

TECHNICAL SUPPORT DOCUMENT (TSD)

August 10, 2020

I. GENERAL COMMENTS

A. Company Information

Business Name: Tucson Electric Power – North Loop Generating Station (TEP-NLGS)
Facility Address: 10600 N. Casa Grande Highway
Mailing Address: 88 East Broadway, Mail Stop HQW602, P.O. Box 711 Tucson, AZ 85702

B. Background

The facility consists of three Westinghouse 27 MWe simple cycle gas turbine generators (NLGT1, NLGT 2, & NLGT 3) and one 21.5 MWe simple cycle gas turbine generator (NLGT4). The units are primarily used as "peaking" generators and are only fired when electrical demand requires their use. Units NLGT1 - 3 were installed prior to 1976 and are not subject to any New Source Performance Standards (NSPS); additionally they are not subject to Compliance Assurance Monitoring (CAM) under 40 CFR Part 64 since they do not have any control devices. The diesel starter motors for these units are subject to 40 CFR 63, Subpart ZZZZ. Unit 4 was installed in 2001 and is subject to the NSPS, 40 CFR 60, Subpart GG. NLGT4 is limited to emit no more than 40 tons of nitrogen oxide (NO_x) concentrations and 100 tons of Carbon Monoxide (CO) concentrations per year calculated as a 12 month rolling total. NLGT4 uses water injection technology to reduce NO_x concentrations to below the required NSPS limit.

The majority of the emitted pollutants are due to the operation of the combustion turbines. NLGT1 - 3 primarily fire natural gas during normal operations but can fire fuel oil as an alternate fuel. These units have diesel fuel fired starter engines rated at 635 horsepower which operate for a brief period (about 12 min.) to start the turbine. NLGT1 – 3 are also designed with speed reducers that connect the turbine to the generator and are equipped with lube oil vapor extraction systems. NLGT4 is exclusively fired on pipeline quality natural gas and uses an electric start motor. The facility also maintains a 3,034,858 gallon fuel oil storage tank and other ancillary support equipment.

C. Attainment Classification

The NLGS is located in a region that is designated as attainment for all criteria pollutants.

D. Permit Actions

The Table below summarizes the permit actions taken since the last permit renewal, January 18, 2019.

Summary of Permit Actions Within the Current Permit Term

Received/ Approved	Permit Action
<p>Received 01/30/2020</p> <p>Approved 02/13/2020</p>	<p>1053-102P Administrative Permit Amendment:</p> <p>TEP Requests three administrative permit amendments:</p> <ol style="list-style-type: none"> 1. The compliance certification due date to be changed from January 31st to February 15th, 2. Renumber the conditions in Section 1 Part B because conditions 25 and 26 are repeated in Section 2 of Part B, 3. Change the facility name in the footers, starting on Page 16 of the permit, from DeMoss Petrie Generating Station to North Loop Generating Station. <p>No change in PTE.</p>
<p>Received 08/10/2020</p> <p>Approved 08/10/2020</p>	<p>1053-0104P Administrative Permit Amendment</p> <p>TEP Requests one administrative permit amendment to correct typographical error. Permit condition 50.a - replace 60.332(a)(2) with 60.332(a)(1).</p> <p>TEP elects to not apply a NO_x emission allowance for fuel-bound nitrogen, so F = 0, as described in 40 CFR 60.332(a)(4). Therefore, Condition 50.b, which describes how to calculate F, is not applicable. Condition removed.</p>

II. SOURCE DESCRIPTION

A. Process Description

The gas turbines at the generating station convert energy from the combustion of fuel and compressed air into mechanical energy by using the expanding high pressure and temperature gases to turn a rotor assembly and produce shaft work output. The output drive shaft is coupled to a generator that produces electricity. The turbines are simple cycle turbines that expel exhaust gases without heat recovery.

Each gas turbine generator at the facility is a modular self-contained operating system consisting of an axial compressor, combustion turbine, and electric generator. The process begins with ambient air being drawn through air filters into the inlet plenum and compressed in the axial flow compressor section of the gas turbine. Next, the pressurized air from the compressor section is expelled into the combustion chamber where it is mixed with fuel and ignited in the reaction zone of the turbine. Hot gases from each combustion chamber then expand through several nozzle and rotor stages to provide radial thrust to the rotor and are expelled to the exhaust plenum and through an exhaust stack to the atmosphere. Each turbine uses a starter motor that operates briefly to spin the rotor assembly to a set speed until there is enough air blowing through to ignite the fuel in the turbine.

1. NSPS Unit (NLGT4)

The gas turbine generator set is a simple cycle GE LM2500 with a maximum rated nameplate generating capacity of 21.5 Megawatts. The unit uses an electric motor to start up the turbine. The unit is fired exclusively on pipeline quality natural gas and is equipped with water injection technology to reduce NO_x below the levels required by the NSPS (40 CFR 60, Subpart GG). Water is injected at the combustor nozzle at a flow rate that is proportional to the fuel flow or unit load to

cool the flame temperature and thereby reduce oxides of nitrogen. Tuning of combustion conditions is done by finding the optimum conditions needed for effective combustion such as air intake, fuel flow, water injection, fuel-air mixture levels, etc. The unit also uses an evaporative cooler to cool inlet air to improve performance in the hot ambient air temperatures.

For this permit renewal, TEP has requested to remove the certified NO_x, CO, and diluent CEMS monitor that continuously monitors and quantifies the NO_x and CO emissions, and replace it with a system that continuously monitors and records the fuel consumption and ratio of water to fuel. The proposed NO_x monitoring replacement complies with the monitoring provisions prescribed under 60.334(a) of subpart GG. TEP will conduct a NO_x performance test to demonstrate compliance with the Subpart GG NO_x limit and establish parametric values and ranges for the unit. Compliance with the 40 tons/year NO_x emissions cap will be demonstrated using a NO_x emission factor equivalent to the Subpart GG NO_x limit of 75 ppmvds, 0.276 lb/MMBtu of NO_x and annual heat input in MMBtu to conservatively estimate NLGT4's annual NO_x emissions.

TEP also proposes to replace the CO/diluent CEMS with a methodology that uses a conservative CO emission factor. To demonstrate compliance with the 100 tons/year, a CO emission factor, 0.725 lb/MMBtu of CO, will be used in conjunction with the annual heat input in MMBtu to estimate NLGT4's annual CO emissions. The fixed CO emission factor is converted from 323.2 ppmvds, a conservative CO concentration value measured by the current CO CEMS at the historic 95th percentile concentration point.

2. Non-NSPS Units (NLGT1, 2, & 3)

The gas turbine generator sets are simple cycle Westinghouse Model W251-B models. Each unit has a maximum rated nameplate generating capacity of 27 MW. The units are primarily fueled by pipeline quality natural gas, but can fire fuel oil or a combination of the two fuels. These units use 635 horsepower diesel fueled engines to start the turbine. These turbines rotate at a higher speed than the generator and use a speed reducer to connect to the generator. The reducer is combined with the lubricating oil reservoir and oil pump assembly and is vented to the atmosphere through a lube oil vapor extractor. The units also use an evaporative cooler to improve performance in the hot ambient air temperatures.

B. Process Rate and Operating Hours

1. NSPS Unit (NLGT4)

The gas turbine's heat rate under full power is approximately 279.5 MMBtu/hr of pipeline quality natural gas (measured from fuel flow data under actual conditions, HHV = 1020 Btu/scf). The unit will be operated as a "peaking" unit. When operating, peaking units operate at or near full-load capacity. Periods of start-up conditions will be brief for this unit (see Section 2.1 of January 23, 2001 application). Maximum emissions are characterized on the basis of the full-load fuel consumption rate of 279.5 MMBtu per hour.

2. Non-NSPS Units (NLGT1, NLGT2 & NLGT3)

The three pre-NSPS turbines consume fuel at a rate of 432 MMBtu per hour when burning natural gas or fuel oil. These units have no operating restrictions (hours or emissions) as they were installed before 1976 and are thus “grandfathered” units not subject to NSPS or PSD regulations. No modifications subject to PSD have taken place since installation.

3. Operating Limitations

TEP-NLGS is required to keep the NLGT4 turbine’s NOx emissions below 40 tpy and CO emissions below 100 tpy. They are also required to keep NOx emissions below the NSPS emission standard (NSPS emission limit using actual measured heat rate of 13.72 KJ/Whr = 78.8 ppm). NLGT4 is limited to the use of pipeline natural gas only. The three older turbines may operate 365 days a year (8760 hours per year) and are limited to the use of fuel oil, natural gas, or a combination of the two. TEP-NLGS demonstrates compliance with this restriction by operating a continuous monitoring system (CMS) at NLGT4 to monitor the fuel consumption and water to fuel ratio fired in the turbine unit. Using CMS monitors for NLGT4 and keeping complete records of any changes in fuel for the other three turbines (See permit for more details). The starter engines are limited to 30 minutes for startup by 40 CFR Subpart ZZZZ and require periodic oil changes and maintenance inspections.

III. REGULATORY HISTORY

TEP-NLGS is currently in compliance with the permit and regulatory requirements.

A. Testing & Inspections

Inspections have been conducted regularly. The last completed inspection was concluded on April 9, 2018. The last performance test for NO_x and CO was on June 19, 2018. Both the inspection and performance test verified that the facility was in compliance with permit conditions.

B. Excess Emissions

There have been no reports of excess emissions from this facility or reports of permit deviations.

IV. EMISSIONS ESTIMATES

For Title V air permitting purposes, the major source threshold for a criteria air pollutant is 100 tpy and major hazardous air pollutants (HAPs) source threshold at 10 tpy of a single HAP or 25 tpy of any HAPs combination. Additionally a source that emits or has the potential to emit 75,000 tpy CO_{2e} or more is a major source of GHG emitting source for Title V permitting purposes. As shown in the tables below, NLGS is a major Title V source for NO_x and CO and GHG when firing natural gas, and a major source for NO_x, SO₂ and GHG when firing fuel oil.

Pollutant	Facility-Wide Emissions Natural Gas Firing Scenario (Tons per Year)	Facility-Wide Emissions Fuel Oil Firing Scenario) (Tons per Year)
Particulate Matter (as PM ₁₀)	38.48	69.14
Nitrogen Oxides (NO _x)	1,857.88	5,038.64
Sulfur Oxides (SO _x)	13.25	5,161.26
Green House Gas (CO _{2e})	646,225	907,477
Carbon Monoxide (CO)	566.24	23.84
Volatile Organic Compounds (VOC)	16.45	6.86
Lead	0.00	0.08
Hazardous Air Pollutants (HAPs)	5.98	7.46

NLGS Annual Potential to Emit (tons/year) Summary – Natural Gas Firing Scenario

Source	NO _x	SO _x	PM ₁₀ /PM _{2,5}	CO	CO _{2e}	Lead	HAPs	VOC's
Turbine Units NLGT1-4	1,854.54	12.22	38.38	565.47	646,043	0.00	5.97	12.21
Starter Engines	3.34	1.03	0.06	0.76	183	0.00	0.00	0.09
Lube Oil Vapor Extractors								2.25
Fuel Oil Storage Tank FH1								1.88
Facility Total =	1,857.88	13.25	38.44	566.24	646,225	0.00	5.98	16.44

NLGS Annual Potential to Emit (tons/year) Summary – Fuel oil Firing Scenario

Source	NO _x	SO _x	PM ₁₀ /PM _{2,5}	CO	CO _{2e}	Lead	HAPs	VOC's
Turbine Units NLGT1-4	5,035.30	5,160.22	69.07	23.08	907,294	0.08	7.46	2.63
Starter Engines	3.34	1.03	0.06	0.76	183	0.00	0.00	0.09
Lube Oil Vapor Extractors								2.25
Fuel Oil Storage Tank FH1								1.88
Facility Total =	5,038.64	5,161.26	69.14	23.84	907,477	0.08	7.46	6.86

V. APPLICABLE REQUIREMENTS

A. Code of Federal Regulations (CFR):

40 CFR 60 Subpart A	General Provisions
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines (NLGT4 only)
40 CFR 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE) (Applicable to NLGT1A, 2A, and 3A only)
40 CFR 61 Subpart M	National Emission Standards for Hazardous Air Pollutants – Asbestos
40 CFR 82 Subpart F	Protection of Stratospheric Ozone - Recycling and Emissions Reduction

B. Pima County State Implementation Plan (SIP):

Rule	103	Authority
Rule	111	General Applicability
Rule	212	Sampling, Testing, and Analysis Requirements
Rule	222	Permit Display or Posting
Regulation	24	Permit Fee Schedules/Non-Fee Requirements
Rule	318	Vacant Lots and Open Spaces
Rule	321	Standards and Applicability (Includes NESHAPS)
Rule	343	Visibility Limiting Standard
Regulation	50	Periodic Testing
Rule	623	Reporting for Emission Inventories
Rule	621	Reporting for Compliance Evaluations

C. Pima County Code (PCC) Title 17, Chapter 17.11:

17.11.010	Statutory authority.
17.11.020	Planning, constructing, or operating without a permit.
17.11.060	Permit display or posting.
17.11.080	Permit shield.
17.11.120	Material permit condition.
17.11.160	Test methods and procedures.
17.11.190	Permits containing synthetic emission limitations and standards.
17.11.210	Performance tests.

D. Pima County Code (PCC) Title 17, Chapter 17.12:

17.12.010	Permit application processing procedures for Class I permits.
17.12.040	Permit contents for Class I permits.
17.12.060	Review by the EPA and affected states for Class I Permits
17.12.080	Compliance plan.
17.12.090	Facility changes allowed without permit revisions.
17.12.100	Administrative permit amendments.
17.12.110	Minor permit revisions for Class I permits.
17.12.120	Significant permit revisions for Class I permits.
17.12.130	Permit reopenings – revocation and reissuance – termination.
17.12.140	Permit renewal and expiration.
17.12.160	Annual emissions inventory questionnaire.
17.12.170	Excess emissions reporting requirements.
17.12.180	Affirmative defenses for excess emissions due to malfunctions, startup, and shutdown.
17.12.220	Fees related to Class I permits.

Pima County Code (PCC) Title 17, Chapter 17.16:

17.16.020	Noncompliance with Applicable Standards
17.16.040	Standards and Applicability (Includes NESHAP)
17.16.050	Visibility Limiting Standards
17.16.080	Vacant Lots and Open Spaces
17.16.340	Standards of Performance for Stationary Rotating Machinery

Pima County Code (PCC) Title 17, Chapter 17.20:

17.20.010	Source sampling, monitoring and testing.
17.20.040	Concealment of emissions.

Pima County Code (PCC) Title 17, Chapter 17.28

Article I	Violations
Article II	Conditional Orders
Article III	Circumvention

VI. NON-APPLICABLE REQUIREMENTS

The following regulations are not applicable to TEP-NLGS:

Code of Federal Regulations:

1. 40 CFR 75 Continuous Emission Monitoring

Portions of this regulation are used in the permit as a reference for emission calculations and missing data procedures for the CEMS on unit NLGT4. TEP-NLGS is required to follow all the procedures as outlined in the permit with respect to emission calculations and missing data procedures only. As such, these are not federally enforceable but are locally enforceable as a method of compliance in the permit.

2. 40 CFR 72 Subpart A - Acid Rain Program

This regulation is not applicable to the facility per 40 CFR 72.6(b)(1) and 40 CFR 72.7.

VII. PERMIT CONTENTS

A. Applicability:

TEP-NLGS is required to obtain a permit for the four stationary gas turbines and three stationary rotating machines maintained at the facility, pursuant to PCC 17.12.140.B.1.a. The turbines and generators operated at the facility are subject to the regulations of 40 CFR 60 Subpart GG and PCC 17.16.340. The three older gas turbines use starter motors that are subject to 40 CFR 63 Subpart ZZZZ. The following facility wide regulations; PCC 17.16.050 & PCC 17.16.080 are included exclusively for fugitive dust purposes.

B. Operational Limitations

TEP-NLP is required to keep the NLGT4 turbine's NO_x emissions below 40 tpy and CO emissions below 100 tpy. They are also required to keep NO_x emissions below the NSPS emission standard (NSPS emission limit using actual measured heat rate of 13.72 KJ/Whr = 78.8 ppm). NLGT4 is limited to the use of pipeline natural gas only. The three older turbines may operate 365 days a year (8760 hours per year) and are limited to the use of fuel oil, natural gas, or a combination of the two. TEP-NLGS demonstrates compliance with this restriction by monitoring the NO_x and CO emissions using monitoring provisions prescribed under 60.334(g) of Subpart GG, which allows for establishing a parameter monitoring plan approach for a gas turbine unit that uses water injection for NO_x and CO controls. These parametric values and ranges for the unit will be established with a performance test.

The starter engines are limited to 30 minutes for startup by 40 CFR Subpart ZZZZ and require periodic oil changes and maintenance inspections.

C. Miscellaneous Comments

1. NSPS Stationary Gas Turbine

TEP proposes to replace the NO_x/diluent CEMS with a monitoring system that continuously monitors and records NLGT4's fuel consumption and ratio of water to fuel. The proposed NO_x monitoring replacement is fully warranted by and complies with the monitoring provisions prescribed under §60.334(a) of Subpart GG, which authorizes a gas turbine unit that uses water injection for NO_x controls, like NLGT4, to "install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine". Consistent with §60.334(g), TEP will also develop and implement a parameter monitoring plan for NLGT4 that explains the procedures used to document proper operation of the NO_x emission controls on the unit. In addition, TEP will (in the first year of the permit term) conduct initial NO_x performance testing to demonstrate compliance with the Subpart GG NO_x limit and establish acceptable parametric values and ranges for the unit. As for the annual NO_x emissions capped at 40 tons/year, compliance will be demonstrated using NO_x emission factor equivalent to the Subpart GG NO_x limit of 75 ppmvds (0.276 lb/MMBtu) of NO_x and annual heat input in MMBtu to conservatively estimate NLGT4's annual NO_x emissions. As a comparison, the highest 1-hour NO_x concentration ever recorded by the NO_x analyzer at NLGT4 over the past 6 years was 69.7 ppmvds. The majority of hourly NO_x concentration values measured by NO_x CEMS historically lies below the 30 ppm mark.

TEP also proposes to replace the CO/diluent CEMS with a methodology that uses a conservative CO emission factor. To demonstrate compliance with the annual CO emissions limit of 100 tons/year, a CO emission factor, 0.725 lb/MMBtu of CO, will be used in conjunction with annual heat input in MMBtu to estimate NLGT4's annual CO emissions. The fixed CO emission factor is converted from 323.2 ppmvds, a conservative CO concentration value measured by the current CO CEMS at the historic 95th percentile concentration point. The majority of hourly CO concentration values measured by CO CEMS historically stays below the 300 ppm mark.

Should the 12 month rolling total of NO_x exceed 32 tpy or 80 tpy CO, the Permittee shall verify that unit NLGT4 (NSPS unit) meets the Nitrogen Oxides standard by completing a performance test before the end of the permit term. Should the permit term expire 6 months or less from the date the 12-month rolling NO_x/CO emissions from NLGT4 are greater than 32 tpy of NO_x or greater than 80 tpy of CO (trigger date), then the Permittee shall complete a performance test within 12 months of the trigger date.

2. Non-NSPS Stationary Gas Turbines

Sulfur Dioxide

The requirement in PCC 17.16.340.J to report daily periods when the fuel sulfur content of the fuel being fired exceeds 0.8% by weight has not been included in the permit as all fuel that is delivered to Pima County has an enforceable limit of 0.9% by weight. Any fuel over 0.8% but below 0.9% would not be an exceedance of any standard or limitation and so it would be burdensome for sources to report every time the fuel had a sulfur content above 0.8%. An excess emissions report would be submitted should the fuel exceed the 0.9% sulfur content standard. This permit will not allow the use of high sulfur diesel. Moreover, even though the sulfur content limit is 0.9% by weight, jet fuel, natural gas, gasoline and low sulfur diesel #2 delivered to Pima County consistently shows sulfur levels below this limit as shown in past records of fuel supplier specifications which verify sulfur content of the fuel fired. The limitation in Part B: Section 3, 36.d of the permit, will ensure high sulfur fuel is not fired allowing the omission of rule PCC 17.16.340.H as well. These rules are incorporated by reference (PCC 17.16.340) in Attachment 1 of the permit.

Compliance with the fuel limitation requirements of Part B: Section 1, 25.b.i of the permit shall ensure compliance with the Sulfur Dioxide Standards of PCC 17.16.340.F; which limit the emission of SO₂ to 1.0 pound per million BTU heat input when burning low sulfur fuel. The definition of low sulfur fuel (PCC 17.04.340.A. "Low Sulfur Fuel") is fuel oil containing less than 0.9 percent sulfur by weight. EPA AP-42 Appendix A, page A-5 states the heating value of diesel fuel is 137,000 BTU per gallon. Thus, 1 million BTU of heat input is equivalent to 7.3 gallons of diesel. At 7.05 lbs per gallon, 51.47 lbs of diesel will produce 1 million BTU. At 0.9% 51.47 lbs of diesel contains 0.46 lbs of sulfur. Combined with Oxygen to form SO₂, and assuming 100% of the sulfur in the fuel forms SO₂, this would yield 0.92 lb SO₂ per 1MMBtu. Thus, low sulfur fuel oil will produce 0.92 lbs of SO₂ per million BTU of heat input. This is roughly 8% less than the prescribed 1.0 pound SO₂ per million BTU (PCC 17.16.340.F). Likewise, distillate, residual, and other such fuel oils range from 0.84 to 0.94 lbs of SO₂ per million BTU. Thus, it is not necessary to include the standard in the permit explicitly but, by reference in Attachment 1 of the permit.

Particulate Matter

Mass emission testing to determine compliance with the particulate matter standard is not normally necessary as standard emission factors for gas turbines yield emission estimates of particulate matter that are far less than the standard allowed by the rule equation. The Control Officer may require the Permittee to quantify its particulate matter emissions if the Control Officer has reasonable cause to believe a violation of a standard has been committed.

VOC

In addition to the VOC's generated from combustion of the gas turbines, an additional 4.13 tpy of VOC emissions were estimated by TEP in the PTE from the speed reducer lube oil vapor extractors and storage of fuel oil in the storage tank. The estimates were calculated using the maximum amount of make-up lube oil of 200 gallons/year for each of the gas turbine units for the extractors and using Tanks 4.09D to estimate emissions from the fuel oil tank.

VII. IMPACTS TO AMBIENT AIR QUALITY

As this is a permit renewal only, and TEP-NLGS is not a PSD source, impacts to ambient air quality studies are not required at this time.

VIII. CONTROL TECHNOLOGY DETERMINATION

Control Technologies are not required for the source.

IX. PREVIOUS PERMIT CONDITIONS

The previous permit conditions (Part B, Section 3, Conditions II.A, II.B and II.C) and the associated excess emission reporting condition (Part B, Section 3, Condition IV.C.3) in the Specific Conditions were taken from NSPS 40 CFR 60.334(b) and 60.334(j)(1)(iii). These conditions have been removed as they were specific to sources choosing the option to monitor the NOX/diluent using a CEMS. The previous permit conditions relating to the operation of a carbon monoxide CEMS have also been removed.

XII. ACID RAIN PROVISIONS

The existing non-NSPS gas turbines are not subject to the Acid Rain Provisions as they are simple combustion turbines that commenced operation before November 15, 1990 (40 CFR 72.6(b)(1)). The new NSPS gas turbine will not be subject to Acid Rain provisions. New utility units are exempt from the Acid Rain provisions if the total name-plate capacity is equal to or less than 25 MWe, do not burn coal-derived gaseous fuel with a sulfur content greater than natural gas and burn gaseous fuel with an annual average sulfur content of 0.05% or less by weight (40 CFR, 72.7(a)). The NSPS unit meets all the preceding conditions and is therefore not subject to Acid Rain provisions.

XIII. COMPLIANCE ASSURANCE MONITORING (CAM) PROVISIONS

CAM provisions do not apply to any of the turbines. 40 CFR Part 64, 64.2(a) defines the applicability of CAM to emissions units. For CAM to apply, a unit must be subject to an emission limit or standard for the applicable regulated pollutant, the unit must use a control device to achieve compliance with that limitation or standard, and the unit must have a pre-control emission potential that would classify it as a major source. The NLGT4 turbine has an emission standard for NO_x in 40 CFR Part 60, Subpart GG, and the turbine may use a control device (i.e., a water injection system) to achieve compliance with the standard, but the unit's potential-to-emit (without considering the emission reductions achieved by the control device) is less than major source levels since the applicant has accepted a synthetic emission limit (40 tpy) and fuel use restrictions to remain below major modification levels. Since the unit will not be classified as a major source, it is not subject to the CAM provisions. The existing turbines are not subject to the CAM provisions as they have no control device.

XIV. ACCIDENT PREVENTION REQUIREMENTS (CLEAN AIR ACT SECTION 112(R))

The source does not handle, store, or use listed substances or materials in quantities exceeding the applicable thresholds.

XV. MACT

TEP-NLGS is not a major source of HAPs and so no major source MACT considerations are necessary. TEP-NLGS is an areas source of HAP's and operates reciprocating internal combustion engines (RICE) in the gas turbines that are subject to 40 CFR Subpart ZZZZ. These engines are by definition black start engines and subject to applicable operation limitations and maintenance requirements but are not subject to any fuel requirements, or specific emission limitations, or required to install any emission control devices.

XVI. INSIGNIFICANT ACTIVITIES

The following insignificant activities listed in the original application, (see Section 1.5 of the January 30, 1995 application), are related to electric utilities and may occur at the site. The following table lists the activities commonly associated with power plants and provides a determination as to whether the control officer considers the activities insignificant. PDEQ will only list in the permit those activities that have an applicable requirement but whose emissions are insignificant compared to the overall emissions at the facility.

Insignificant Activities Listed in the January 30, 1995 Permit Application	
Type of Activity or Equipment	Insignificant Determination
Transformers, switchgear, and water treatment systems.	Yes
Out-of-service fuel oil tank.	Yes. Tank is empty.
Landscaping, building maintenance and janitorial activities.	Yes. Defined.
Manually operated equipment and related activities for buffing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding or turning and associated venting hoods.	Yes. Defined.
Internal combustion (IC) engine driven compressors, IC engine driven electrical generator sets, and IC engine driven water pumps used only for emergency replacement or standby service.	Yes. Defined.
Chemical laboratories including equipment used exclusively for chemical or physical analysis.	Yes. Defined.
Fuel burning equipment fired at a rate less than 1.0 MMBtu/hr for less than an 8-hour period.	No. May be subject to PCC 17.16.165.
Pressurized storage and piping for natural gas, butane, propane, or LPG.	Yes
Petroleum product storage tanks and associated loading operations for lubricating oil, used oil, and transformer oil.	Yes
Piping of fuel oils, used oil, and transformer oil.	Yes
Storage and handling of drums or other transportable containers where the containers are sealed during storage, and covered during loading and unloading.	Yes
Water treatment and storage systems for cooling tower feed or facility service and potable water.	Yes
Chemical storage associated with water or wastewater treatment where the water is treated for consumption and/or used within the permitted facility.	Yes
VOC emissions from the cooling towers.	No. May be subject to PCC 17.16.430.
Individual flanges, valves, seals, pressure relief valves, other individual components not in VOC service that have the potential for leaks	Yes
Cafeterias, kitchens, and other facilities used for food or beverage preparation.	Yes
Equipment using water, water and soap or detergent, or a suspension of abrasive in water for purposes of cleaning or finishing.	Yes if not related to production.
Battery recharging areas.	Yes. Defined.
Aerosol can usage.	No. May be subject to PCC 17.16.400.
Acetylene, butane, and propane torches.	Yes if used only for general and infrequent maintenance.
Equipment used for portable steam cleaning.	Yes. Defined.
Blast cleaning equipment using a suspension of abrasive in water and any exhaust system or collector serving them exclusively.	No. May be subject to PCC 17.16.100.D.
Lubricating system reservoirs.	Yes
Hydraulic system reservoirs.	Yes
Adhesive use.	Yes if not VOC containing

Insignificant Activities Listed in the January 30, 1995 Permit Application	
Type of Activity or Equipment	Insignificant Determination
Production of hot/chilled water for onsite use.	Yes
Safety devices such as fire extinguishers.	Yes
General vehicle maintenance and servicing activities.	Yes
Storage cabinets for flammable materials.	Yes
Housekeeping activities and associated products for cleaning purposes and operation of vacuum cleaning systems.	Yes providing the vacuum system is not a production unit.
Air conditioning, cooling, heating, or ventilation equipment.	Yes providing the air conditioning units have no applicable requirements under Title VI of the Act.
General office activities such as paper shredding, copying, photographic activities, and blueprinting.	Yes
Restroom facilities and associated cleanup operations, stacks, and vents.	Yes. Defined.
Smoking rooms and areas.	Yes. Defined.
Normal consumer use of consumer products including hazardous substances as defined in the Federal Hazardous Substances Act (15 U.S.C. 1261 et. Seq.).	Yes.
Operation and testing of emergency fire water pumps, firefighting activities, and training conducted at the facility in preparation of fighting fires.	Yes
Activities associated with the construction, repair, and maintenance of paved or open areas, including street sweepers, vacuum trucks, and vehicles related to the control of fugitive emissions of such roads or open areas.	Yes except for major sources of PM ₁₀ in PM ₁₀ non-attainment areas.
Truck and car traffic on unpaved roads or open areas.	Yes except for major sources of PM ₁₀ in PM ₁₀ non-attainment areas.
Rail car traffic and locomotive switching activities.	Yes