: A05) for NO<sub>x</sub>, CO and stack gas parameters once every five years. The auxiliary boiler at Higgins is designed for operation when the turbines are not operating -- specifically, for providing auxiliary steam to the air ejector system. This system is used to establish required vacuum in the condenser needed to start up the gas turbines. For this reason, and unlike the system design at the Chuck Lenzie Generating Station, the auxiliary boiler cannot be operated safely simultaneously with the power block. The only way to perform the specified auxiliary boiler performance testing during operation of the gas turbines is to manually vent pressurized steam which presents unacceptable safety hazards. Therefore, NV Energy must shut down the power plant in order to perform a boiler burner efficiency test or performance test. The last set of test results indicate that the boiler has tested well below the permits limits for NO<sub>x</sub>, and CO and there are no federal requirements to test*

*this unit. NVE requests the burner efficiency test required two times per year in Condition III.C.9 be removed.*

Discussion: Air Quality's Guideline for Source Testing requires performance testing every 5 years. Air Quality is aware of a number of sources that have to vent pressurized steam safely to do a performance test. The requirement for performance testing every 5 years will be retained and the window of testing will be opened up to "within 90 days of the anniversary of the last performance test" as is current Air Quality practice. Since the unit operated almost 2,300 hours in 2014, and is permitted to operate up to 2,500 hours per year, the twice a year burner efficiency test will also be retained. The source is encouraged to work with Air Quality Compliance to schedule performance testing and burner efficiency tests at times advantageous to the source with respect to the unusual operating nature of this auxiliary boiler.

- *Testing Condition III.D.4 requires performance testing every five years on the auxiliary boiler. Should this condition remain in the permit, in an effort to better accommodate scheduling of performance tests, NV Energy requests the performance testing language be updated to allow testing be completed within 90 days of the anniversary date of the last performance test.*

Discussion: Air Quality has been adding this flexibility to subsequent performance testing dates when revising permits. The change will be made.

- *Condition III.E.2.h requires record keeping for daily and rolling 12-month total hours of operation of the fire pump engine. NV Energy requests this condition be revised to be consistent with the federal requirements (40 CFR 63, Subpart ZZZZ) by revising to record keeping of annual operations and removal of the requirement to keep records of daily operations. This request affects Condition III.E.3.c as well.*

Discussion: All sources in Clark County are required to record use of emergency engines for testing/maintenance and separately for emergency use. The daily records requirement will be changed to date and duration of operation and an annual total.

- *NV Energy requests that the HAP PTE for the turbines be based on the emission factors summarized in Table 4-6 to be consistent with the emission factors used for turbines at other NV Energy facilities.*

Discussion: This change is because of a change in AP-42 emission factors, and will not trigger regulatory review.

#### Changes Made by Air Quality as Part of the Renewal:

- Updated fire pump engine PTE for 500 hours and updated emission factor in AP-42 and Ultra Low Sulfur diesel.
- Converted the "12-month rolling" conditions to "any consecutive 12 months" where appropriate.
- Added sandblaster and parts washer to insignificant activities list as proposed in a prior notification.
- Source has an ammonia potential to emit of 230.30 tons per year. Removed ammonia requirements in permit. Reasoning is discussed in this TSD.

- Updated structure and general conditions.
- Updated GHG PTE based on renewal application.

Previous Control Technology Determinations

**Table II-C-2: Previous BACT Determinations for Stationary Gas Turbine Units**

EU	Description	BACT Technology	BACT Limit
A01/A02	175 MW Stationary Gas Turbine/HRSG, natural gas firing	SCR, dry low-NO <sub>x</sub> burners, oxidation catalyst, natural gas combustion, inlet air filters	2.5 ppmvd NO <sub>x</sub> and 5.0 ppmvd CO on a 3-hour average at 15 percent O <sub>2</sub>
A03/A04	175 MW Stationary Gas Turbine/HRSG, natural gas firing	SCR, dry low-NO <sub>x</sub> burners, oxidation catalyst, natural gas combustion, inlet air filters	2.5 ppmvd NO <sub>x</sub> and 5.0 ppmvd CO on a 3-hour average at 15 percent O <sub>2</sub>
A05	40 MMBtu/hr Auxiliary Boiler, natural gas firing	Low-NO <sub>x</sub> burner	30 ppmvd NO <sub>x</sub> and 100 ppmvd CO
A06	265 hp diesel emergency fire pump, diesel firing	Timing retard, turbocharging, aftercooling, low sulfur diesel fuel	NA

**D. Operating Scenario**

Stationary Gas Turbine Generators

The stationary gas turbines are heavy duty, single shaft, and natural gas-fired units with a nominal energy production rating of 175 MW each. The heat input for each stationary gas turbine, based on the higher heating value of natural gas, is limited to 2,096 MMBtu/hr and 15,365,000 MMBtu/year (any consecutive 12-month period). Determination of these heat input limits are based on operating and ambient conditions at full load, evaporative cooler on and 12 degrees Fahrenheit. There is no limit on the hours of operation of the stationary gas turbines.

Duct Burners

Heat input for each duct burner, based on the higher heating value of natural gas, is limited to 700 MMBtu/hr and 2,145,000 MMBtu/year (any consecutive 12-month period). Determination of these heat input limits are based on operating and ambient conditions at full load and 108 degrees Fahrenheit. Each duct burner is permitted to operate up to an equivalent 3,064 hours equivalent full load at 108 degrees Fahrenheit at a maximum heat input per any consecutive 12-month period.

Auxiliary Boiler

Heat input for the auxiliary boiler, based on the higher heating value of natural gas, is limited to 40 MMBtu/hr and 100,000 MMBtu/year (any consecutive 12-month period). Determination of these heat input limits are based on operating and ambient conditions at full load and 67 degrees Fahrenheit. The auxiliary boiler is permitted to operate up to an equivalent of 2,500 hours equivalent full load at 67 degrees Fahrenheit at a maximum heat input per any consecutive 12-month period.

Emergency Fire Pump

The emergency engine-driven diesel fire pump is installed at the site to ensure the availability of fire-fighting water, even in the event of a power failure. The unit has a rating of 265 hp. This unit is permitted to operate up to 100 hours per year for testing and maintenance. There is no limit on the hours of operation in the event of an emergency.



## E. Proposed Exemptions

No proposed exemptions.

## III. EMISSIONS INFORMATION

### A. Total Source Potential to Emit

Table III-A-1 reflects the sum of the PTEs of all permitted emission units. The source is major for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub> and CO and minor for SO<sub>x</sub>, VOC and HAP.

**Table III-A-1: Total Source PTE (tons per year)**

Pollutant	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP	GHG <sup>1</sup>
<b>PTE Totals</b>	<b>144.91</b>	<b>144.91</b>	<b>158.58</b>	<b>194.04</b>	<b>10.44</b>	<b>43.53</b>	<b>7.21</b>	<b>2,836,682</b>
<b>Major Source Thresholds</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>10/25<sup>2</sup></b>	<b>-</b>

<sup>1</sup>GHG is expressed as CO<sub>2e</sub> for information only.

<sup>2</sup>25 tons for combination of all HAPs (no single HAP exceeds 10 tons).

The PTE of the GHG pollutant (Table III-A-2) reflects the individual pollutants, as submitted by the source, and converted into tons per year, where applicable. This PTE is not a source-wide cap on the GHG PTE.

**Table III-A-2: Source GHG PTE (tons per year)**

CO <sub>2</sub>	CH <sub>4</sub> <sup>1</sup>	N <sub>2</sub> O <sup>1</sup>
2,683,124	3,490.23	162,070

<sup>1</sup> Expressed as CO<sub>2e</sub>

### B. Equipment Description

The air emission points and associated major equipment are listed below.

Two (2) Westinghouse 501FD Stationary Gas Turbines

- 175 MW each
- Natural gas fired
- Inlet air filters with filter cleaning system
- EU Identification A01 and A03

Two (2) Duct Burners

- 700 MMBtu/hr each
- Natural gas fired
- EU Identification A02 and A04

Auxiliary Boiler

- 40 MMBtu/hr
- Natural gas fired

Emergency Fire Pump

- 265 hp
- Diesel fired

Insignificant Units

- Mobile combustion sources
- Station maintenance activities

- Maintenance shop activitied (e.g. parts washers, sandblasters)
- Steam cleaning operations
- Diesel storage tank for the emergency fire pump
- Lubrication oil sumps and vents
- Ammonia storage and handling

**C. Emission Units, Emission Limitations, PTE and EI**

The stationary source covered by this Part 70 OP is defined to consist of the emission units summarized in Table III-C-1.

**Table III-C-1: Source Emission Units**

EU	Description	Rating	Make	Model #	Serial #
A01	Stationary Gas Turbine, natural gas fired, MEQ = 175	175 MW	Westinghouse	501FD	---
A02	Duct Burner for HRSG associated with A01	700 MMBtu/hr	---	---	---
A03	Stationary Gas Turbine, natural gas fired, MEQ = 175	175 MW	Westinghouse	501FD	---
A04	Duct Burner for HRSG associated with A03	700 MMBtu/hr	---	---	---
A05	Auxiliary Boiler	40 MMBtu/hr	English Boiler and Tube	30DE250	22-007
A06	Emergency Diesel Fire Pump, DOM: 1999	265 bhp	John Deere	6081AF001	RG6081A140717
		pump	Clarke	8100	01-034838-01-01

Stationary Gas Turbines and Duct Burners (EUs: A01/A02 and A03/A04)

Hourly emission limits for each stationary gas turbine are based on 100 percent load at 12°F which corresponds to a heat input rate of 2,096 MMBtu/hr (based on higher heating value of natural gas). Hourly limits for each duct burner are based on equivalent full load at 108°F which corresponds to a heat input rate of 700 MMBtu/hr (based on higher heating value of natural gas). Annual emission limits for each stationary gas turbine and each duct burner are based on fuel limitations (heat input rates) of 15,365,000 MMBtu and 2,145,000 MMBtu, respectively, any consecutive 12-month period. HAP emissions are based on AP-42 emission factors; Table 3.1-3 for the turbines, Tables 1.4-3 and 1.4-4 for the duct burners, and Table 3.3-2 for the diesel fire pump. Formaldehyde is controlled through the use of an oxidation catalyst which provides an 85 percent control of its emissions. Since the change in HAP emissions from this unit is the result of a change related to AP-42 emission factors, the change will not count towards an EI for neither regulatory analysis nor billing.

Auxiliary Boiler (EU: A05)

Short term emissions from the boiler were based on AP-42 emission factors for all pollutants except CO and NO<sub>x</sub> which were based on 100 ppm and 30 ppm, respectively. Annual emission rates were based on 2,500 hours of operation per year.

Emergency Fire Pump (EU: A06)

Emission factors for the fire pump engine were provided by the source and use manufacturer's data. SO<sub>x</sub> and HAP are taken from AP-42. Since the change in emissions from this unit is the

result of a policy change related to 40 CFR 63, Subpart ZZZZ, the change will not count towards an EI for neither regulatory analysis nor billing.

**Table III-C-2: Emission Unit PTE, Including Startups and Shutdowns (tons per any consecutive 12-month period)<sup>1</sup>**

EU	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
A01/A02	72.20	72.20	77.90	95.15	5.20	21.65	3.56
A03/A04	72.20	72.20	77.90	95.15	5.20	21.65	3.56
A05	0.50	0.50	1.80	3.70	0.03	0.20	0.09
A06	0.01	0.01	0.98	0.04	0.01	0.03	0.01
<b>Total Source PTE</b>	<b>144.91</b>	<b>144.91</b>	<b>158.58</b>	<b>194.04</b>	<b>10.44</b>	<b>43.53</b>	<b>7.21</b>

<sup>1</sup> Annual emissions based on fuel limitations of stationary gas turbine and duct burner of 15,365,000 MMBtu/yr and 2,145,000 MMBtu/yr, respectively.

**Table III-C-3: Emission Unit PTE, Excluding Startups and Shutdowns (pounds per hour)<sup>1</sup>**

EU	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
A01/A02	21.10	21.10	25.70	31.38	1.68	9.90	2.14
A03/A04	21.10	21.10	25.70	31.38	1.68	9.90	2.14
A05	0.40	0.40	1.44	2.96	0.03	0.16	0.07
<b>Total</b>	<b>42.95</b>	<b>42.95</b>	<b>64.84</b>	<b>68.47</b>	<b>6.63</b>	<b>20.28</b>	<b>4.58</b>

<sup>1</sup> Emissions for each stationary gas turbine are based on 100 percent load at 12°F which corresponds to a heat input rate of 2,096 MMBtu/hr (HHV). Emissions for each duct burner are based on equivalent full load at 108°F which corresponds to a heat input rate of 700 MMBtu/hr.

**Table III-C-4: Emission Concentrations Excluding Startups and Shutdowns**

EU	Averaging Period	O <sub>2</sub> Standard	NO <sub>x</sub> (ppmvd)	CO (ppmvd)
A01/A02	3-Hour	15%	2.5	5.0
A03/A04	3-Hour	15%	2.5	5.0
A05	15-Minute	3%	30.0	100.0

The startup and shutdown emission rates listed in Table III-C-5 are not federally enforceable limits. These values are to be used when CEMS data is not available. The Permittee shall include actual startup and shutdown emissions in the annual mass emission reporting.

**Table III-C-5: Startup and Shutdown Emissions (pounds per hour)<sup>1</sup>**

EU	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC
A01, A02, A03 & A04	34.40	157.40	1,303.00	1.40	193.60

<sup>1</sup> Emissions include contribution from two turbine units and two HRSG units together.

**Table III-C-6: Estimated Source HAP Emissions (tons per year)**

Pollutant	Stationary Gas Turbines (EUs: A01 and A03 Combined) <sup>1</sup>	Duct Burners (EUs: A02 and A04 Combined) <sup>2</sup>	Auxiliary Boiler (EU: A05) <sup>2</sup>	Emergency Diesel Fire Pump (EU: A06) <sup>3</sup>
1,3 Butadiene	6.61E-03	---	---	3.42E-05
Acetaldehyde	6.15E-01	---	---	6.71E-04
Acrolein	9.83E-02	---	---	8.09E-05
Benzene	2.00E-02	4.42E-03	1.03E-04	8.16E-04
Ethylbenzene	4.92E-01	---	---	---
Formaldehyde	2.35E-01	2.37E-02 <sup>4</sup>	3.68E-03	1.03E-03

Pollutant	Stationary Gas Turbines (EUs: A01 and A03 Combined) <sup>1</sup>	Duct Burners (EUs: A02 and A04 Combined) <sup>2</sup>	Auxiliary Boiler (EU: A05) <sup>2</sup>	Emergency Diesel Fire Pump (EU: A06) <sup>3</sup>
Naphthalene	2.00E-02	1.28E-03	2.99E-05	-
PAH	3.38E-02	---	---	1.47E-04
Propylene Oxide	4.46E-01	---	---	---
Toluene	3.23E-01	7.15E-03	1.67E-04	3.58E-04
Xylenes	9.83E-01	---	---	2.49E-04
Polycyclic Organic Matter	---	1.85E-04	4.32E-06	---
Dichlorobenzene	---	2.52E-03	5.88E-05	---
Hexane	---	3.79E+00	8.82E-02	---
Arsenic Compounds	---	4.21E-04	9.80E-06	---
Beryllium Compounds	---	2.52E-05	5.88E-07	---
Cadmium Compounds	---	2.31E-03	5.39E-05	---
Chromium Compounds	---	2.94E-03	6.86E-05	---
Cobalt Compounds	---	1.77E-04	4.12E-06	---
Manganese Compounds	---	7.99E-04	1.86E-05	---
Mercury Compounds	--	5.47E-04	1.27E-05	--
Nickel Compounds	---	4.42E-03	1.03E-04	---
Selenium Compounds	---	5.05E-05	1.18E-06	---
<b>HAP Emissions Total</b>	<b>3.27</b>	<b>3.84</b>	<b>0.09</b>	<b>0.003</b>

<sup>1</sup> Emission factors from AP-42, Section 3.1-3. Except for benzene, formaldehyde, and toluene from Gas-fired Boiler and Turbine Air Toxics Summary Report, by Carnot Technical Services, Tustin, CA, for Gas Research Institute and the Electric Power Research Institute, August 1996.

<sup>2</sup> Emission factors from AP-42, Tables 1.4-3 and 1.4-4.

<sup>3</sup> Emission factors from AP-42, Table 3.3-2.

No single source-wide HAP emission exceeds 10 tons per year and total source-wide HAP emissions shall not exceed 25 tons per year. Therefore, this source is not subject to MACT for stationary gas turbines. The emergency fire pump is subject to management practices in a MACT standard (40 CFR 63, Subpart ZZZZ) since it is a reciprocating internal combustion engine operating at an area source of HAP emissions that is not commercial, residential or institutional.

#### Insignificant Units and Activities

A letter was submitted to Air Quality on July 11, 2011 requesting these units not be considered emission units. The calculations provided bear this out so they will be added to the Part 70 OP as Insignificant Units and Activities.

- Sandblaster
- Parts Washer

Ammonia is no longer a regulated pollutant in the AQR. Since the source is not in a populated area, and there are no nearby emissions of a potentially reactive nature, ammonia monitoring and record keeping requirements were removed from the Operating Permit. The source may wish to retain records of ammonia emissions should ammonia be identified as a PM<sub>2.5</sub> precursor in the future. Source has an ammonia potential to emit of 230.30 tons per year.

## D. Testing

Performance testing is subject to 40 CFR 60 Subpart A, Subpart Dc, 40 CFR 72 and Air Quality's Guideline for Source Testing. Required testing will be performed using the following methods:

Pursuant to Air Quality's Guideline for Source Testing, the Permittee shall conduct performance testing on the auxiliary boiler in accordance with the following methods once every five years:

**Table III-D-1: Performance Testing Requirements for Auxiliary Boiler**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NO <sub>x</sub>	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	Opacity	EPA Method 9
Stack Gas Parameters	-	EPA Methods 1, 2, 3A, and 4 <sup>1</sup>

<sup>1</sup> Method 4 is not required if the source uses Method 19 to calculate exhaust flow rate with an F factor derived from a site-specific fuel sample test.

Burner efficiency testing will be required twice a year according to Air Quality's Guidelines for Source Testing.

## E. Continuous Emissions Monitoring

To demonstrate continuous direct compliance with all emission limitations for NO<sub>x</sub> and CO specified in this permit, the source operates a continuous emission monitoring system (CEMS) for NO<sub>x</sub>, CO and O<sub>2</sub> on each stationary gas turbine unit in accordance with 40 CFR 60 and 75. The CEMS monitors and records the following parameters for each individual stationary gas turbine:

1. exhaust gas concentrations of NO<sub>x</sub>, CO, and diluent O<sub>2</sub> including periods of startup and shutdown;
2. exhaust gas flow rate (by direct or indirect methods);
3. fuel flow rate;
4. hours of operation;
5. 3-hour rolling averages of NO<sub>x</sub> and CO concentrations (in ppm);
6. hourly, daily and quarterly accumulated mass emissions of NO<sub>x</sub> and CO; and
7. hours of downtime of the CEMS.

Compliance with all emission limitations for SO<sub>x</sub> for the fire pump shall be demonstrated via certification of fuel sulfur analysis from the fuel oil supplier for each delivery or a quarterly certification from the natural gas supplier or gas testing analysis. The sulfur content of the natural gas shall not exceed an average of 0.75 grains/100 dscf as determined by 40 CFR 60.334(h).

Required periodic audit procedures and QA/QC procedures for CEMS shall conform to the provisions of 40 CFR 60, Appendix F. Relative accuracy test audits (RATA) of the CO, NO<sub>x</sub> and O<sub>2</sub> CEMS shall be conducted at least annually.

## IV. REGULATORY REVIEW

### A. Local Regulatory Requirements

Air Quality has determined that the following public law, statutes and associated regulations are applicable:

1. Clean Air Act, as amended (CAAA), Authority: 42 U.S.C. § 7401, et seq.;
2. Title 40 of the Code of Federal Regulations (CFR);
3. Nevada Revised Statutes (NRS), Chapter 445B;
4. Portions of the AQR that are included in the State Implementation Plan (SIP) for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from Authority to Construct permits and Section 16 Operating Permits issued by Air Quality are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and
5. Portions of the AQR that are not included in the SIP. These locally applicable requirements are locally enforceable only.

The Nevada Revised Statutes (NRS) and the Clean Air Act Amendments (CAAA) are public laws that establish the general authority for the Regulations mentioned.

The Air Quality Part 70 (Title V) Program received Final Approval on November 30, 2001 with publication of that approval appearing in the Federal Register December 5, 2001 Vol. 66, No. 234. AQR Section 19 - Part 70 Operating Permits [Amended 07/01/04] details the Clark County Part 70 Operating Permit Program. On September 20, 2010, Clark County submitted a revision to the operating permit program (AQR 12.5) pursuant to 40 CFR Part 70.4(i)(2). EPA has not acted on that request yet. These regulations may be accessed on the Internet at: [http://www.clarkcountynv.gov/depts/AirQuality/Pages/Rules\\_CurrentRulesandRegulations.aspx](http://www.clarkcountynv.gov/depts/AirQuality/Pages/Rules_CurrentRulesandRegulations.aspx)

Local regulations contain sections that are federally enforceable and sections that are locally enforceable only. Locally enforceable only rules have not been approved by EPA for inclusion into the State Implementation Plan (SIP). Requirements and conditions that appear in the Part 70 OP which are related only to non-SIP rules are notated as locally enforceable only.

**Table IV-A-1: AQR Section 12 Summary Table for This Source (As Addressed by Part 70 OP)**

	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>VOC</b>	<b>HAP</b>
<b>Air Quality Area</b>	PSD	PSD	PSD	PSD	PSD	PSD	PSD
<b>Source PTE (tpy)</b>	<b>144.91</b>	<b>144.91</b>	<b>158.58</b>	<b>194.04</b>	<b>10.44</b>	<b>43.53</b>	<b>7.21</b>
<b>Major Source</b>	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 10 tpy for each HAP, or ≥ 25 tpy for combined HAPs

**Discussion:** Walter M. Higgins III Generating Station is a major source of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub> and CO, and VOC and a source of GHG. Air Quality no longer regulates ammonia. As part of the original NSR Analysis, all of these emissions triggered notice of proposed action.

All Applicable Air Quality Regulations are included in the attachments.

## Increment Analysis

Air Quality modeled the source using AERMOD to track the increment consumption. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (1999 to 2003) of meteorological data from the McCarran Station and Desert Rock Station were used in the model. United States Geological Survey (USGS) National Elevation Dataset (NED) terrain data was used to calculate elevations. Table IV-A-2 presents the results of the modeling.

**Table IV-A-2: PSD Increment Consumption**

Pollutant	Averaging Period	PSD Increment Consumption by the Source (µg/m <sup>3</sup> )	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO <sub>2</sub>	3-hour	1.59 <sup>1</sup>	648802	3942151
SO <sub>2</sub>	24-hour	0.55 <sup>1</sup>	649052	3942555
SO <sub>2</sub>	Annual	0.08	648958	3942554
NO <sub>x</sub>	Annual	1.45	648958	3942554
PM <sub>10</sub>	24-hour	6.64 <sup>1</sup>	649052	3942555
PM <sub>10</sub>	Annual	0.67	649100	3942700

<sup>1</sup>Second High Concentration

Table IV-A-2 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

## B. Federally Applicable Regulations

### 40 CFR 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

#### Subpart A – General Provisions

##### 40 CFR 60.7 – Notification and record keeping

**Discussion:** This regulation requires notification to Air Quality of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device, CEMS data, and performance test data. These requirements are found in the Part 70 OP. Air Quality requires records to be maintained for five years, a more stringent requirement than the two years required by 40 CFR 60.7.

##### 40 CFR 60.8 – Performance tests

**Discussion:** These requirements are found in the Part 70 OP in the Testing Section. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. Air Quality

requirements for initial performance testing are identical to AQR Section 60.8. Air Quality also requires periodic performance testing on emission units based upon throughput or usage. More discussion is in this document under the compliance section.

#### **40 CFR 60.11 – Compliance with standards and maintenance requirements**

**Discussion:** Compliance with various applicable standards will be demonstrated by performance tests unless otherwise specified in the standard. The source is subject to 40 CFR 60 Subpart GG which requires fuel monitoring and sampling to meet a standard. Subpart GG requirements are addressed in the Part 70 OP. AQR Section 26 is more stringent than the federal opacity standards, setting a maximum of 20 percent opacity for a period of more than 6 consecutive minutes. Walter M. Higgins III Generating Station shall operate in a manner consistent with this section of the regulation.

#### **40 CFR 60.12 – Circumvention**

**Discussion:** This prohibition is addressed in the Part 70 OP. This is also local rule AQR 80.1.

#### **40 CFR 60.13 – Monitoring requirements**

**Discussion:** This section requires that CEMS meet 40 CFR 75 Appendix B and 40 CFR 60 Appendix F standards of operation, testing and performance criteria. The Part 70 OP contains the CEMS conditions and citations to 40 CFR 75 Appendix B and 40 CFR 60 Appendix F. In addition, the QA plan approved for the CEMS follows the requirements outlined including span time and recording time.

### **Subpart Da – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978**

#### **40 CFR 60.40Da – Applicability**

**Discussion:** The duct burners (EUs: A02 and A04) are subject to the provisions of this subpart. They each have a rated capacity of 700 MMBtu/hr.

#### **40 CFR 60.42Da – Standard for Particulate Matter**

**Discussion:** The manufacturer's performance data for the duct burners states that particulate emissions from the combustion of natural gas will yield 0.01 pounds per MMBtu, which is more stringent than the 0.03 pounds per MMBtu NSPS standard. Walter M. Higgins III Generating Stations shall be in compliance with this regulation. The Part 70 OP states that visible emissions from each stationary gas turbine/duct burner stack shall not exceed twenty (20) percent opacity for a period of more than 6 consecutive minutes. This is more stringent than the NSPS limits.

#### **40 CFR 60.43Da – Standard for Sulfur Dioxide**

**Discussion:** The manufacturer's performance data for the duct burners states that sulfur dioxide from the combustion of natural gas will yield 0.0006 pounds per MMBtu, which is more stringent than the NSPS standard. Walter M. Higgins III Generating Station will be in compliance with this standard.

#### **40 CFR 60.44Da – Standard for Nitrogen Oxides**

**Discussion:** According to the manufacturer, the duct burners operate at a full load input of 700 MMBtu per hour (HHV) each and will contribute approximately 25.7 pounds per



hour of NO<sub>x</sub> emissions each, less than the NSPS standard. The emission rate per duct burner can be calculated as follows:

$$25.7 \text{ pounds/hour} / 700 \text{ MMBtu/hr} = 0.04 \text{ pounds NO}_x \text{ per MMBtu}$$

Walter M. Higgins III Generating Station shall be in compliance with this standard.

#### **40 CFR 60.48Da – Compliance Provisions**

**Discussion:** Walter M. Higgins III Generating Station has separate emission standards during startup and shutdown. They are outlined in the Part 70 OP. Walter M. Higgins III Generating Station has completed all compliance demonstrations and has demonstrated compliance with all applicable emission standards for NO<sub>x</sub> and SO<sub>2</sub>. They also employ the use of CEMS on each of the stationary gas turbine stacks to monitor NO<sub>x</sub> emissions. The measurements to be taken are outlined in the Part 70 OP.

#### **40 CFR 60.49Da – Emissions Monitoring**

**Discussion:** The duct burners combust only natural gas; therefore, COMS and SO<sub>2</sub> CEMS are not required. Walter M. Higgins III Generating Station is subject to the requirements of 40 CFR 75; therefore, the data acquired by the NO<sub>x</sub> CEMS are allowed to be used to show compliance with both 40 CFR 60 Subpart Da and 40 CFR 75. The reporting requirements are outlined in the Part 70 OP. Also, the source has installed a diluent oxygen CEMS. The duct burners exhaust through the same stack as the combustion turbines; therefore, the monitors required for monitoring stationary gas turbine emissions will also monitor duct burner emissions. Monitoring requirements are outlined in the Part 70 OP.

#### **40 CFR 60.50Da – Compliance Determination Procedures and Methods**

**Discussion:** The compliance demonstration for this source is discussed in the Part 70 OP.

#### **40 CFR 60.51Da – Reporting Requirements**

**Discussion:** Reporting requirements are discussed in the Part 70 OP.

### **Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

#### **40 CFR 60.40c – Applicability and Delegation of Authority**

**Discussion:** The auxiliary boiler is rated at 40 MMBtu/hr; therefore, Subpart Dc is applicable to this unit.

#### **40 CFR 60.42c – Standard for Sulfur Dioxide**

**Discussion:** This section does not pertain to boilers that exclusively fire natural gas.

#### **40 CFR 60.43c – Standard for Particulate Matter**

**Discussion:** This section does not pertain to boilers that exclusively fire natural gas.

#### **40 CFR 60.48c – Reporting and Recordkeeping Requirements**

**Discussion:** Reporting and Recordkeeping Requirements are addressed in the Part 70 OP.

## **Subpart GG – Standards of Performance for Stationary Gas Turbines**

### **40 CFR 60.330 – Applicability and designation of affected facility**

**Discussion:** Subpart GG applies to the two stationary gas turbines at this source.

### **40 CFR 60.332 – Standard for nitrogen oxides**

**Discussion:** See Table V-D-1 of this document.

### **40 CFR 60.333 – Standard for sulfur dioxide**

**Discussion:** See Table V-D-1 of this document.

### **40 CFR 60.334 – Monitoring of operations**

**Discussion:** The requirements are stipulated in the Part 70 OP. Sulfur content shall be verified annually and based on data from the gas supplier.

### **40 CFR 60.335 – Test methods and procedures**

**Discussion:** These requirements are found in the conditions for performance testing found in the Part 70 OP.

## **Subpart KKKK – Standards of Performance for Stationary Combustion Turbines**

Subpart KKKK does not apply to the turbines at this source because the turbines did not commence construction, modification, or reconstruction after February 18, 2005.

## **40 CFR 63-NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES:**

### **Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

#### **40 CFR 63.6585 – Applicability**

**Discussion:** Subpart ZZZZ applies to the 265 hp emergency fire pump engine at this source.

#### **40 CFR 63.6595 – Date of Compliance**

**Discussion:** The source operating the emergency diesel fire pump complied with the applicable emission limitations and operating limitations before the applicability date of May 3, 2013.

#### **40 CFR 63.6603 – Emission Limitations and Operating Limitations**

**Discussion:** The requirements are stipulated in the Part 70 OP.

#### **40 CFR 63.6625 – Monitoring, Installation, Collection, Operation and Maintenance Requirements**

**Discussion:** The source must install a nonresettable hour meter if one is not already installed. The source must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent

practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

## **40 CFR 64 – COMPLIANCE ASSURANCE MONITORING**

### **40 CFR 64.2 – Applicability**

**Discussion:** CAM requirements contained in 40 CFR 64 are only applicable for an emission when that unit meets all of the following:

- The unit must be located at a major source for which a Part 70 or 71 permit is required.
- The unit must be subject to an emission limitation or standard.
- The unit must have uncontrolled potential emissions of at least the major source amount.
- The unit must use a control device to achieve compliance.

Additionally, certain exemptions under the CAM rule apply to those unit that are subject to requirements and compliance demonstration provisions under Titles IV and V to the Clean Air Act (CAA).

#### Stationary Gas Turbines/Duct Burners (EUs: A01/A02 and A03/A04)

Pursuant to 40 CFR 64.2(b)(1)(iii), NO<sub>x</sub> emissions are exempt from CAM requirements because acid rain program requirements are applicable. Pursuant to 40 CFR 64.2(b)(1)(vi), CO emissions are exempt because CO CEMS requirements are included in the Title V permit. EUs: A01/A02 and A03/A04 do not have any control device for PM<sub>10</sub> or SO<sub>2</sub> and the potential VOC emissions without add-on controls are less than the major source threshold. Therefore, EUs: A01/A02 and A03/A04 do not meet the CAM applicability criteria described above for PM<sub>10</sub>, VOC or SO<sub>2</sub>.

#### Auxiliary Boiler and Fire Pump (EUs: A05 and A06)

The potential emissions without add-on controls of each regulated air pollutant from the auxiliary boiler and fire pump are less than the major source threshold. Therefore, the CAM requirements do not apply for any regulated pollutant.

## **40 CFR 72 – ACID RAIN PERMITS REGULATION**

### **Subpart A – Acid Rain Program General Provisions**

#### **40 CFR 72.6 – Applicability**

**Discussion:** Walter M. Higgins III Generating Station is defined as a utility unit in the definitions of 40 CFR 72; therefore, the provisions of this regulation apply.

#### **40 CFR 72.9 – Standard Requirements**

**Discussion:** Walter M. Higgins III Generating Station has applied for all of the proper permits under this regulation.

### **Subpart B – Designated Representative**

**Discussion:** Walter M. Higgins III Generating Station has a Certificate of Representation for Designated Representative on file. They have fulfilled all requirements under this Subpart.

### **Subpart C – Acid Rain Permit Applications**

**Discussion:** Walter M. Higgins III Generating Station has applied for an acid rain permit.

### **Subpart D – Acid Rain Compliance Plan and Compliance Options**

**Discussion:** This Subpart discusses the individual requirements necessary for a complete compliance plan. A compliance plan exists for each stationary combustion turbine.

### **Subpart E – Acid Rain Permit Contents**

**Discussion:** Walter M. Higgins III Generating Station has applied for an acid rain permit and it will contain all information necessary to demonstrate compliance with this Subpart.

### **40 CFR 73 – ACID RAIN SULFUR DIOXIDE ALLOWANCE SYSTEM**

**Discussion:** Walter M. Higgins III Generating Station is an affected source pursuant to 40 CFR 72.6 because it fits the definition of a utility unit; therefore, this regulation shall apply.

### **Subpart B – Allowance Allocations**

**Discussion:** Walter M. Higgins III Generating Station is not listed on either Phase I or Phase II tables because it is a newer power plant; therefore, it will not have an initial allocation per 40 CFR 73.10.

### **Subpart C – Allowance Tracking System**

**Discussion:** A complete certificate of representation has been received and an account has been established for this source. Walter M. Higgins III Generating Station shall follow all guidelines and instructions presented in this Subpart while maintaining its allowance account.

### **Subpart D – Allowance Transfers**

**Discussion:** When an allowance transfer is necessary, Walter M. Higgins III Generating Station shall follow all procedures in this Subpart.

### **Subpart E – Auctions, Direct Sales and Independent Power Producers Written Guarantee**

**Discussion:** This Subpart outlines the auction process for allowance credits.

### **Subpart F – Energy Conservation and Renewable Energy Reserve**

**Discussion:** There are no qualified conservation measures or renewable energy generation processes at this source; therefore, this Subpart does not apply.

### **40 CFR 75 – CONTINUOUS EMISSION MONITORING**

**Discussion:** Walter M. Higgins III Generating Station is subject to the Acid Rain emission limitations of 40 CFR 72; therefore, the facility is subject to the monitoring requirements of this regulation.

Each stationary gas turbine/duct burner has been equipped with a NO<sub>x</sub> CEMS and a diluent oxygen monitor. Each stationary gas turbine is also equipped with a fuel flow

monitor. The data from the CEMS is used to provide quarterly acid rain reports to both EPA and Air Quality.

All required monitoring plans, RATA testing protocols and certification testing reports have been provided to EPA and Air Quality. Initial CEMS certification testing was completed on November 23, 2003. The CEMS Quality Assurance Plan was submitted to Air Quality on February 12, 2003 and approved on August 11, 2003.

## V. COMPLIANCE

### A. Compliance Certification

12.5.2.8(e) Requirements for compliance certification:

- (a) Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to Air Quality shall be as follows:

**Table V-A-1: Reporting Schedule**

Required Report	Applicable Period	Due Date <sup>1</sup>
Semiannual Report for 1 <sup>st</sup> Six-Month Period	January, February, March, April, May, June	July 30 each year
Semiannual Report for 2 <sup>nd</sup> Six-Month Period, any additional annual records required	July, August, September, October, November, December	January 30 each year
Annual Compliance Certification Report	Calendar Year	January 30 each year
Annual Emission Inventory Report	Calendar Year	March 31 each year
Excess Emission Notification	As Required	Within 24 hours of the time the Permittee first learns of the excess emissions
Excess Emission Report	As Required	Within 72 hours of the Excess Emission Notification
Deviation Report	As Required	Along with semiannual reports
Performance Testing	As Required	Within 60 days from the end of the test

<sup>1</sup> Each report shall be submitted by the due date listed. If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day.

- (b) A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
- (c) A schedule for submission of compliance certifications during the permit term.
- (d) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

**B. Compliance Summary**

**Table V-B-1: AQR Applicable to Walter M. Higgins III Generating Station**

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 0	Definitions	Applicable – Walter M. Higgins III Generating Station will comply with all applicable definitions as they apply.	Walter M. Higgins III Generating Station will meet all applicable test methods should new definitions apply.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 4	Control Officer	Applicable – The Control Officer or his representative may enter into Walter M. Higgins III Generating Station property, with or without prior notice, at any reasonable time for purpose of establishing compliance with permit regulations	Walter M. Higgins III Generating Station will allow Control Officer to enter property as required.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 12.5	Part 70 OPs	Applicable – Walter M. Higgins III Generating Station is a major stationary source and under Part 70. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months of commencing operation of the new emission unit.	Walter M. Higgins III Generating Station submitted the initial Part 70 permit application within 12 months of startup. The renewal application was submitted within the appropriate timeframe.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 13.2.82 Subpart ZZZZ	NESHAP – Stationary Reciprocating Internal Combustion Engines	Applicable – The Walter M. Higgins III Generating Station fire pump is an affected unit.	Applicable monitoring requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 14.1.b.1 Subpart A	NSPS – General Provisions	Applicable – Walter M. Higgins III Generating Station is an affected facility under the regulations. The NSPS standards they reference are federally enforceable.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.

<b>Citation</b>	<b>Title</b>	<b>Applicability</b>	<b>Applicable Test Method</b>	<b>Compliance Status</b>
AQR Section 14.1.b.3 Subpart Da	NSPS – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978	Applicable – The Walter M. Higgins III Generating Station duct burners are natural gas fired units with heat input greater than 250 MMBtu/hr.	All duct burners meet the applicable PM, SO <sub>2</sub> and NO <sub>x</sub> emission standards. The duct burners also meet the opacity requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 14.1.b.5 Subpart Dc	NSPS – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Applicable – The Walter M. Higgins III Generating Station auxiliary boiler is a natural gas fired units with heat input greater than 10 MMBtu/hr.	The auxiliary boiler will meet the appropriate requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 14.1.b.40 Subpart GG	NSPS – Standards of Performance for Stationary Gas Turbines	Applicable – The Walter M. Higgins III Generating Station stationary gas turbines are natural gas fired units with heat input greater than 10 MMBtu/hr.	All stationary gas turbines meet the applicable NO <sub>x</sub> emission standard. When firing on natural gas, NO <sub>x</sub> emissions shall not exceed 2.5 ppmv (dry, corrected to 15 percent oxygen). NO <sub>x</sub> emissions determined by EPA Method 7E.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 18	Permit and Technical Service Fees	Applicable – Walter M. Higgins III Generating Station will be required to pay all required/applicable permit and technical service fees.	Walter M. Higgins III Generating Station is required to pay all required/applicable permit and technical service fees.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 21	Acid Rain Permits	Applicable – Walter M. Higgins III Generating Station is an affected facility. The stationary combustion turbines are applicable under the Acid Rain Program.	Walter M. Higgins III Generating Station submitted required acid rain permit forms/applications.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 22	Acid Rain Continuous Emission Monitoring	Applicable – Walter M. Higgins III Generating Station an affected facility and is required to meet the requirements for the monitoring, recordkeeping and reporting of flow rate.	Walter M. Higgins III Generating Station submitted all required protocols/test plans per ATC prior to CEMS certification.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 25	Upset/Breakdown, Malfunctions	Applicable – Any upset, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to Control Officer. Section 25.1 is locally and federally enforceable.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within 24 hours of onset of such event.	The Walter M. Higgins III Generating Station currently complies with applicable requirements.
AQR Section 26	Emissions of Visible Air Contaminants	Applicable – Opacity for the any emission unit may not exceed 20 percent for more than 6 consecutive minutes.	Compliance determined by EPA Method 9.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 28	Fuel Burning Equipment	Applicable – The PM emission rates for all stationary gas turbines are well below those established based on Section 28 requirements.	Maximum allowable PM emission rate determined from equation in Section 28.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 40	Prohibition of Nuisance Conditions	Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. Section 40 is locally enforceable only.	Walter M. Higgins III Generating Station air contaminant emissions controlled by pollution control devices or good combustion and thus will not cause a nuisance.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 41	Fugitive Dust	Applicable – Walter M. Higgins III Generating Station shall take necessary actions to abate fugitive dust from becoming airborne.	Walter M. Higgins III Generating Station utilizes appropriate best practices to not allow airborne fugitive dust.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 42	Open Burning	Applicable – In event Walter M. Higgins III Generating Station burns combustible material in any open areas, such burning activity will have been approved by Control Officer in advance. Section 42 is a locally enforceable rule only.	Walter M. Higgins III Generating Station will contact the Air Quality and obtain approval in advance for applicable burning activities as identified in the rule.	Walter M. Higgins III Generating Station complies with applicable requirements.



<b>Citation</b>	<b>Title</b>	<b>Applicability</b>	<b>Applicable Test Method</b>	<b>Compliance Status</b>
AQR Section 43	Odors in the Ambient Air	Applicable – An odor occurrence is a violation if the Control Officer is able to detect the odor twice within a period of an hour, if the odor causes a nuisance, and if the detection of odors is separated by at least 15 minutes. Section 43 is a local enforceable rule only.	Walter M. Higgins III Generating Station is a predominantly natural gas-fired facility and is not expected to cause odors.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 70.4	Emergency Procedures	Applicable – Walter M. Higgins III Generating Station submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Section 16 OP Application.	Walter M. Higgins III Generating Station submitted an emergency standby plan and received the Section 16 OP.	Walter M. Higgins III Generating Station complies with applicable requirements.

**Table V-B-2: Federal Air Quality Regulations Applicable to Walter M. Higgins III Generating Station**

<b>Citation</b>	<b>Title</b>	<b>Applicability</b>	<b>Applicable Test Method</b>	<b>Compliance Status</b>
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)	Applicable – Walter M. Higgins III Generating Station PTE > 100 TPY and is listed as one of the 28 source categories.	BACT analysis, air quality analysis using modeling, and visibility and additional impact analysis performed for original ATC permits.	Walter M. Higgins III Generating Station complies with applicable sections as required by PSD regulations.
40 CFR Part 52.1470	SIP Rules	Applicable – Walter M. Higgins III Generating Station is classified as a Title V source, and SIP rules apply.	Applicable monitoring and record keeping of emissions data.	Walter M. Higgins III Generating Station is in compliance with applicable state SIP requirements including monitoring and record keeping of emissions data.
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions	Applicable – Walter M. Higgins III Generating Station is an affected facility under the regulations.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 60, Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978	Applicable – The Walter M. Higgins III Generating Station stationary gas turbines are applicable subject to the requirements of this Subpart.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.

<b>Citation</b>	<b>Title</b>	<b>Applicability</b>	<b>Applicable Test Method</b>	<b>Compliance Status</b>
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Applicable – The Walter M. Higgins III Generating Station auxiliary boiler is subject to the requirements of this Subpart.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 60, Subpart GG	Standards of Performance for New Stationary Sources (NSPS) – Stationary Gas Turbines	Applicable – The Walter M. Higgins III Generating Station stationary gas turbines are natural gas-fired units with heat input greater than 10 MMBtu/hr.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)	Applicable – Emissions from stacks are subject to opacity standards.	Opacity determined by EPA Method 9.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 63, Subpart ZZZZ	Emission Standards for Hazardous Air Pollutants	Applicable – The Walter M. Higgins III Generating Station diesel emergency fire pump is subject to the requirements of this subpart	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station must have been in compliance with the applicable requirements on and after May 3, 2013.
40 CFR Part 64	Compliance Assurance Monitoring	Not Applicable – Walter M. Higgins III Generating Station has CEMS to monitor NO <sub>x</sub> and CO emissions.	Walter M. Higgins III Generating Station continuously monitors NO <sub>x</sub> and CO emissions with CEMS.	Not Applicable.
40 CFR Part 70	Federally Mandated OPs	Applicable – Walter M. Higgins III Generating Station is a major stationary source and under Part 70 the initial Title V permit application was submitted as required. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months or commencing operation of any new emission unit.	Walter M. Higgins III Generating Station submitted a renewal application on May 7, 2009. Applications for new units will be submitted within 12 months of startup.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 72	Acid Rain Permits Regulation	Applicable – Walter M. Higgins III Generating Station is applicable to the requirements under this regulation.	Walter M. Higgins III Generating Station has submitted the required application and notifications.	Walter M. Higgins III Generating Station complies with applicable requirements.

<b>Citation</b>	<b>Title</b>	<b>Applicability</b>	<b>Applicable Test Method</b>	<b>Compliance Status</b>
40 CFR Part 73	Acid Rain Sulfur Dioxide Allowance System	Applicable – Walter M. Higgins III Generating Station is applicable to the requirements under this regulation.	Walter M. Higgins III Generating Station will obtain SO <sub>2</sub> allowances based on the actual emissions recorded annually by the CEMS.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 75	Acid Rain CEMS	Applicable – Walter M. Higgins III Generating Station is applicable to the requirements under this regulation.	Walter M. Higgins III Generating Station will comply with all monitoring, recordkeeping and reporting for SO <sub>2</sub> , NO <sub>x</sub> and CO <sub>2</sub> emissions and flow rate from affected units under the Acid Rain Program.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 82	Protection of Stratospheric Ozone	Applicable – Walter M. Higgins III Generating Station is subject to stratospheric ozone regulations based on 40 CFR 82.4.	Applicable.	Applicable.

### C. Permit Shield

Pursuant to AQR 12.5.2.9, a permit shield was requested by the source during this renewal.

EU	Regulation (40 CFR)	Pollutant	Regulatory Standard		Permit Limit		Value Comparison			Averaging Period Comparison			Shield Statement
			Value	Units	Value	Units	Standard Value, in Units of Permit Limit	Permit Limit Value	Is Permit Limit Equal or More Stringent?	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent?	
A01/A02 A03/A04	60.332 (GG)	NO <sub>x</sub>	75 <sup>1</sup>	ppmvd @ 15% O <sub>2</sub>	2.5	ppmvd @ 15% O <sub>2</sub>	75	2.5	Yes	4 hour	3 hour	Yes	The permit limit is more stringent than the standard, based upon both concentration and averaging time, therefore the facility should be shielded from the standard.
A01/A02 A03/A04	60.333 (GG)	SO <sub>2</sub>	0.015	% by volume at 15% O <sub>2</sub>	0.5 <sup>2</sup>	gr sulfur/100 scf	255	0.5	Yes	monitoring not required under 60.334(h)(3)	monthly	Yes	
A01/A02 A03/A04	60.333 (GG)	Sulfur	0.8	% by weight	0.5 <sup>2</sup>	gr sulfur/100 scf	250	0.5	Yes	monitoring not required under 60.334(h)(3)	monthly	Yes	
A01/A02 A03/A04	60.42(Da)	Opacity	20	%	20	%	20	20	Yes	6 minute block	6 minute rolling	Yes	
A01/A02 A03/A04	60.44(Da) <sup>2</sup>	NO <sub>x</sub>	1.6	lb NO <sub>x</sub> /MW-hr	25.7	lb NO <sub>x</sub> /hr	424	25.7	Yes	30-day rolling	1 hour	Yes	
A01/A02 A03/A04	60.43(Da) <sup>3</sup>	SO <sub>2</sub>	0.2	lb SO <sub>2</sub> /MMBtu	0.5 <sup>3</sup>	gr sulfur/100 scf	66.5	0.5	yes	monitoring not required under 60.49Da(b)	monthly	yes	

<sup>1</sup> The 40 CFR 60.332 NO<sub>x</sub> standard is a formula; the value used here (75 ppmvd) is the minimum possible value of the standard for any emission unit.

<sup>2</sup> The steam generating unit has no electrical output. Therefore, NO<sub>x</sub> emissions in units of lb/MW-hr cannot be determined. To resolve this, each gas turbine and heat recovery steam generator/duct burner were treated as a "unit" with one half of the steam turbine in order to compare the permit NO<sub>x</sub> limit to the Subpart Da limit. In this manner, for each "unit", electrical output was calculated to be half of the combined cycle nominal output (530 MW /2 = 265 MW).

<sup>3</sup> Facility required to combust only pipeline natural gas which by definition contains less than 0.5 grains per 100 scf sulfur content. The averaging period is per Part 75 Appendix D which allows for monthly averaging or a single sample, depending on the circumstances. AP-42 Table 3.1-2a and the lower heating value for pipeline natural gas (950 Btu/scf) were used to convert the regulatory sulfur standard to the comparable permit limit value. EPA Method 19 Equation 19-1 and 40CFR75 Appendix D Equation D-1h were used to convert the regulatory SO<sub>2</sub> standard.

### D. Streamlining Demonstration

Table V-D-1: 40 CFR 60 Subparts Da, Dc and GG Streamlining Demonstration

EU	Regulation (40 CFR)	Regulatory Standard	Permit Limit	Value Comparison (in Units of the Permit Limit)			Averaging Period Comparison			Streamlining Statement for Shielding Purposes
				Standard Value	Permit Limit Value	Is Permit Limit Equal or More Stringent?	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent?	
A01/ A02 A03/ A04	60.332 (GG)	75 ppmvd NO <sub>x</sub> @ 15% O <sub>2</sub> <sup>(1)</sup>	2.5 ppmvd NO <sub>x</sub> @ 15% O <sub>2</sub>	75 <sup>(1)</sup>	2.5	Yes	4 hour	3 hour	Yes	The permit limits are more stringent than the standard based

EU	Regulation (40 CFR)	Regulatory Standard	Permit Limit	Value Comparison (in Units of the Permit Limit)			Averaging Period Comparison			Streamlining Statement for Shielding Purposes
				Standard Value	Permit Limit Value	Is Permit Limit Equal or More Stringent?	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent?	
A01/ A02	60.333 (GG)	150 ppmvd (326 lbs/hr) SO <sub>x</sub> @ 15% O <sub>2</sub>	1.68 lbs/hr SO <sub>x</sub> @ 15% O <sub>2</sub> (natural gas)	326	1.68	Yes	4 hour	3 hour	Yes	upon both concentration and averaging time. Compliance with the permit demonstrates compliance with the standard.
A03/ A04										
A01/ A02	60.333 (GG)	0.8% Sulfur by weight (280 gr/100 scf)	0.75 gr/100 scf	280	0.75	Yes	4 hour	rolling 12-month	Yes	
A03/ A04										
A01/ A02	60.42 (Da)	0.03 lb PM/MMBtu	21.10 lbs PM <sub>10</sub> /hr	83.88	21.10	Yes	30-day rolling	1 hour	Yes	The permit limits are more stringent than the standard based upon both concentration and averaging time. Compliance with the permit demonstrates compliance with the standard.
A03/ A04										
A01/ A02	60.42 (Da)	20% Opacity	20% Opacity	20	20	Yes	60-minute period, excepting 6 minutes	60-minute period, excepting 6 minutes	Yes	
A03/ A04										
A01/ A02	60.43 (Da)	0.20 lb SO <sub>2</sub> /MMBtu	1.68 lb SO <sub>2</sub> /hr	622.20	1.68	Yes	30-day rolling	1 hour	Yes	
A03/ A04										
A01/ A02	60.44 (Da)	0.20 lb NO <sub>x</sub> /MMBtu	2.5 ppm NO <sub>x</sub> @ 15% O <sub>2</sub>	54	2.5	Yes	30-day rolling	1 hour	Yes	
A03/ A04										
A01/ A02	60.44 (Da)	1.6 lb NO <sub>x</sub> /MW-hr	25.70 lb NO <sub>x</sub> /hr	280	25.70	Yes	30-day rolling	1 hour	Yes	
A03/ A04										

<sup>1</sup> The 40 CFR 60.332 NO<sub>x</sub> standard is the following formula:  $STD = 0.0075 * (14.4)/Y + F$ ; the calculated value (75 ppmvd) is the minimum possible value of the standard for any emission unit.

Where:

STD = allowable ISO corrected NO<sub>x</sub> emission concentration (percent by volume at 15 percent oxygen and on a dry basis);

Y = manufacturer's rated heat at manufacturer's rated load or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour (for the purposes of obtaining the minimum possible value of the standard, Y = 14.4; and

F = NO<sub>x</sub> emission allowance for fuel-bound nitrogen (N = the nitrogen content of the fuel). For the purposes of obtaining the minimum possible value of the standard, F = 0.

Fuel-bound nitrogen (percent by weight)	F (NO <sub>x</sub> percent by volume)
N ≤ .015	0
0.015 < N ≤ 0.1	0.04 (N)
0.1 < N ≤ 0.25	0.004+0.0067(N-0.1)
N > 0.25	0.005

<sup>2</sup> Sulfur content was converted from percent by weight to grains per 100 scf as follows: 0.8% sulfur = 56 gr sulfur per lb natural gas. AP-42 defines natural gas as generally more than 85 percent methane and varying amounts of ethane propane, butane, and inerts (typically nitrogen, carbon dioxide, and helium). Assuming an average molecular weight of 18 lb/lb-mol, 1 lb natural gas = 20 scf. Lastly, 56 grains sulfur per 20 scf natural gas = 280 gr/100 scf.

## E. Summary of Monitoring for Compliance

**Table V-E-1: Summary of Monitoring for Compliance**

Emission Unit	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
A01 & A03 A02 & A04	Stationary Gas Turbines and Duct Burners	CO, NO <sub>x</sub> , SO <sub>2</sub> , PM <sub>10</sub> , VOC, HAPs	AQR Sections 12.5 40 CFR 60 Subpart GG	Annual and short-term emission limits.	CEMS for NO <sub>x</sub> and CO.  Stack testing for VOC, PM <sub>10</sub> and opacity as outlined in Part 70 OP.  Compliance for SO <sub>2</sub> and HAPs shall be based on sole use of natural gas as fuel and emission factors.  Recording is required for compliance demonstration.
A01 & A03 A02 & A04	Stationary Gas Turbines and Duct Burners	Opacity	AQR Section 26	Less than 20 % opacity.	Use of natural gas as fuel and good combustion practices as well as EPA Method 9 performance testing upon the request of the Control Officer.
A05	Auxiliary Boiler	CO, NO <sub>x</sub> , SO <sub>2</sub> , PM <sub>10</sub> , VOC, HAPs	AQR Sections 12.5 40 CFR 60 Subpart Dc	Annual and short-term emission limits.	Stack testing for NO <sub>x</sub> and CO by EPA Methods as outlined in Part 70 OP.  Compliance for PM <sub>10</sub> , SO <sub>2</sub> , VOC and HAPs shall be based on sole use of natural gas as fuel and emission factors.  Recording is required for compliance demonstration.
A05	Auxiliary Boiler	Opacity	AQR Section 26	Less than 20 % opacity.	Use of natural gas as fuel and good combustion practices as well as visual emission checks as outline in Part 70 OP.

Emission Unit	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
A06	Diesel Fire Pump	CO, NO <sub>x</sub> , SO <sub>2</sub> , PM <sub>10</sub> , VOC, HAPs	AQR Sections 12.5 40 CFR Subpart ZZZZ	Restricted testing hours	Compliance for regulated pollutants shall be based on sole use of ultra-low-sulfur diesel fuel and emission factors.  Recording is required for compliance demonstration.
A06	Diesel Fire Pump	Opacity	AQR Section 26	Less than 20 % opacity.	Sole use of ultra-low-sulfur diesel fuel and quarterly visual emission checks as outlined in Part 70 OP.

## **VI. EMISSION REDUCTION CREDITS (OFFSETS)**

The source is subject to offset requirements in accordance with AQR Section 12.7. Offset requirements and associated mitigation are pollutant-specific. The source has no federal offset requirements associated with this permitting action.

## **VII. ADMINISTRATIVE REQUIREMENTS**

AQR Section 12.5 requires that Air Quality identify the original authority for each term or condition in the Part 70 OP. Such reference of origin or citation is denoted by [italic text in brackets] after each Part 70 Permit condition.

Air Quality proposes to issue the Part 70 OP conditions on the following basis:

### **Legal:**

On December 5, 2001 in Federal Register Volume 66, Number 234 FR30097 the EPA fully approved the Title V OP Program submitted for the purpose of complying with the Title V requirements of the 1990 CAAA and implementing Part 70 of Title 40 Code of Federal Regulations.

### **Factual:**

Walter M. Higgins III Generating Station has supplied all the necessary information for Air Quality to draft Part 70 OP conditions encompassing all applicable requirements and corresponding compliance.

### **Conclusion:**

Air Quality has determined that Walter M. Higgins III Generating Station will continue to determine compliance through the use of CEMS, performance testing, quarterly reporting, daily record keeping, coupled with annual certifications of compliance. Air Quality proceeds with the preliminary decision that a Part 70 OP should be issued as drafted to Walter M. Higgins III Generating Station for a period not to exceed five years.



## Attachments

<b>EU#</b>	A06	<b>Horsepower:</b>	265		<b>Emission Factor</b>	<b>Control</b>	<b>Potential Emissions</b>			
<b>Make:</b>	Clarke	<b>Hours/Day:</b>	1.0		(lb/hp-hr)	Efficiency	lb/hr	lb/day	ton/yr	
<b>Model:</b>		<b>Hours/Year</b>	500		PM10	1.54E-04	0.00%	0.04	0.04	0.01
<b>S/N:</b>					NOx	1.48E-02	0.00%	3.91	3.91	0.98
<b>Manufacturer Guarantees</b>					CO	6.39E-04	0.00%	0.17	0.17	0.04
<b>PM10</b>	0.07	g/hp-hr	▼		SOx	1.21E-05	0.00%	0.01	0.01	0.01
<b>NOx</b>	6.7	g/hp-hr	▼		VOC	5.07E-04	0.00%	0.13	0.13	0.03
<b>CO</b>	0.29	g/hp-hr	▼		HAP	4.52E-05	0.00%	0.01	0.01	0.01
<b>SOx</b>		g/hp-hr	▼							
<b>VOC</b>	0.23	g/hp-hr	▼							
<b>Engine Type:</b>	Diesel	▼			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)					

## Clark County Air Quality – AQR with Source Compliance or Requirement

Applicable Section – Title	Applicable Subsection - Title	SIP	Affected Emission Unit
0. Definitions	applicable definitions	yes	entire source
1. Definitions	“Affected Facility”, “Dust”, “Existing Gasoline Station”, “Fumes”, “Mist”, “New Gasoline Stations”, “New Source”, “Single Source”, “Standard Conditions”, “Uncombined Water”.	yes	entire source
2. Air Pollution Control Board	all subsections	yes	entire source
4. Control Officer	all subsections	partial	entire source
5. Interference with Control Officer	all subsections	yes	entire source
6. Injunctive Relief	all subsections	yes	entire source
7. Hearing Board and Hearing Officer	all subsections	no	entire source
8. Persons Liable for Penalties - Punishment: Defense	all subsections	yes	entire source
9. Civil Penalties	all subsections	no	entire source
10. Compliance Schedule	when applicable; applicable subsections	yes	entire source
12.0. Applicability, General Requirements and Transition Procedures	all subsections	yes	entire source
12.2 Prevention of Significant Deterioration in Attainment Areas	all subsections	yes	entire source
12.4 Authority to Construct Permit Requirements for Part 70 Sources	all subsections	yes	entire source
12.5. Part 70 OP Requirements	applicable subsections	yes	entire source
12.6 Confidentiality	all subsections	yes	entire source

12.7 Emission Reduction Credits	all subsections	yes	entire source
12.9 Annual Emission Inventory Requirements	all subsections	yes	entire source
12.10 Continuous Monitoring Requirements for Stationary Sources	all subsections	yes	entire source
13. National Emission Standards for Hazardous Air Pollutants	CCAQR Section 13.2.82: Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	no	fire pump
14. New Source Performance Standards	CCAQR Section 14.1.b.40: Subpart GG Standards of Performance for Stationary Gas Turbines CCAQR Section 14.1.b.3: Subpart Da Standards of Performance for Electric Utility Steam Generating Units CCAQR Section 14.1.b.5: Subpart Dc - Standards of Performance for Industrial – Commercial – Institutional Steam Generating Units	no	Stationary Gas Turbines and auxiliary boiler
18. Permit and Technical Service Fees	18.1 OP Fees 18.2 Annual Emission Unit Fees 18.4 New Source Review Application Review Fee 18.5 Part 70 Application Review Fee 18.6 Annual Part 70 Emission Fee 18.14 Billing Procedures	partial	entire source
21. Acid Rain Permits	all subsections	no	entire source
22. Acid Rain Continuous Emissions Monitoring	all subsections	no	entire source
24. Sampling and Testing - Records and Reports	§ 24.1 Requirements for installation and maintenance of sampling and testing facilities § 24.2 Requirements for emissions record keeping § 24.3 Requirements for the record format § 24.4 Requirements for the retention of records by the emission sources (Note: Repealed from SIP on Oct 17, 2014)	no	entire source
25.1 Upset/Breakdown, Malfunctions (1981)	§ 25.1 Requirements for the excess emissions caused by upset/breakdown and malfunctions	no	entire source
25.2 Upset/Breakdown, Malfunctions (1981)	§ 25.2 Reporting and Consultation	yes	entire source

26. Emission of Visible Air Contaminants	26.1 Limit on opacity ( $\leq$ 20 percent for 6 minutes in a 60-minute period)	yes	entire source
27. Particulate Matter from Process Weight Rate	all subsections	yes	entire source
28. Fuel Burning Equipment	Emission Limitations for PM	yes	entire source
29. Sulfur Contents of Fuel Oil	Repealed by County	yes	entire source
40. Prohibitions of Nuisance Conditions	40.1 Prohibitions	no	entire source
41. Fugitive Dust	41.1 Prohibitions	yes	entire source
42. Open Burning	42.2	no	entire source
43. Odors In the Ambient Air	43.1 Prohibitions coded as Section 29	no	entire source
60. Evaporation and Leakage	all subsections Repealed by County and from SIP in 2011	no	entire source
70. Emergency Procedures	all subsections	yes	entire source
80. Circumvention	all subsections	yes	entire source
81. Provisions of Regulations Severable	all subsections	yes	entire source