

# TITLE V OPERATING PERMIT STATEMENT OF BASIS

**Facility Name:** Goal Line, L.P.

**Title V Permit No.:** APCD2016-TVP-00043

**Permit Application Nos.:** APCD2016-APP-004597

**Site ID:** APCD1992-SITE-08447

**Equipment Address:** 555 North Tulip Street  
Escondido, CA 92025

**Facility Contact:** Robert Mason, Plant Manager  
**Contact Phone:** (760)738-4999

**Permit Engineer:** Nick Horres  
**Date Completed:** August 23, 2017

## 1.0 Purpose/Introduction

This statement of basis describes an initial Title V permit covering a stationary natural gas-fired combustion turbine permitted under District permit APCD2001-PTO-911504 and associated equipment. The basis for submittal under Title V is that the facility is subject to the acid rain program under Title IV of the federal Clean Air Act (CAA) which requires Title V permitting pursuant to 40 CFR § 70.3.

## 2.0 Background

This is the initial application for a Title V permit; however, this facility has been in operation for a number of years operating under an exemption from the acid rain program which no longer applies to the facility due to a change in operating hours and contractual arrangement with the utility. The title V application was submitted on August 8, 2016. The acid rain permit application was submitted on February 29, 2016.

## 3.0 Facility Description

This facility is not a major source for any pollutants. The facility consists of one cogeneration gas turbine powering a generator and producing steam for use in a steam turbine and for use as process steam by an adjoining ice rink and one auxiliary boiler.

The gas turbine is a GE LM6000 model rated at 42.4 MW with a maximum heat input of 404.8 MMBtu/hr HHV. The turbine utilizes water injection and selective catalytic reduction (SCR) with ammonia injection for emission control. Steam is also produced

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using the waste heat which is partially used to drive a steam turbine, producing a total maximum of 49.8 MW for the gas turbine and steam turbine combined. The turbine is also equipped with a NO<sub>x</sub> and O<sub>2</sub> CEMS for monitoring of emissions.

The auxiliary boiler has a maximum heat input of 14.6 MMBtu/hr. It is fired with natural gas and equipped with a low NO<sub>x</sub> burner for emission control.

Permit Number	Source Category
APCD2001-PTO-911504	Turbine – Electric and Steam Generation
APCD1999-PTO-960443	Boiler – Steam Generation

### 4.0 Emission Changes

There are no emission changes as part of this permit action since it is an initial permit. The current potential to emit for the facility is described in the tables below.

<b>Gas Turbine Potential to Emit (PTE)</b>			
Pollutant	lb/hr	lb/day	Tons/yr
NO <sub>x</sub>	25	253.5	46.3
CO	22.7	545	99.5
VOC	0.85	20.4	3.7
SO <sub>x</sub>	0.85	20.4	3.7
PM	2.7	64.1	11.7
<b>Boiler Potential to Emit (PTE)</b>			
Pollutant	lb/hr	lb/day	Tons/yr
NO <sub>x</sub>	0.53	12.8	2.3
CO	0.54	13.0	2.4
VOC	0.37	8.8	1.6
SO <sub>x</sub>	0.03	0.7	0.1
PM	0.11	2.6	0.5
<b>Facility Potential to Emit (PTE)</b>			
Pollutant	lb/hr	lb/day	Tons/yr
NO <sub>x</sub>	25.5	266	48.6
CO	23.2	558	99.9
VOC	1.2	29	5.3
SO <sub>x</sub>	0.9	21	3.8
PM	2.8	67	12.2

### 5.0 Title IV (Acid Rain) and Title V Permitting

The facility is subject to the acid rain provisions under District Rule 1412 and Title IV of the Federal CAA, as given at 40 Code of Federal Regulation (CFR) § 72.6(a). Under the

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acid rain program, an affected source (a term specifically defined in Title IV of the CAA, and which applies to this facility) is subject to Title V permitting pursuant to District Rule 1401 and 40 CFR § 70.3(a)(4).

The facility became a newly affected facility under the acid rain program due to no longer meeting the definition of a “qualifying facility” described in 40 CFR 72.2. The acid rain permit is incorporated into the Title V permit in Section II.D and the renewal period will match that of the Title V permit.

### 6.0 Applicable Requirements

#### 6.1 Summary by Pollutant

<b>Turbine</b>	
Pollutant	Primary Limiting Regulation(s)
NOx	Rule 20.2 (NSR); Rule 69.3.1; 40 CFR 60 Subpart GG
SO2	Rule 20.2; Rule 62; Rule 53; 40 CFR 60 Subpart GG
VOC	Rule 20.2;
CO	Rule 20.2; (AQIA only)
PM10	Rule 20.2; Rule 53
Toxic Pollutants	Rule 1200

<b>Boiler</b>	
Pollutant	Primary Limiting Regulation(s)
NOx	Rule 69.2;
SO2	Rule 62; 40 CFR 60 Subpart Dc
VOC	None
CO	Rule 69.2
PM10	Rule 52
Toxic Pollutants	Rule 1200

#### 6.2 Discussion

The above table summarizes those rules on which the permit conditions are based. The permittee must comply with the most stringent requirement, as cited in the permit, which also serves as the compliance measure for the less stringent requirements.

District Prohibitory Rules (52, 53, 62)

All three of these rules contain general prohibitory emission requirements for PM<sub>10</sub> and SO<sub>x</sub> that apply to wide categories of equipment. Permit conditions specifying the use of

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pipeline quality natural gas as fuel for both the turbine and boiler ensures compliance with the requirements of these rules.

### District Prohibitory Rules (69.2, 69.3 and 69.3.1)

These rules contain equipment specific prohibitory requirements for gas turbine engines (69.3 and 69.3.1) and boilers (69.2). Each applicable emission standard, monitoring, maintenance and recordkeeping requirement is stated in the Appendix A of the Title V permit.

### Rule 20.2 New Source Review

The gas turbine engine was subject to new source review (NSR) when it was installed. The turbine was determined to meet best available control technology requirements and applicable emission limits are specified in the Appendix A permit conditions. Condition 3 of the Permit APCD2001-PTO-911504 incorporated into this permit in Appendix A limits aggregate emissions from the stationary source to below all major source thresholds. Condition 9a of APCD2001-PTO-911504 replaced a similar previous condition and is designed to limit NO<sub>x</sub> emissions during startup and shutdown when steady state BACT emission limits do not apply.

### Rule 1200 Toxics

District Rule 1200 is a local-only enforceable rule that regulates emissions of toxic air contaminants based on allowable increases in health risk from projects that emit these air contaminants. Applicable requirements of Rule 1200, including limits on ammonia slip, are specified in the District-only enforceable section of the permit.

### 40 CFR 60 Subpart Dc (NSPS for small steam generating units)

NSPS subpart Dc sets SO<sub>x</sub> and PM<sub>10</sub> emission limits for the auxiliary boiler and these requirements are met through the use of natural gas as fuel and District preconstruction review and permit conditions ensuring that the boiler is only capable of combusting, and only does combust, natural gas as fuel.

### 40 CFR 60 Subpart GG (NSPS for stationary gas turbines)

NSPS subpart GG specifies NO<sub>x</sub> and SO<sub>x</sub> emission limits for the gas turbine. The NO<sub>x</sub> emission limit is stated in permit condition 9b of APCD2001-PTO-911504 and

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compliance is measured with a certified CEMS. The permit requires using pipeline natural gas for fuel to ensure compliance with SOx emission limits.

### **7.0 Monitoring, Recordkeeping and Reporting**

Pursuant to NSR and District Rule 69.3.1, the turbine is required to be equipped with a CEMS to measure emissions of NOx and O2 in addition to the requirement to measure operational parameters including water injection rate and ammonia flow rate to the SCR. These monitoring systems also fulfill monitoring requirements of 40 CFR 60 subpart GG. Monitoring requirements are specified in the existing District Permits incorporated into the Title V permit along with additional Title IV Acid Rain permit requirements added to the Title V permit that apply pursuant to District Rule 1421.

Both the turbine and boiler are source tested on an annual basis to ensure emissions of NOx and CO (boiler and turbine) and ammonia (turbine only) comply with the emission requirements of the permit.

The accuracy of the CEMS system is also tested using a relative accuracy test audit (RATA) conducted according to the frequencies defined in 40 CFR part 75. The facility initially applied to modify permit conditions to only require the use of part 75 procedures for CEMS certification; however, after review the District determined it was appropriate for the RATA to also ensure the accuracy of the CEMS for measuring concentration based (ppmvd NOx corrected to 15% O2) and mass emission based (Pounds NOx/hour) to show continuous compliance with the BACT NOx emission limits.

Compliance Assurance Monitoring (CAM) under 40 CFR Part 64 does not apply to any of the emission units covered by this permit because permit conditions ensure that this is not a major source of any pollutants.

### **8.0 Permit Shield**

In accordance with District Rule 1410(p) and 40 CFR Part 70.6(f), a permit can include a provision precluding the permittee from enforcement action for certain requirements that either do not apply or that are superseded by another requirement to which the permittee is subject, as stated in the permit. A permit shield, if granted, is limited as given by the aforementioned regulations.

A permit shield was requested by the applicant for a variety of requirements that are subsumed by more stringent requirements. These requests are analyzed below.

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1. Request: Rule 69.3(b)(2)(ii) and (d) and 69.3.1(b)(3)(i) and (d)(1)

This request is for a permit shield from prohibitory rule emission limits for NO<sub>x</sub> that are less stringent than the BACT NO<sub>x</sub> emission limit described in the permit for the gas turbine. The District agrees with this request in part – noting that Rule 69.3.1(b)(3)(i) is actually an exemption from meeting emission limits during startups and, therefore, a shield from this requirement is counter-intuitive. Granted permit shield: Rule 69.3.1(d)(1) and Rule 69.3(d)(1).

2. Request: 40 CFR 60.332(a)(1), 60.334(j)(1)(iii)(A)

This is a request for a permit shield from the NSPS subpart GG NO<sub>x</sub> emission limit (based on turbine efficiency, 118 ppmvd corrected to 15% O<sub>2</sub>) that is less stringent than the BACT NO<sub>x</sub> emission limit, except that it applies at all times including during startup and shutdown. After review, the District does not consider this requirement to be fully subsumed by the BACT NO<sub>x</sub> emission limit because there are operating scenarios, such as the turbine being called to run consecutive, short periods of time (< 2 hours), that would result in operation not being subject to the BACT NO<sub>x</sub> emission limit. Permit shield not granted from this requirement.

3. Request: 40 CFR 60.333

The request is for a shield from fuel sulfur content limits contained in NSPS subpart GG due to this requirement being subsumed by more stringent requirements. The District agrees with granting a permit shield from this requirement, although notes that the most stringent requirement is the BACT imposed limit to use only pipeline quality natural gas (not Rule 62). Granted permit shield: 40 CFR 60.333.

4. Request: Condition 9, 40 CFR 60.13(a), 40 CFR 60.334(b)(1)

These are requests for permit shield from CEMS requirements including those contained in 40 CFR Subpart 60 and a corresponding permit condition. The District agrees with the proposal that the CEMS will be certified to part 75 requirements and has updated the District permit incorporated into the Title V permit in appendix A. However, the District does not agree with granting a permit shield because the equipment is complying with the Part 60 requirement by complying with the alternative Part 75 CEMS certification requirements rather than subsuming Part 60 CEMS certification requirements. Permit shield not granted from this requirement.

5. Request: District Rule 69.3.1(f)(2)

This is a request from the requirement to use a prescribed test method to measure HHV and LHV content of the fuel. The District does not agree with this request for a permit

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shield because the facility complies with the rule using records provided by the fuel provider which is allowed by the rule. Permit shield not granted from this requirement.

6. Request: 40 CFR 60.334(j)(5) and 40 CFR 60.7(d), 40 CFR 60.7(c)

This request is for a permit shield from the requirement to submit CEMS reports for excess emissions and monitor downtime and to only submit summary reports when the excess emissions make up less than 1% of total operating time and monitor downtime of less than 5% of total operating time. The District does not agree with this request because the rule cited as subsuming these requirements, District Rule 19.2, does not apply to the gas turbine. Permit shield not granted from these requirements.

7. Request: District Rule 68(b)(3) and 68(d) (Auxiliary Boiler)

This request is for a permit shield from the NO<sub>x</sub> emission limits of Rule 68 that would apply to the auxiliary boiler. However, the boiler has a maximum heat input of < 50 MMBtu/hr and is not subject to the rule and, therefore, there is no subsumed requirement and no need for a permit shield. Permit shield not granted from these requirements.

### 9.0 Outside Review

In accordance with District Rule 1415, the District is submitting the proposed draft permit for public notice and review by EPA Region 9 and affected states, including Tribes.

### 10.0 Conclusions/Recommendations

The source is expected to comply with all applicable requirements including those cited in the current District permit as well as those under District Rule 1401 and Title V. Therefore, once the public notice and comment response requirements of District Rule 1415 are fulfilled and assuming no substantive issues are raised requiring further analysis, the recommendation of this report is for the subject initial Title V permit to be issued.