

Westin La Paloma Resort & Spa
Air Quality Operating Permit 2655
Technical Support Document (TSD)

I. GENERAL COMMENTS:

A. Company Information

1. Source Name: Westin La Paloma Resort & Spa
2. Source Address: 3800 E. Sunrise Drive, Tucson AZ 85718

B. Background

The source operates under an older Class III air quality permit. It is considered a true minor for all conventional pollutants and an area source of HAPs.

This TSD was updated for the renewal of the permit. The renewal application was received on September 20, 2006.

C. Attainment Classification

The source is located in an area that is in attainment for all pollutants.

II. SOURCE DESCRIPTION

A. Process Description

The source operates one emergency generator, and 6 boilers in support of its operations. The boilers are fired exclusively with natural gas, while the emergency generator is fired exclusively with diesel fuel.

B. Operating Capacity and Schedule

The operating schedule at the facility is not limited and the facility and equipment is permitted for operation 7/days/week, 24 hours a day, 365 days a year

C. Air Pollution Control Equipment

The boilers and generator have no pollution control equipment.

III. REGULATORY HISTORY

The source is currently in compliance with all Pima County Code requirements.

IV. EMISSIONS ESTIMATES

Emission estimates for the source were derived using emission factors from AP-42 tables. AP-42 tables 3.3-1 thru 3 and 3.4-1 thru 4 (Diesel Industrial Engines and Large Stationary Diesel Engines) were used for emergency generator emission factors. For the boilers the natural gas emission factors from AP-42 table 1.4 were used.

Federal requirements limit the emergency generator to no more than 100 hours of operation for maintenance and readiness testing and limit usage for non-emergency purposes, while there is no limit on hours of operation during true emergencies.

Per EPA guidelines, the PTE for the emergency generators is assumed to be inherently controlled to operate no more than 500 hours. In accordance with the federal limitations, the controlled facility-wide PTE has been calculated by limiting the generator to 100 hours for maintenance and readiness testing.

The following table outlines Westin La Paloma Resort & Spa’s controlled and uncontrolled potential to emit pollutants.

Potential to Emit (Tons per Year) Diesel Fired Generator and Natural Gas Fired Boilers							
	NO _x	CO	VOC	SO _x	PM ₁₀	PM _{2.5}	HAPs
Uncontrolled*	7.93	5.04	0.51	.64	0.29	0.46	0.12
Controlled**	5.86	4.59	0.34	0.15	0.14	0.34	0.10

* Generator operating 500 hours and boilers operating 8760 hrs/yr.

** Generator operating 100 hrs/yr and boilers operating 8760 hrs/yr.

V. APPLICABLE REQUIREMENTS

40 CFR, Part 60 Standards of Performance for New Stationary Sources

Subpart A General Provisions

Appendix A Test Methods

Pima County Code Title 17, Chapter 17.12 – Permits and Permit Revisions

Article I – General Provisions

- 17.12.010 Statutory Authority
- 17.12.020 Planning, Constructing, or Operating Without a Permit
- 17.12.040 Reporting requirements
- 17.12.045 Test methods and procedures
- 17.12.050 Performance tests
- 17.12.080 Permit Display or Posting

Article II – Individual Source Permits

- 17.12.165 Permit application processing procedures for Class II and Class III permits
- 17.12.185 Permit contents for Class II and Class III permits
- 17.12.190 Permits containing synthetic emission limitations and standards

- 17.12.235 Facility Changes that require a permit revision
- 17.12.240 Procedures for certain changes that do not require a permit revision Class II or Class III
- 17.12.255 Minor Permit Revision
- 17.12.260 Significant Permit Revision
- 17.12.270 Permit Reopenings – Revocation and reissuance – Termination
- 17.12.350 Material permit condition

Article VI – Individual Source Permits

- 17.12.520 Fees related to Class II and Class III permits

Pima County Code Title 17, Chapter 17.16 – Emission Limiting Standards

Article I – General Provisions

- 17.16.010 Local rules and standards; Applicability of more than one standard
- 17.16.020 Noncompliance with applicable standards
- 17.16.030 Odor limiting standards

Article II – Visible Emission Standards

- 17.16.040 Standards and applicability (includes NESHAP)
- 17.16.050 Visibility limiting standard

Article III Emissions from Existing and New Nonpoint Sources

- 17.16.070 Fugitive dust emissions standards for motor vehicle operation.
- 17.16.080 Vacant lots and open spaces.
- 17.16.090 Roads and streets.
- 17.16.100 Particulate Materials
- 17.16.110 Storage Piles

Article IV – New and Existing Stationary Source Performance Standards

- 17.16.130 Applicability
- 17.16.165 Standards of performance for fossil-fuel fired industrial commercial equipment
- 17.16.340 Standards of performance for stationary rotating machinery
- 17.16.430 Standards of performance for unclassified sources

Pima County Code Title 17, Chapter 17.20 – Emissions Source Testing and Monitoring

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

Pima County Code Title 17, Chapter 17.24:

- 17.24.020 Recordkeeping for compliance determination

VI. REQUIERMENTS SPECIFICALLY IDENTIFIED AS NON-APPLICABLE

40 CFR Part 63 NESHAP Subpart JJJJJ has been identified as non-applicable since the boilers are natural gas-fired boilers. Should boilers or heaters be installed that are dual fired boilers or become subject to Subpart JJJJJ in the oil firing subcategory as defined in 40 CFR 63.11237, a significant permit revision will be required and compliance with Subpart JJJJJ will be required.

40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for stationary Reciprocating Internal Combustion Engines (RICE). The rule applies to owners or operators of new and reconstructed stationary RICE of any horsepower rating which are located at a major or area source of hazardous air pollutants. While all stationary RICE located at a major or area sources are subject to the final rule, there are distinct exemptions from the requirements of this rule. Pursuant to 40 CFR 63.6585(f) (2) existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii), are not subject to this rule. EPA docket [EPA-HQ-OAR-2008-0708](#) 'Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE': Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

VII. PERMIT CHANGES and APPLICABILITY DETERMINATIONS

A. Permit and Permit Summary

The Specific Conditions have been organized into permit sections specific to the equipment and source categories.

B. General Applicability (Section 1):

This Section of the permit provides a reference for the applicability of the affected sources and PCC and rules that apply to the facility and operations, and to help organize the permit sections. Specific applicability provisions for the permitted facility sources are included in Section 5.

C. Facility-Wide Operations (Section 2):

This Section incorporates the facility wide provisions applicable to all sources at the facility and is used to streamline provisions applicable to the specific sources and operations in other sections of the permit to include the following: Voluntary Limitations, General control standards, Materials handling standards, Odor limiting standards, Opacity Standards, Visibility Limiting Standards, and asbestos requirements for demolition and renovation activities. This Section also incorporates the facility-wide provisions for recordkeeping, reporting, facility changes, and testing.

D. Fossil Fuel Fired Industrial and Commercial Equipment (Boilers, Heaters and other Equipment) (Section 3):

This Section incorporates applicable PCC requirements and voluntary emission limits for boilers, heaters, and fuel fired equipment to avoid certain requirements in PCC 17.16.165. The specific applicability provisions for the boilers and heaters are included in Section 5 and indicated in the equipment list.

The listed boilers and heaters in the equipment list are limited to firing natural gas. The specific definition for natural gas is taken from the NESHAP standard and is a broad definition that also includes LPG or Propane for use in temporary boilers or as an alternate fuel if required.

E. Non-NSPS / Non-NESHAP Generators (Section 4):

This Section contains requirements for generators that are not subject to or exempt from NSPS standards in 40 CFR Part 60, Subpart IIII or NESHAP standards in 40 CFR Part 63, Subpart ZZZZ. The emergency generator installed at the source are exempt from NESHAP, Subpart ZZZZ as commercial emergency generator in accordance with 40 CFR 63.6585(f)(2) as long as they are limited to less than 100 run hours for maintenance and readiness testing.

F. Specific Applicability Provisions (Section 5):

This Section of the permit includes specific conditions on the applicability of permitted facility sources to include provisions related to the source categories, affected facilities, equipment, emission sources, installations, activities and operations at the facility.

Applicable boilers that comply with Section 3 of the permit shall be considered to be compliant with PCC 17.16.165. The facility is required to submit a significant revision if the facility desires to fire fuels other than those allowed in Section 3 of the permit.

G. Fugitive Dust Control Plan (Section 6):

The facility comprises approximately 39 acres and has portions of the property and operations that may be susceptible to the generation of fugitive dust emissions. This section of the permit contains fugitive dust control standards and describes reasonably necessary and feasible precautions for the control of fugitive dust and airborne particulate matter to comply with I.E and I.F of Section 2 of the permit. The Permittee is required to document corrective actions taken in accordance with II.A. of Section 2 of the permit to comply with this section.

VIII. Periodic Monitoring

This is a Class II/III permit and as such does not include the mandatory submittal of a semiannual summary report of required monitoring or an annual compliance certification to the Control Officer. The permit requires the facility to maintain the required periodic monitoring records on site and their submittal as requested by the Control Officer in order to demonstrate compliance.

IX. Control Technology Determination

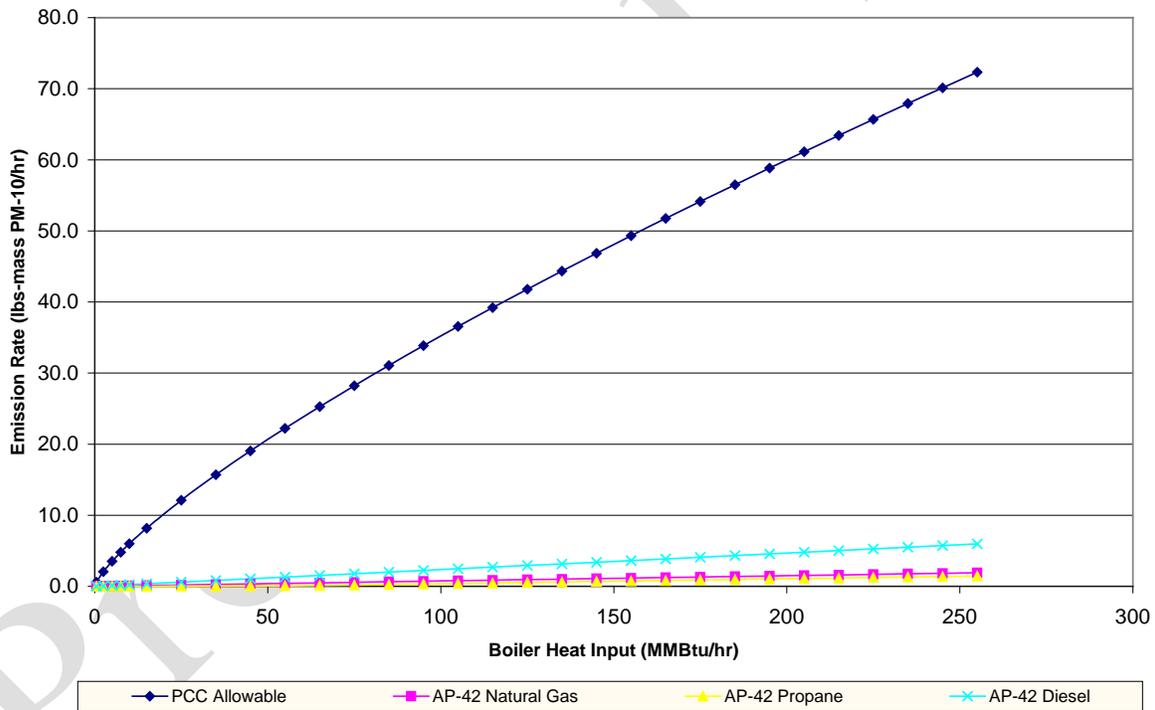
No control technologies needed to be determined; the source is not subject to RACT, BACT or LAER.

X. Exclusion of PCC Particulate Matter Discharge Rate Standards

The applicable PCC rules for the maximum particulate discharge rates are not normally included for Class II and III area source permits as explained below.

- For particulate matter sources, the calculated maximum particulate matter discharge rate, as provided in Title 17, yields maximum rates that far exceed the emissions expected from most typical area sources. For example a 200 ton/hour process source, which is typical for an average construction aggregate screening operation, would be limited to a maximum particulate matter discharge rate of 40.4 lbs/hour or 177 tons/year. This limit far exceeds estimated emissions from typical sources using EPA AP-42 emission factors and the source is far more likely to exceed opacity and visibility limiting standards well before reaching this limit.
- With regard to fuel burning equipment, PCC 17.16.165.C limits the emissions of particulate matter from commercial and industrial fossil-fuel fired equipment (including but not limited to boilers). This limit is not normally included in permits because allowable emissions are consistently over an entire order of magnitude higher than EPA AP-42 estimated potential emissions. The chart below, illustrates the point.

Comparison of Emissions of PM-10 for Boilers: PCC Allowable vs AP-42 Estimated



Comparative Chart of Allowable Particulate Emissions Under Pima County Code, Title 17, and Estimated Potential Emissions based on EPA AP-42 Estimates for External Combustion Sources. Allowable emissions are consistently over ten times estimated potential emissions. Therefore, it is not necessary to include the standard in the permit explicitly, but by reference in Attachment 1.