
San Diego County Air Pollution Control District

10124 Old Grove Rd
San Diego, CA 92131-1649
(858) 586-2600

TITLE V OPERATING PERMIT

APCD2006-PTO-960991

Issued To:

Solar Turbines Incorporated
Site ID # APCD1976-SITE-01130

Site Address:

4200 Ruffin Road
San Diego, CA 92123
(858) 694-6625

Mailing Address

PO Box 85376, MZ T-2
San Diego, CA 92186-5376

Responsible Official – Jim Hickle, Director of Packaging Systems Operations

Facility Contact – Aleks Meyer, EHS Manager

Permit Information Contact – Kaytlyn Collins, EHS Engineer

Issued by the San Diego County Air Pollution Control District on June 27, 2011.

Revised on 2024.

This Title V Operating Permit expires on 2028.

Mohsen Nazemi, Chief of Engineering

Date

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PREAMBLE

This Title V Operating Permit consists of this document and all appendices, including District permits incorporated by reference. The facility is subject to all applicable requirements identified within this permit, unless a specific permit shield is specified within this permit. If an applicable requirement is omitted from this permit, the facility is still obligated to comply with such an applicable requirement. The permittee must comply with all of the terms listed in each section of this permit.

This permit contains five major sections: Section I contains the Regulation XIV requirements required to carry out the Title V Operating Permit program. Section II contains the requirements that are applicable to the facility on a facility-wide basis. Section III contains the requirements that are applicable to individual emission units which have been issued District permits or District registration, or which have been determined to be insignificant emission units. Section IV contains terms and requirements pertaining to variance procedures and compliance schedules, if applicable to the facility. Section V contains five appendixes. Appendix A contains all the District permits incorporated within this permit. Appendix B contains a table of all rules approved by the District, the rules contained in the State Implementation Plan (SIP), and federal rules that are potential applicable requirements. Appendix C contains a list of abbreviations used within this permit. Appendix D1 contains definitions of terms for the purpose of implementing 40 CFR Part 63 Subpart M. Appendix D2 contains calculation procedures for implementing 40 CFR Part 63 Subpart M. The basis for each condition is noted in brackets following each condition.

Copies of the Rules and Regulations of the Air Pollution Control District of San Diego County and the Rules and Regulations for San Diego County contained in the SIP approved by EPA may be obtained at the District. Copies are also available for review at the following locations:

SD Air Pollution Control District (Library & Public Review Area)	County of SD Law Library (Downtown)	County of SD Law Library (North County)
10124 Old Grove Rd. San Diego, CA 92131 (858) 586-2600	1105 Front St. San Diego, CA 92101 (619) 531-3900	325 S. Melrose Suite 300 Vista, CA 92083 (760) 940-4386

The current Rules and Regulations of the Air Pollution Control District of San Diego County may also be viewed and downloaded using the following internet address:

www.sdapcd.org

The following addresses should be used to submit any certifications, reports or other information required by this permit:

SD Air Pollution Control District Compliance Division 10124 Old Grove Rd. San Diego, CA 92131	USEPA Region IX Director of the Air Division Attn: Air-3 75 Hawthorne Street San Francisco, CA 94105
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SECTION I. REGULATION XIV PERMIT REQUIREMENTS

A. ADMINISTRATIVE PERMIT TERMS

1. This Title V Operating Permit expires 5 years from date of issuance. [Rule 1410]
2. Commencing or continuing operation under this permit to operate shall be deemed acceptance of all terms and conditions specified within this permit. This does not limit the right of the applicant to seek judicial review or seek federal EPA review of a permit term or condition. [Rule 1421]
3. This permit may be modified, revoked, reopened and reissued, or terminated by the District for cause. [Rule 1421]
4. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay the applicability of any permit condition. [Rule 1421]
5. This permit does not convey any property rights of any sort, nor any exclusive privilege. [Rule 1421]
6. The need for the permittee to halt or reduce a permitted activity in order to maintain compliance with any term or condition of this permit shall not be a defense for any enforcement action brought as a result of a violation of any such term or condition. [Rule 1421]
7. In the event of challenge to any portion of this permit, the rest of the permit remains valid. [Rule 1421]
8. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any applicable requirement in this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [Rule 1421]

B. RENEWAL REQUIREMENTS AND TERMS

1. The permittee shall submit a complete application for renewal of this permit to the Air Pollution Control Officer at least 12 months, but not more than 18 months, prior to permit expiration. [Rule 1410]
2. If an administratively complete application for renewal of this permit has been submitted to the Air Pollution Control Officer within the dates specified in Section I.B.1., the terms and conditions of this permit shall remain in effect and the source may continue operations under these terms and conditions until the Air Pollution Control Officer issues or denies the permit renewal. [Rule 1410]

C. MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS

1. The permittee shall provide the District access to the facility and all equipment subject to this permit, and access to all required records pursuant to California Health and Safety Code Section 41510. [Rule 1421 (b)(2)(i)]
2. The permittee shall maintain all records required by this permit including any calibration, maintenance, and other supporting information and copies of all reports required by this permit for at least five years from their date of creation. Such records shall be maintained on-site for a minimum of three years. [Rule 1421(b)(1)(iii)]
3. The permittee shall submit monitoring and recordkeeping summary reports and all other monitoring and recordkeeping reports required by this permit to the District every six months, unless a shorter time frame is required by a specific permit condition contained in Section III of this permit. Unless other dates are specified in Section III, reports for data required to be collected from January 1 through June 30, shall be submitted no later than September 1 of the calendar year, and reports for data required to be collected from July 1 through December 31, shall be submitted no later than March 1 of the following calendar year. The report for the final six months of the year may be consolidated with the annual compliance certification required below. All instances of noncompliance from federally enforceable applicable requirements shall be clearly identified in these reports. (Timely completion of District Certification Reports Form J1 and Form J2, if applicable, and all indicated attachments, fulfills the requirements of this condition.) [Rule 1421]
4. Each calendar year, the permittee shall submit to the District and to the federal EPA an annual compliance certification, in a manner and form approved in writing by the District, for the previous calendar year that includes the identification of each applicable term or condition of the final permit for which the compliance status is being certified, the compliance status and whether the facility was in continuous or intermittent compliance during the previous calendar year, identification of the method used to determine compliance during the previous calendar year, and any other information required by the District to determine the compliance status. The annual compliance certification for a calendar year shall be submitted no later than March 1 of the following calendar year and may be consolidated with the monitoring and recordkeeping report for the last six months of the year for which compliance is certified. (Timely completion of District Certification Reports Form J1 and Form J2, if applicable, and all indicated attachments, fulfills the requirements of this condition.) [Rule 1421(b)(2)(iii) and Rule 1421 (b)(2)(iv)]
5. Any report submitted to the District or federal EPA pursuant to this permit to comply with a federally enforceable applicable requirement, shall be certified by a responsible official stating that, based on information and belief formed after reasonable inquiry, the report is true, accurate and complete. [Rule 1421 (b)(2)(iv)]
6. The permittee shall make any trade secret designations of records, documents, or other information submitted to the District or federal EPA in accordance with District Rule 176. [Rule 176]

7. The permittee shall report all deviations from any and all federally enforceable permit terms and conditions including: (a) breakdowns, whether or not they result in excess emissions, (b) deviations that result in excess emissions of any regulated air pollutant, and (c) deviations from monitoring, recordkeeping, reporting and other administrative requirements that do not result in excess emissions. For deviations that result from breakdowns under District Rule 98, the permittee shall report the breakdown within two hours of detection of the breakdown and provide a follow-up written report after corrective actions have been taken. For deviations not due to a breakdown but which result in excess emissions, the permittee shall report the deviation within ten calendar days of detection. For all other deviations where no specific time frame for reporting a deviation applies, the permittee shall report the deviation at the time of the next semi-annual monitoring summary or annual compliance certification, whichever occurs first. If an underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, then the criteria for the applicable requirement shall apply. The report must include the probable cause of such deviations and any corrective actions or preventive measures taken. [Rule 1421]

D. GENERAL PERMIT REQUIREMENTS

1. The permittee shall comply with all terms and conditions of this permit. This permit consists of this document and Appendices A, B, C, D1, and D2. Any noncompliance with the federally applicable terms and conditions of this permit shall constitute a violation of the federal Clean Air Act. Noncompliance with any federally applicable permit term or condition of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Noncompliance with any District permit term or condition is grounds for enforcement action by the District. [Rule 1421 (b)(1)(vi)]
2. Upon a written request by the District, the permittee shall furnish to the District any information needed to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; any information required to determine compliance with this permit; or any records required to be maintained pursuant to this permit. Such information shall be provided within a reasonable time, as specified within the District's written request. [Rule 1421 (b)(1)(x)]
3. The permittee shall pay annual fees in accordance with District Rule 40. [Rule 1421(b)(1)(xi)]
4. The permittee shall provide access, facilities, utilities and any necessary safety equipment for source testing and inspection upon request of the District. [Rule 19]
5. This permit shall be maintained on-site at all times and be made available to the District upon request. [Rule 1410 (c)]
6. The Rule Reference Table provided in Appendix B shall be used to determine whether a cited rule is a federally and District enforceable requirement or a District only enforceable requirement. Any new or revised District rule shall not be considered federally enforceable until the rule is approved by EPA into the SIP. In cases where

SIP approval is pending for a revised District rule, the rule citation shall refer to both the current SIP approved rule and the revised District rule. [Rule 1421]

SECTION II. FACILITY-WIDE REQUIREMENTS

A. GENERAL PERMIT PROGRAM APPLICABLE REQUIREMENTS

The permittee shall comply with the applicable requirements specified in the Rules and Regulations cited below, unless specifically exempted by the same Rule or Regulation.

Regulation	Rule Citation	Title
SDCAPCD Reg. II	10	Permits Required
SDCAPCD Reg. II	19	Provision of Sampling & Testing Facilities
SDCAPCD Reg. II	19.3	Emission Information
SDCAPCD Reg. II	21	Permit Conditions
SDCAPCD Reg. IV	60	Circumvention
SDCAPCD Reg. V	98	Breakdown Conditions: Emergency Variance
SDCAPCD Reg. VIII	131	Stationary Source Curtailment Plan
SDCAPCD Reg. VIII	132	Traffic Abatement Plan

B. GENERAL PROHIBITORY APPLICABLE REQUIREMENTS

The permittee shall comply with the generally applicable requirements specified in the Rules and Regulations cited below, unless specifically exempted by the same Rule or Regulation. These generally applicable requirements apply on a facility-wide basis to all permitted equipment, registered equipment, and insignificant activities. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more permitted emission units, the requirement is also included in Section III.A. of this permit.

Regulation	Rule Citation	Title
SDCAPCD Reg. IV	50	Visible Emissions
SDCAPCD Reg. IV	51	Nuisance
SDCAPCD Reg. IV	67.0	Architectural Coatings
SDCAPCD Reg. IV	67.17	Storage of Materials Containing VOC
SDCAPCD Reg. IV	71	Abrasive Blasting
SDCAPCD Reg. VI	102	Open Fires - Western Section
SDCAPCD Reg. VI	105	Burning Permits
SDCAPCD Reg. VI	106	Permit Duration
SDCAPCD Reg. VI	107	Burning Hours
SDCAPCD Reg. VI	108	Burning Conditions
SDCAPCD Reg. VI	111	Prior Notification
SDCAPCD Reg. VI	112	Burning Report
SDCAPCD Reg. XI	Subpart M, 361.145	Standard for Demolition and Renovation
SDCAPCD Reg. XI	Subpart M, 361.150	Standard for Waste Disposal for Manufacturing, Fabricating, Demolition, Renovation, and Spraying Operations
40 CFR Part 82	Subpart F	Recycling and Emissions Reduction

C. 40 CFR Part 68, Chemical Accident Prevention Provisions (RMP Requirements)

This source has a risk management plan for natural gas storage.

D. PERMIT SHIELDS

A permit shield has been granted from enforcement action for the following requirements: Rules 52, 54, 68, and 69.3.

52. Shielding from Rule 52 was granted in the past because this rule does not apply to stationary internal combustion engines and gas turbines are a type of internal combustion engine

54. Shielding from Rule 54 was granted in the past because this rule does not apply to operations comprised exclusively of a combustion process where liquid fuels, gaseous fuels and corresponding combustion air are introduced. The monitoring of fuel usage and emissions for emissions threshold conditions are enforced by Rule 20.3.

68. Shielding from Rule 68 was granted in the past because any article, machine, equipment, facility, or other contrivance used exclusively for the testing of turbine engines or their components is exempt from this rule. The monitoring of fuel usage and emissions for emissions threshold conditions are enforced by Rule 20.3.

69.3 Shielding from Rule 69.3 was granted in the past because any gas turbine engine when operated exclusively for research, development or testing of gas turbine engines or their components is exempt from this rule. The monitoring of fuel usage and emissions for emissions threshold conditions are enforced by Rule 20.3.

E. ADDITIONAL TERMS

1. Any emission unit described in this Title V operating permit as being fired on natural gas, shall only use Public Utility Commission (PUC)-quality natural gas, unless the emission unit permit specifies otherwise. Permittee shall provide records of the natural gas sulfur content to the District upon request. [Rule(s) 53, 62]
2. Records required by this permit shall be considered as being maintained "on-site" if records for the previous 12-month period are available at the stationary source and any additional records are maintained at Solar Turbines Harbor Drive Facility located at 2200 Pacific Highway, San Diego CA 92101, and made readily available to the District upon request. [Rule 21]

SECTION III. EMISSION UNIT REQUIREMENTS

A. DISTRICT PERMITTED EMISSION UNITS

The District Permits listed at the introduction to Appendix A, including all terms and conditions of such permits, constitute the emission unit portion of this Title V Operating Permit.

B. REGISTERED AND LEASED EMISSION UNITS

The permittee shall comply with the source specific applicable requirements specified in the Rules and Regulations cited below for all registered and leased emission units, unless specifically exempted by the same Rule or Regulations.

Regulation	Rule Citation	Title
SDCAPCD Reg. IV	62	Sulfur Content of Fuels
SDCAPCD Reg. IV	69.4	Stationary Reciprocating Internal Combustion Engines

C. REQUIREMENTS FOR EMERGENCY ENGINES

The emergency engines are subject to 40 CFR 63 Subpart ZZZZ -- *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE)*. Applicable requirements include, but may not be limited to, the following:

1. The permittee must change engine oil and filter every 500 hours of operation or annually, whichever comes first; or test the oil in accordance with 40 CFR § 63.6625(i). (40 CFR 63 Subpart ZZZZ § 63.6603(a) and Table 2d(4)(a))
2. The permittee must inspect the air cleaner of a compression ignition engine or inspect spark plugs of a spark ignition engine, every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR 63 Subpart ZZZZ §63.6603(a) and Table 2d(4)(b) or Table 2d(5)(b))
3. The permittee must inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR 63 Subpart ZZZZ §63.6603(a) and Table 2d(4)(c))
4. The permittee shall maintain files of all required information (including all reports and notifications) in accordance with the general provisions of 40 CFR § 63.10(b).

D. INSIGNIFICANT EMISSION UNITS AND ACTIVITIES

The permittee shall comply with the source specific applicable requirements specified in the Rules and Regulations cited below for all emission units not required to obtain a District Permit to Operate pursuant to Rule 11, unless specifically exempted by the same Rule or Regulations.

Regulation	Rule Citation	Title
SDCAPCD Reg. IV	62	Sulfur Content of Fuels
SDCAPCD Reg. IV	66	Organic Solvents
SDCAPCD Reg. IV	66.1	Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds
SDCAPCD Reg. IV	69.2.1	Small Boilers, Process Heaters, and Steam Generators

E. PERMIT SHIELDS

Not applicable to this source.

SECTION IV. VARIANCE PROCEDURES & COMPLIANCE SCHEDULES

A. VARIANCE PROCEDURES

1. The permittee may seek relief from District enforcement action in the event of a breakdown in accordance with District Rule 98. Notwithstanding the foregoing, the granting by the District of breakdown relief or the issuance by the Hearing Board of a variance does not provide relief from federal enforcement or citizen's suits. [Rule 98]

B. COMPLIANCE SCHEDULES

Not applicable to this source.

SECTION V. APPENDICES

APPENDIX A: DISTRICT PERMITS (Attached)

Permit Numbers	Source Category
APCD2006-PTO-003977	Paint Spray (2) Small Booth
APCD2006-PTO-007750	Abrasive Blasting
APCD2006-PTO-050303	Paint Spray (2) South Booth
APCD2006-PTO-960542	IC Emergency Engine (Fire Pump)
APCD2006-PTO-961078	IC Emergency Engine (Computer)
APCD2006-PTO-976907	IC Emergency Engine (Maintenance)
APCD2006-PTO-978792	Paint Spray (2) North Booth
APCD2008-PTO-003886	Test Cell #8
APCD2008-PTO-004015	Test Cell #7
APCD2008-PTO-004252	Test Cell #1
APCD2008-PTO-004253	Test Cell #2
APCD2008-PTO-004254	Test Cell #3
APCD2008-PTO-004255	Test Cell #4
APCD2008-PTO-004256	Test Cell #5
APCD2008-PTO-004257	Test Cell #6
APCD2008-PTO-004258	Test Cell #9
APCD2008-PTO-004495	Test Cell #10
APCD2008-PTO-004496	Test Cell #11
APCD2008-PTO-004733	Test Cell #12
APCD2008-PTO-020875	Test Cell #19
APCD2008-PTO-020876	Test Cell #16-1
APCD2008-PTO-020877	Test Cell #18
APCD2008-PTO-020878	Test Cell #17
APCD2008-PTO-020879	Test Cell #16
APCD2008-PTO-020880	Test Cell #15
APCD2008-PTO-020881	Test Cell #13
APCD2008-PTO-020882	Test Cell #14
APCD2008-PTO-975790	Test Cell #16-4
APCD2008-PTO-975791	Test Cell #21
APCD2008-PTO-975792	Test Cell #22
APCD2008-PTO-975793	Test Cell #23B
APCD2008-PTO-976905	Thermal Oxidizer (Dev Test)
APCD2008-PTO-976913	Thermal Oxidizer (Prod Test)
APCD2013-PTO-001529	Test Cell #20
APCD2015-PTO-002260	Boiler
APCD2016-PTO-002572	Thermal Oxidizer (T250)
APCD2017-PTO-002875	Test Cell #24
APCD2017-PTO-002876	Test Cell #23A
APCD2017-PTO-002877	Test Cell #25
APCD2022-PTO-004277	Test Cell #16-2
APCD2022-PTO-004278	Test Cell #16-3



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
PHONE (858) 586-2600 Fax (858) 586-2601
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Sectors: 4, J
Site Record ID: APCD1976-SITE-01130
Application Record ID: APCD1997-APP-960991

PERMIT ID
APCD2006-TVP-960991


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

TITLE V
PERMIT TO OPERATE

The following is hereby granted a Title V Permit to Operate the articles, machines, equipment, or contrivances described in the following attachments. This permit is not transferable to a new owner nor is it valid for the operation of equipment at another location, except as specified.

EQUIPMENT OWNER

Solar Turbines Inc PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

TITLE V COMPANY CONTACT:

Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

TITLE V RESPONSIBLE PERSON:

Solar Turbines Inc
 Jim Hickle
 PO Box 85376 Mail Zone T-2
 San Diego Ca 92186

RESPONSIBLE OFFICIAL: Jim Hickle, Director of Packaging Systems Operations

ALTERNATIVE: Kaytlyn Collins, EHS Engineer

FACILITY CONTACT: Aleks Meyer, EHS Manager

PERMIT INFO CONTACT: Kaytlyn Collins, EHS Engineer



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2020-APP-006524

PERMIT ID
APCD2006-PTO-003977

Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Metal parts and products application station consisting of one (1) paint spray booth,
 Manufacturer: AFC Finishing Systems
 Model: SDD-DT-6354
 Dimensions: 63'L X 26'W x18'H,
 Fan rating: 82,000 cfm
 Air Replacement Heaters Rating: 6,048,000 BTU/hr
 Equipped with four (4) air supply lines for spray equipment, exhaust filters, removable partitioning wall and using a Rule 67.3 compliant application equipment cleaning station shared with Permits to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303 and using equipment including but not limited to an enclosed gun washer and a cleaning tank. For purposes of complying with the conditions below, the following equipment groups are defined:

Equipment Group CO1: coating and adhesive operations including, but not limited to, coating application, adhesive application, and surface preparation, but excluding application equipment cleanup and solvent reclamation under Permits to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303.

Equipment Group CO2: equipment cleanup and solvent reclamation under Permits to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303 and an unpermitted five gallon solvent still.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [27K] Surface Coating Application Station

BEC: APCD2016-CON-001233

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2020-APP-006524

PERMIT ID
APCD2006-PTO-003977


A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rule 67.3.
2. Permittee shall operate the coating application station described above in compliance with all applicable standards of Rule 67.3 Section (d) including application methods, surface preparation and cleanup requirements, coating VOC limits and application equipment cleanup requirements.
3. Permittee shall maintain records for the application station described above in accordance with all applicable requirements of Rule 67.3 Section (f).
4. Usage data for coatings, surface preparation and cleanup for the operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall be recorded in a common logbook shared between the operations. [NSR]
5. If requested by the District or EPA, the applicable test methods listed in Rule 67.3 Section (g) shall be used to determine compliance with the applicable standards of Rule 67.3 Section (d).
6. The average quantity of VOC emissions from the coating operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall not exceed 470 pounds per operating day per calendar month. [NSR]
7. The maximum quantity of VOC emissions from the coating operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall not exceed 22 tons in any consecutive 12-month period. [NSR]
8. Permittee shall maintain monthly usage records of all coatings applied in the operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 and record the number of coating days per calendar month. [NSR]
9. Permittee shall not apply coatings in the application station described above unless exhaust fans and exhaust filters are installed and operating properly. [NSR]
10. Permittee shall ensure that all materials containing organic compounds are stored in closed containers in accordance with Rule 67.17 requirements.
11. Current Material Safety Data Sheets (MSDS) or manufacturer's specifications which identify the VOC content, vapor pressure or initial boiling point, as applicable shall be maintained on-site for all materials used containing Volatile Organic Compounds and made readily available to the District upon request. [NSR]
12. Sum of Federal hazardous air pollutants (HAPs) emissions from the stationary source's permits under permit record ID, APCD2006-PTO-978792, APCD2006-PTO-050303, APCD2006-PTO-003977 under site record ID, APCD1976-SITE-01130 and any other site ID determined to be part of this stationary source, shall be less than 5 tons per consecutive twelve (12) month period. (Rule 21)
13. Hazardous air pollutant (HAP) emissions from this stationary source shall be calculated on a monthly basis no later than two months following the end of the month the calculation is for. These calculations shall be performed according to a protocol approved by the District and may incorporate the provisions of Rule 60.2. (Rules 21 and 60.2)
14. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

15. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
16. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2015-APP-003951

PERMIT ID
APCD2006-PTO-007750


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PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Abrasive blast room: 45' x 20' x 20' with floor type reclaim system; one 13.5 ton storage hopper for steel shot abrasives with elevator assembly and air wash separator; one 18 cft storage hopper for garnet abrasive with elevator assembly and air wash separator; one Schmidt, Model 6.5CF blast machine for steel shot abrasive with two 1/2" nozzles; one Schmidt, Model 6.5 CF blast machine for garnet abrasive, with one 1/2" nozzle; all equipment vented to a dust collecting system: Torit, Model HDFT 3-36, S/N IG627488-001, with 36 cartridge filters, rated at 99.99% control efficiency for 0.5 micron particles, 20,500 cfm. (82\#14844; 06/01\LKR\#976009; 8/2015/003868)

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [02B] Abrasive Blasting Cabinet

BEC: APCD2015-CON-001095

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. The air pollution control device shall be maintained in good operating condition and shall be in operation whenever the equipment described above is in operation. [NSR]
2. All process and storage equipment with air pollution control equipment shall be maintained and operated so that there is no leakage (0% opacity during operation and free of accumulated dust when not in operation) of air contaminants to the atmosphere prior to their treatment in the air pollution control system. [NSR]
3. A maximum of two nozzles may be operated in the room at any one time. (Rule 50, NSR)
4. Differential pressures across the filters, as measured by the differential pressure gauges, shall be in the range of 0.6 to 8.0 inches of water column. Differential pressure readings shall be recorded once per week and a log shall be kept for the last three years of operation which shall be on site and made available to the District upon request. [NSR]



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2015-APP-003951

PERMIT ID
APCD2006-PTO-007750


5. All records required by this permit shall be kept for a minimum of three (3) years and made available to District personnel upon request. [NSR]
6. Permittee shall perform the following monitoring at least annually and maintain records of the results:
 - 1) Visually inspect the baghouse filter system to verify it is in good working order.
 - 2) Observe the baghouse exhaust to detect any visible emissions.If any visible emissions are observed, Permittee shall take immediate corrective actions. [NSR]
7. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

8. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
9. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.) [Rule 1200]
10. There shall be no more than two nozzles operating in the abrasive blast room at any time. (Rule 1200)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2020-APP-006524

PERMIT ID
APCD2006-PTO-050303


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Two (2) metal coating application stations (i.e., zones) consisting of: one JBL paint spray booth, Model , #OWDDT-92-XWPDT-S,
 Dimensions: 27 feet wide x 30 feet high x 96 feet long (partitioned in the center to form two (2) 48 feet long booths or zones)
 Each zone equipped with four (4) 13,750 cfm exhaust fans with dry filters and one (1) natural gas fired WEATHER-RITE drying oven, Model No. TOT-230-VT, 3.267 MMBtu/hr input rating, operated at less than 194 degrees F using coating application methods specified in Rule 67.3; and a Rule 67.3 compliant application equipment cleaning station shared with Permit to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303 and using equipment including but not limited to an enclosed gun washer and a cleaning tank. For purposes of complying with the conditions below, the following equipment groups are defined:

Equipment Group CO1: coating and adhesive operations including, but not limited to, coating applications, adhesive application, and surface preparation, but excluding application equipment cleanup and solvent reclamation under Permit to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303.

Equipment Group CO2: equipment cleanup and solvent reclamation under Permit to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303 and an unpermitted five gallon solvent still.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 2 [27K] Surface Coating Application Station

BEC: APCD2016-CON-001234

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rule 67.3.



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PERMIT ID
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2. Permittee shall operate the coating application station described above in compliance with all applicable standards of Rule 67.3 Section (d) including application methods, surface preparation and cleanup requirements, coating VOC limits and application equipment cleanup requirements. [Rule 67.3]
3. Permittee shall maintain records for the application station described above in accordance with all applicable requirements of Rule 67.3 Section (f).
4. Usage data for coatings, surface preparation and cleanup for the operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall be recorded in a common logbook shared between the operations. [NSR]
5. If requested by the District or EPA, the applicable test methods listed in Rule 67.3 Section (g) shall be used to determine compliance with the applicable standards of Rule 67.3 Section (d).
6. The average quantity of VOC emissions from the coating operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall not exceed 470 pounds per operating day per calendar month. [NSR]
7. The maximum quantity of VOC emissions from the coating operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall not exceed 22 tons in any consecutive 12-month period. [NSR]
8. Permittee shall maintain monthly usage records of all coatings applied in the operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 and record the number of coating days per calendar month. [NSR]
9. Permittee shall not apply coatings in the application station described above unless exhaust fans and exhaust filters are installed and operating properly. [NSR]
10. Permittee shall ensure that all materials containing organic compounds are stored in closed containers in accordance with Rule 67.17 requirements. [Rule 67.17]
11. Current Material Safety Data Sheets (MSDS) or manufacturer's specifications which identify the VOC content, vapor pressure or initial boiling point, as applicable shall be maintained on site for all materials used containing Volatile Organic Compounds and made readily available to the District upon request. [NSR]
12. Permittee shall maintain on site pressure gauges in proper operating condition to measure the air cap pressure of HVLPP coating application equipment. The permittee shall maintain a permanent air pressure at the air cap in the range of 0.1 to 10 PSIG when applying coatings. [Rule 67.3]
14. Sum of Federal hazardous air pollutants (HAPs) emissions from the stationary source's permits under permit record ID, APCD2006-PTO-978792, APCD2006-PTO-050303, APCD2006-PTO-003977 under site record ID, APCD1976-SITE-01130 and any other site ID determined to be part of this stationary source, shall be less than 5 tons per consecutive twelve (12) month period. (Rule 21)
15. Hazardous air pollutant (HAP) emissions from this stationary source shall be calculated on a monthly basis no later than two months following the end of the month the calculation is for. These calculations shall be performed according to a protocol approved by the District and may incorporate the provisions of Rule 60.2. (Rules 21 and 60.2)
16. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

13. Permittee shall not use coating materials that contain hexavalent chromium, nickel, cadmium, lead, copper, beryllium or manganese in the above operation. Prior to the use of any coating containing any element(s) or compound(s) of any element(s) listed in this condition, permittee shall submit an application to modify this permit to operate to the District and receive written approval from the District for such use. [Rule 1200]
17. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2020-APP-006524

PERMIT ID
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18. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



San Diego County Air Pollution Control District
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Sectors: 4, J
Site Record: APCD1976-SITE-01130
Application Record: APCD Condition Update

Permit Record: APCD2006-PTO-960542



Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego, CA 92123

Equipment Address:

Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego, CA 92123

PERMIT TO OPERATE

EXPIRES: March 31, 2024

This permit is not valid until required fees have been paid.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

Equipment Owner:

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

Equipment Description:

EMERGENCY ENGINE FIRE PUMP: CATERPILLAR DIESEL ENGINE, MODEL 3208, S/N 3Z11276, 255 BHP. (960542-CCN-1/98) 17CCR93115SJE01/06

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules:

1 [34W] Registered Engine (Rule 12)

BEC: APCD2020-CON-001742

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

1. The engine shall be operated exclusively during emergencies as defined in Rule 69.4.1 or Rule 12 or 17CCR93115 as applicable, or for maintenance and testing.
2. Engine operation for maintenance and testing purposes shall not exceed 35 hours per calendar year unless otherwise required by National Fire Protection Association (NFPA) Section 25. (17 CCR 93115, Rule 1200, NSR)
3. This engine shall only use CARB diesel fuel. (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII)
4. Visible emissions including crank case smoke shall comply with Air Pollution Control District Rule 50. (Rule 50)
5. The equipment described above shall not cause or contribute to a public nuisance. (Rule 51)
6. The engine and any associated air pollution control equipment and monitoring equipment shall be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions (40CFR Subpart ZZZZ §63.6605(b)).
7. The owner or operator shall minimize engine operating time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.(40CFR Subpart ZZZZ §63.6625(h))
8. This engine shall not operate for non-emergency use during the following periods, as applicable:
 - (a) whenever there is any school sponsored activity, if engine is located on school grounds or
 - (b) between 7:30am and 3:30pm on days when school is in session, if the engine is located within 500 feet of, but not on, school grounds.
 This condition shall not apply to an engine located at or near any school grounds that also serve as the students' place of residence. (17 CCR 93115)

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Permit Record: APCD2006-PTO-960542



9. A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operation hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within 10 calendar days. The written notification shall include the following information:
- (a) old meter's hour reading,
 - (b) replacement meter's manufacturer name, model and serial number if available and current hour reading on replacement meter, and
 - (c) copy of receipt of new meter or of installation work order.
- A copy of the meter replacement notification shall be maintained onsite and made available to the Air Pollution Control District upon request.
(Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ)
10. The owner or operator of this engine shall conduct periodic maintenance of the engine and add-on control equipment, if any, as recommended by the engine and control equipment manufacturers or as specified by the engine servicing company's maintenance procedures. Maintenance shall be conducted at least once each calendar year, and shall include, but is not limited to, the following:
- 1) Change oil and filter, or test in accordance with the oil analysis program in 40 CFR §63.6625(i) or (j), every 500 hours of operation or annually, whichever comes first; and
 - 2) Inspect air cleaner or spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - 3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- Documentation of oil and filter changes or copies of the oil test analysis shall be kept on site and made available upon request.
Documentation of oil and filter changes or copies of the oil test analysis shall be kept on site and made available upon request. If testing in accordance with 40 CFR §63.6625(i) or (j), the oil analysis program must analyze the Total Base Number, viscosity and percent water content (for compression ignition engines) and the Total Acid Number, viscosity and percent water content (for spark ignited engines). If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
(Rule 12, Rule 69.4.1, 40 CFR 63 Subpart ZZZZ)
11. The owner or operator of the engine shall maintain the following records on site for at least the same period of time as the engine to which the records apply is located at the site:
- (a) documentation shall be maintained identifying the fuel as CARB diesel, and
 - (b) manual of recommended maintenance provided by the manufacturer, or maintenance procedures specified by the engine servicing company.
- (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 63 Subpart ZZZZ)



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12. The owner or operator of this engine shall maintain a monthly operating log containing, at a minimum, the following:
 - (a) dates and elapsed times of every instance of engine operation based on actual readings of the engine hour meter;
whether the operation was for maintenance and testing purposes, compliance with the testing requirements of National Fire Protection Association (NFPA) Section 25 or emergency use; and the nature of the emergency;
 - (b) if located within 500 feet of a school, the time of day of every instance of engine operation for testing and maintenance, unless the engine emits no more than 0.01 g/bhp-hr of diesel particulate matter or meets the requirements specified in 17CCR, Section 93115.13(f);
 - (c) total cumulative hours of operation per calendar year;
 - (d) records of periodic engine maintenance shall include the date and a description of the maintenance that was performed; and
 - (e) hours of operation for all uses other than those specified above and identification of the nature of that use. (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ)
13. All records required by this permit shall be kept for a minimum of 60 months from their date of creation unless otherwise indicated by the conditions of this permit. These records shall be maintained onsite for a minimum of 36 months from their date of creation and made available to the District upon request. The remaining 24 months of records may be retained off site. Records kept off site shall be made available to the District within 5 working days of request. (Rule 12, Rule 69.4.1, 40 CFR 63 Subpart ZZZZ)
14. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.
15. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
16. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD Condition Update

PERMIT ID
APCD2006-PTO-961078


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

EMERGENCY ENGINE-GENERATOR SET: CATERPILLAR DIESEL ENGINE, MODEL 3406, S/N 4ZR01855, 600 BHP, DRIVING A 400 KW GENERATOR. (961078-CCN-1/98) 17CCR93115-SJE-01/06

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [34W] Registered Engine (Rule 12)

BEC: APCD2020-CON-001738

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. The engine shall be operated exclusively during emergencies as defined in Rule 69.4.1 or Rule 12 or 17CCR93115 as applicable, or for maintenance and testing. [NSR]
3. Engine operation for maintenance and testing purposes shall not exceed 20 hours per calendar year. (17 CCR 93115, Rule 1200, NSR)
4. This engine shall only use CARB diesel fuel. (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII)
5. Visible emissions including crank case smoke shall comply with Air Pollution Control District Rule 50. (Rule 50)
6. The equipment described above shall not cause or contribute to a public nuisance. (Rule 51)
7. The engine and any associated air pollution control equipment and monitoring equipment shall be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions (40CFR Subpart ZZZZ §63.6605(b)).



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- 8. The owner or operator shall minimize engine operating time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.(40CFR Subpart ZZZZ §63.6625(h))
- 11. A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operation hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within 10 calendar days. The written notification shall include the following information:
 - (a) old meter's hour reading,
 - (b) replacement meter's manufacturer name, model and serial number if available and current hour reading on replacement meter, and
 - (c) copy of receipt of new meter or of installation work order.
 A copy of the meter replacement notification shall be maintained onsite and made available to the Air Pollution Control District upon request.
 (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ)
- 13. The owner or operator of the engine shall maintain the following records on site for at least the same period of time as the engine to which the records apply is located at the site:
 - (a) documentation shall be maintained identifying the fuel as CARB diesel, and
 - (b) manual of recommended maintenance provided by the manufacturer, or maintenance procedures specified by the engine servicing company.
 (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 63 Subpart ZZZZ)
- 15. All records required by this permit shall be kept for a minimum of 60 months from their date of creation unless otherwise indicated by the conditions of this permit. These records shall be maintained onsite for a minimum of 36 months from their date of creation and made available to the District upon request. The remaining 24 months of records may be retained off site. Records kept off site shall be made available to the District within 5 working days of request. (Rule 12, Rule 69.4.1, 40 CFR 63 Subpart ZZZZ)
- 16. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

- 2. This engine shall not be used as a part of a non-emergency Demand Response Program (DRP). This condition shall not apply to engines operating pursuant to the rolling blackout reduction program as defined in 17 CCR 93115 and operating in accordance with 17 CCR 93115.6(c). (17 CCR 93115)
- 9. This engine shall not operate for non-emergency use during the following periods, as applicable:
 - (a) whenever there is any school sponsored activity, if engine is located on school grounds or
 - (b) between 7:30am and 3:30pm on days when school is in session, if the engine is located within 500 feet of, but not on, school grounds. This condition shall not apply to an engine located at or near any school grounds that also serve as the students' place of residence. (17 CCR 93115)
- 10. Engine operation in response to notification of an impending rotating outage shall be subject to all the following restrictions:
 - (a) the utility distribution company has ordered rotating outages in the control area where the engine is located,
 - (b) the engine is operated no more than 30 minutes prior to the time when the utility distribution company officially forecasts a rotating outage in the cited control area, and
 - (c) the engine operation is terminated immediately after the utility distribution company advises that a rotating outage is no longer in effect.
 This condition shall not apply to engines operating pursuant to the rolling blackout reduction program as defined in 17 CCR 93115 and operating in accordance with 17 CCR 93115.6(c). (17 CCR 93115)
- 17. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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App ID: APCD Condition Update

PERMIT ID
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18. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD Condition Update

PERMIT ID
APCD2006-PTO-976907


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

EMERGENCY STANDBY ENGINE: CATERPILLAR MODEL 3306, S/N 8JJ00351, 362 HP, DIESEL FIRED, DRIVING AN ELECTRICAL GENERATOR. TURBOCHARGED AND AFTERCOOLED. 976907-AFS-20AUG2001 17CCR93115SJE01/06

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [34W] Registered Engine (Rule 12)

BEC: APCD2020-CON-001738

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

3. Engine operation for maintenance and testing purposes shall not exceed 20 hours per calendar year. (17 CCR 93115, Rule 1200, NSR)
4. This engine shall only use CARB diesel fuel. (Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII)
5. Visible emissions including crank case smoke shall comply with Air Pollution Control District Rule 50. (Rule 50)
6. The equipment described above shall not cause or contribute to a public nuisance. (Rule 51)
7. The engine and any associated air pollution control equipment and monitoring equipment shall be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions (40CFR Subpart ZZZZ §63.6605(b)).
8. The owner or operator shall minimize engine operating time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.(40CFR Subpart ZZZZ §63.6625(h))



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11. A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operation hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within 10 calendar days. The written notification shall include the following information:
 - (a) old meter's hour reading,
 - (b) replacement meter's manufacturer name, model and serial number if available and current hour reading on replacement meter, and
 - (c) copy of receipt of new meter or of installation work order.A copy of the meter replacement notification shall be maintained onsite and made available to the Air Pollution Control District upon request.
(Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ)
12. The owner or operator of this engine shall conduct periodic maintenance of the engine and add-on control equipment, if any, as recommended by the engine and control equipment manufacturers or as specified by the engine servicing company's maintenance procedures. Maintenance shall be conducted at least once each calendar year, and shall include, but is not limited to, the following:
 - 1) Change oil and filter, or test in accordance with the requirements of 40 CFR §63.6625(i) or (j);
 - 2) Inspect and clean air filters, replacing as necessary; and
 - 3) Inspect all hoses and belts, replacing as necessary.Documentation of oil and filter changes or copies of the oil test analysis shall be kept on site and made available upon request. If testing in accordance with 40 CFR §63.6625(i) or (j), the oil analysis program must analyze the Total Base Number, viscosity and percent water content (for compression ignition engines) and the Total Acid Number, viscosity and percent water content (for spark ignited engines). If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
(Rule 12, Rule 69.4.1, 40 CFR 63 Subpart ZZZZ)
13. The owner or operator of the engine shall maintain the following records on site for at least the same period of time as the engine to which the records apply is located at the site:
 - (a) documentation shall be maintained identifying the fuel as CARB diesel, and
 - (b) manual of recommended maintenance provided by the manufacturer, or maintenance procedures specified by the engine servicing company.(Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 63 Subpart ZZZZ)
14. The owner or operator of this engine shall maintain a monthly operating log containing, at a minimum, the following:
 - (a) dates and elapsed times of every instance of engine operation based on actual readings of the engine hour meter; whether the operation was for maintenance and testing purposes or emergency use; and the nature of the emergency;
 - (b) if located within 500 feet of a school, the time of day of every instance of engine operation for testing and maintenance, unless the engine emits no more than 0.01 g/bhp-hr of diesel particulate matter or meets the requirements specified in 17CCR, Section 93115.13(f);
 - (c) for a total external power outage, documentation from the serving utility of an outage in the area where the engine is located; for an internal power outage, a description of what caused the failure and receipts and/or work orders for the necessary repairs; for a partial external power outage, including a low-voltage or electrical transient incident in which the external power voltage is low enough to trigger the operation of an emergency standby engine, a description of the incident;
 - (d) total cumulative hours of operation per calendar year;
 - (e) records of annual engine maintenance shall include the date the maintenance was performed and the nature of the maintenance; and
 - (f) hours of operation for all uses other than those specified above and identification of the nature of that use.(Rule 12, Rule 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ)



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15. All records required by this permit shall be kept for a minimum of 60 months from their date of creation unless otherwise indicated by the conditions of this permit. These records shall be maintained onsite for a minimum of 36 months from their date of creation and made available to the District upon request. The remaining 24 months of records may be retained off site. Records kept off site shall be made available to the District within 5 working days of request. (Rule 12, Rule 69.4.1, 40 CFR 63 Subpart ZZZZ)
16. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

1. The engine shall be operated exclusively during emergencies as defined in Rule 69.4.1 or Rule 12 or 17CCR93115 as applicable, or for maintenance and testing.
2. This engine shall not be used as a part of a non-emergency Demand Response Program (DRP). This condition shall not apply to engines operating pursuant to the rolling blackout reduction program as defined in 17 CCR 93115 and operating in accordance with 17 CCR 93115.6(c). (17 CCR 93115)
9. This engine shall not operate for non-emergency use during the following periods, as applicable:
 - (a) whenever there is any school sponsored activity, if engine is located on school grounds or
 - (b) between 7:30am and 3:30pm on days when school is in session, if the engine is located within 500 feet of, but not on, school grounds.This condition shall not apply to an engine located at or near any school grounds that also serve as the students' place of residence. (17 CCR 93115)
10. Engine operation in response to notification of an impending rotating outage shall be subject to all the following restrictions:
 - (a) the utility distribution company has ordered rotating outages in the control area where the engine is located,
 - (b) the engine is operated no more than 30 minutes prior to the time when the utility distribution company officially forecasts a rotating outage in the cited control area, and
 - (c) the engine operation is terminated immediately after the utility distribution company advises that a rotating outage is no longer in effect.This condition shall not apply to engines operating pursuant to the rolling blackout reduction program as defined in 17 CCR 93115 and operating in accordance with 17 CCR 93115.6(c). (17 CCR 93115)
17. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
18. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2020-APP-006524

PERMIT ID
APCD2006-PTO-978792


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Two (2) metal coating application stations (i.e., zones) consisting of: one JBL paint spray booth, Model , #OWDDT-92-XWPDT-S,
 Dimensions: 27 feet wide x 30 feet high x 96 feet long (partitioned in the center to form two (2) 48 feet long booths or zones)
 Each zone equipped with four (4) 13,750 cfm exhaust fans with dry filters and one (1) natural gas fired WEATHER-RITE drying oven, Model No. TOT-230-VT, 3.267 MMBtu/hr input rating, operated at less than 194 degrees F using coating application methods specified in Rule 67.3; and a Rule 67.3 compliant application equipment cleaning station shared with Permit to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303 and using equipment including but not limited to an enclosed gun washer and a cleaning tank. For purposes of complying with the conditions below, the following equipment groups are defined:

Equipment Group CO1: coating and adhesive operations including, but not limited to, coating applications, adhesive application, and surface preparation, but excluding application equipment cleanup and solvent reclamation under Permit to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303.

Equipment Group CO2: equipment cleanup and solvent reclamation under Permit to Operate Nos. APCD2006-PTO-003977, APCD2006-PTO-978792 and APCD2006-PTO-050303 and an unpermitted five gallon solvent still.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 2 [27K] Surface Coating Application Station

BEC: APCD2016-CON-001234

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rule 67.3.



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2. Permittee shall operate the coating application station described above in compliance with all applicable standards of Rule 67.3 Section (d) including application methods, surface preparation and cleanup requirements, coating VOC limits and application equipment cleanup requirements. [Rule 67.3]
3. Permittee shall maintain records for the application station described above in accordance with all applicable requirements of Rule 67.3 Section (f).
4. Usage data for coatings, surface preparation and cleanup for the operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall be recorded in a common logbook shared between the operations. [NSR]
5. If requested by the District or EPA, the applicable test methods listed in Rule 67.3 Section (g) shall be used to determine compliance with the applicable standards of Rule 67.3 Section (d).
6. The average quantity of VOC emissions from the coating operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 shall not exceed 470 pounds per operating day per calendar month. [NSR]
7. The maximum quantity of VOC emissions from the coating operations described in Permits to Operate Nos. 978792 and 050303 and the application and cleaning equipment shared with Permit to Operate No. 3977 shall not exceed 22 tons in any consecutive 12-month period. [NSR]
8. Permittee shall maintain monthly usage records of all coatings applied in the operations described in Permits to Operate Nos. 978792 and 050303 and the application equipment cleaning equipment shared with Permit to Operate No. 3977 and record the number of coating days per calendar month. [NSR]
9. Permittee shall not apply coatings in the application station described above unless exhaust fans and exhaust filters are installed and operating properly. [NSR]
10. Permittee shall ensure that all materials containing organic compounds are stored in closed containers in accordance with Rule 67.17 requirements. [Rule 67.17]
11. Current Material Safety Data Sheets (MSDS) or manufacturer's specifications which identify the VOC content, vapor pressure or initial boiling point, as applicable shall be maintained on site for all materials used containing Volatile Organic Compounds and made readily available to the District upon request. [NSR]
12. Permittee shall maintain on site pressure gauges in proper operating condition to measure the air cap pressure of HVLV coating application equipment. The permittee shall maintain a permanent air pressure at the air cap in the range of 0.1 to 10 PSIG when applying coatings. [Rule 67.3]
14. Sum of Federal hazardous air pollutants (HAPs) emissions from the stationary source's permits under permit record ID, APCD2006-PTO-978792, APCD2006-PTO-050303, APCD2006-PTO-003977 under site record ID, APCD1976-SITE-01130 and any other site ID determined to be part of this stationary source, shall be less than 5 tons per consecutive twelve (12) month period. (Rule 21)
15. Hazardous air pollutant (HAP) emissions from this stationary source shall be calculated on a monthly basis no later than two months following the end of the month the calculation is for. These calculations shall be performed according to a protocol approved by the District and may incorporate the provisions of Rule 60.2. (Rules 21 and 60.2)
16. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

13. Permittee shall not use coating materials that contain hexavalent chromium, nickel, cadmium, lead, copper, beryllium or manganese in the above operation. Prior to the use of any coating containing any element(s) or compound(s) of any element(s) listed in this condition, permittee shall submit an application to modify this permit to operate to the District and receive written approval from the District for such use. [Rule 1200]
17. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.



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18. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-003886


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
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PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #08: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #07 : GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-004015


11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-004252


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #01: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(S) \cdot (\text{DF}) + (0.03) \cdot (\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-004253


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #02: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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PERMIT ID
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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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PERMIT ID
APCD2008-PTO-004254


Solar Turbines Incorporated
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 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
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PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #03 : GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-004254


5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #04: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #05 : GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

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A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

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 [Rule(s): 53, 62]
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 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
-the type of equipment tested
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-actual emissions if measured or the emission factor used to calculate emissions
[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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www.sdapcd.org

Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-004257


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #06: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #09 : GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
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 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

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21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #10 : GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

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 [Rule(s): 53, 62]
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 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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www.sdapcd.org

Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-004496


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #11: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR. 950739 (980776-CCN-6/04)

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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PERMIT ID
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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD 12: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
-the type of equipment tested
-operating conditions of the test
-actual emissions if measured or the emission factor used to calculate emissions
[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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APCD2008-PTO-020875


Solar Turbines Incorporated
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EQUIPMENT ADDRESS
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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #19: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-020875


11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2021-APP-007009

PERMIT ID
APCD2008-PTO-020876


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
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PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #16-1: GASEOUS OR DISTILLATE FUEL TO TEST GAS TURBINE ENGINES AND/OR COMPONENTS INCLUDING, BUT NOT LIMITED TO, GENERATORS, COMPRESSORS, OR MECHANICAL DRIVES FOR PRODUCTION, RESEARCH, DEVELOPMENT, PERFORMANCE, ENDURANCE, OR ROUTINE PERIODIC MAINTENANCE TESTING OF THE GAS TURBINE ENGINE AND/OR COMPONENTS AND ELECTRICAL INFRASTRUCTURE OR SIMILAR TYPES OF TESTING THAT MAY INCIDENTALLY PRODUCE ELECTRICITY AS A BYPRODUCT TO BE DIRECTED TO THE FACILITY, GRID, OR A LOAD BANK; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER, 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand

BEC: APCD2022-CON-001921

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells." (Rules(s):21)



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Site ID: APCD1976-SITE-01130
App ID: APCD2021-APP-007009

PERMIT ID
APCD2008-PTO-020876


5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $[(\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG})] / 2$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $[(\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG})] / 2$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S}) \cdot (\text{DF}) + (0.03) \cdot (\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.



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13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions
19. Only the turbine engine test cells/pads described in Permits to Operate 20876 and 975790 may be connected to the electrical grid. If requested by the District, the applicant shall provide documentation of all dates during which power was generated in the test cell and sent to the grid. This documentation may be provided virtually via a Solar dashboard or other online visualization methods. The documentation shall include the dates and descriptions of the systems and/or components that were tested, and the objectives of the test. Electricity generated from testing operations, including maintenance, in the test cell may be used on-site, distributed to the electrical grid, or directed to a load bank. The owner or operator shall not supply electricity to the grid for commercial profit. If requested by the District, the owner or operator shall provide records of the grid interconnection agreement with the local service provider. This condition is effective as of April 28, 2022, and retroactive documentation is not required to be provided to the District.
20. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

21. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
22. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-020877


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
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 Aleks Meyer
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PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #18: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
-the type of equipment tested
-operating conditions of the test
-actual emissions if measured or the emission factor used to calculate emissions
[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #17: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #16: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
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[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
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 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

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21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #15: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

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3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
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16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
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App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-020881


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #13: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST PAD #14: GAS TURBINE ENGINE USING GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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APCD2008-PTO-975790


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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TEST CELL #16-4: GASEOUS OR DISTILLATE FUEL TO TEST GAS TURBINE ENGINES AND/OR COMPONENTS INCLUDING, BUT NOT LIMITED TO, GENERATORS, COMPRESSORS, OR MECHANICAL DRIVES FOR PRODUCTION, RESEARCH, DEVELOPMENT, PERFORMANCE, ENDURANCE, OR ROUTINE PERIODIC MAINTENANCE TESTING OF THE GAS TURBINE ENGINE AND/OR COMPONENTS AND ELECTRICAL INFRASTRUCTURE OR SIMILAR TYPES OF TESTING THAT MAY INCIDENTALLY PRODUCE ELECTRICITY AS A BYPRODUCT TO BE DIRECTED TO THE FACILITY, GRID, OR A LOAD BANK; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER, 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand

BEC: APCD2022-CON-001921

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A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells." (Rules(s):21)



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) * (\text{DF}) + (\text{MaxNGI}) * (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) * (\text{DF}) + (\text{NGI}) * (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) * (\text{DF}) + (0.47) * (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S}) * (\text{DF}) + (0.03) * (\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.



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13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions
19. Only the turbine engine test cells/pads described in Permits to Operate 20876 and 975790 may be connected to the electrical grid. If requested by the District, the applicant shall provide documentation of all dates during which power was generated in the test cell and sent to the grid. This documentation may be provided virtually via a Solar dashboard or other online visualization methods. The documentation shall include the dates and descriptions of the systems and/or components that were tested, and the objectives of the test. Electricity generated from testing operations, including maintenance, in the test cell may be used on-site, distributed to the electrical grid, or directed to a load bank. The owner or operator shall not supply electricity to the grid for commercial profit. If requested by the District, the owner or operator shall provide records of the grid interconnection agreement with the local service provider. This condition is effective as of April 28, 2022, and retroactive documentation is not required to be provided to the District.
20. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

21. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
22. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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www.sdapcd.org

Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2008-PTO-975791


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TURBINE TEST CELL/PAD, DESIGNATED #21, NATURAL GAS OR DISTILLATE FUEL; FIRED WITH AN INTERNAL COMBUSTION ENGINE LESS THAN 500 BHP TO START THE GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER, 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
-the type of equipment tested
-operating conditions of the test
-actual emissions if measured or the emission factor used to calculate emissions
[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
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 San Diego CA, 92123

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TURBINE TEST CELL/PAD, DESIGNATED #22, NATURAL GAS OR DISTILLATE FUEL; FIRED WITH AN INTERNAL COMBUSTION ENGINE LESS THAN 500 BHP TO START THE GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

TURBINE TEST CELL/PAD, DESIGNATED #23-B, NATURAL GAS OR DISTILLATE FUEL; FIRED WITH AN INTERNAL COMBUSTION ENGINE LESS THAN 500 BHP TO START THE GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER, 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

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 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001941

PERMIT ID
APCD2008-PTO-975793


11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
-the type of equipment tested
-operating conditions of the test
-actual emissions if measured or the emission factor used to calculate emissions
[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001963

PERMIT ID
APCD2008-PTO-976905


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

THERMAL OXIDIZER, NATURAL GAS FIRED, WITH TWO LOW-NOX BURNERS, NORTH AMERICAN, MODEL 4796-20, 56.5 MM BTU/HR EACH (113 MM BTU/HR TOTAL). (976905 ALC 04/03)

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [91A] Miscellaneous
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001963

PERMIT ID
APCD2008-PTO-976905


5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001963

PERMIT ID
APCD2008-PTO-976905


11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
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[Rule(s): NSR, 21, 53, 62]
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16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Site ID: APCD1976-SITE-01130
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PERMIT ID
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Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

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The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

THERMAL OXIDIZER, NATURAL GAS FIRED, WITH TWO LOW-NOX BURNERS, NORTH AMERICAN, MODEL 4796-20, 56.5 MM BTU/HR EACH (113 MM BTU/HR TOTAL). (976913 ALC 04/03)

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [91A] Miscellaneous
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
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9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001963

PERMIT ID
APCD2008-PTO-976913


11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
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 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
APCD2013-PTO-001529


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
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 San Diego CA 92123

PERMIT TO OPERATE

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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Test Cell/Pad #20: Gas Turbine using gaseous or distillate fuel; with an internal combustion engine less than 500 BHP to start the gas turbine being tested; with a common flare, Maxon burner, 15 MMBtu/hr.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

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A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

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 [Rule(s): 53, 62]
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 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2014-APP-003678

PERMIT ID
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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2013-APP-002622

PERMIT ID
APCD2015-PTO-002260


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Natural gas-fired boiler; 5.978 MMBtu/hr, Fulton, Model VMP-W150LE, Serial Number PV587kk; equipped with a Webster Low Nox burner.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [13A] Boiler/Heater
 BEC: 2014-CON-000992

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. This equipment shall only be fired on Public Utility Commission (PUC) quality natural gas. [NSR; Rule 62]
2. Natural gas usage shall not exceed 220,000 therms per calendar year. This is an amount equal to 970,588 lbs of natural gas. [NSR]
3. A non-resettable, totalizing meter in the fuel line of the boiler shall be used to measure the mass flow rate to the unit. [NSR]
4. The equipment shall be tuned at least once per year in accordance with the tuning procedure in Section (j) of Rule 69.2, or in accordance with the manufacturer's recommended tuning procedure, provided such procedure has been approved in advance by the Air Pollution Control Officer. [Rules (s): 69.2, and 40 CFR Part 63 Subpart DDDDD]
5. The permittee shall keep the following records. All records shall be maintained for five years from their date of creation.
 - a. Annual fuel usage; and
 - b. Documentation verifying completion of the required annual tune-ups, including the data required in Section (j) of Rule 69.2



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6. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, thermal oxidizers and boilers at this facility. The turbine test cells/pads, duct burner test pad, associated thermal oxidizers and boilers are together hereinafter referred to as "test cells." (Rules(s):21)
7. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit. [NSR]
8. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request. [Rule 21]
9. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG})) / 2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology. [NSR]
10. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG})) / 2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request. [NSR]
11. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day. [NSR]
12. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S}) \cdot (\text{DF}) + (0.03) \cdot (\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel. [NSR]



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13. The calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells and the boiler to exceed 183.2 tons per calendar year. NOx emissions shall be calculated based on the procedures described in the turbine test cells /pads, duct burner test pad, and thermal oxidizers permits. The boiler NOx emissions shall be calculated based on an emission factor of 0.72 lbs NOx/1000 lb fuel and annual fuel usage. [Rule(s): NSR, 21]
14. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day. [NSR]
15. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day. [NSR]
16. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District. [NSR]
17. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions. [NSR]
18. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data. [Rule 21]
19. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test. [Rule 21]
20. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions [Rule 21]
21. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

22. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
23. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.) [Rule 1210]



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2011-APP-001769

PERMIT ID
APCD2016-PTO-002572


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Thermal Oxidizer: Turner Envirollogic, natural gas fired, 120 MMBtu/hr, S/N TO-830CX-F60R-C-3328, with two low-NOx burners, North American, Model 4796-20, 60 MMBtu/hr each.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [91A] Miscellaneous

BEC: APCD2016-CON-001188

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
[Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
[Rule(s): 1410]
3. This equipment shall only be fired on Public Utility Commission (PUC) quality natural gas.
[NSR; Rule 62]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
[Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001939

PERMIT ID
APCD2017-PTO-002875


Solar Turbines Incorporated
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EQUIPMENT ADDRESS
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EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Test Cell/Pad #24: Gas Turbine using gaseous or distillate fuel; with an internal combustion engine less than 500 BHP to start the gas turbine being tested.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
PHONE (858) 586-2600 Fax (858) 586-2601
www.sdapcd.org

Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001939

PERMIT ID
APCD2017-PTO-002875



5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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PERMIT ID
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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
[Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
[Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
[Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
[Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
[Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
[Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
[Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
 - actual emissions if measured or the emission factor used to calculate emissions[Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2012-APP-001941

PERMIT ID
APCD2017-PTO-002876


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Test Cell/Pad #23-A: Gas Turbine using gaseous or distillate fuel; with an internal combustion engine less than 500 BHP to start the gas turbine being tested.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(S) \cdot (\text{DF}) + (0.03) \cdot (\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



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Site ID: APCD1976-SITE-01130
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PERMIT ID
APCD2017-PTO-002877


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Inc Manager Owner PO Box 85376 Mail Zone T-2, San Diego, Ca 92186

EQUIPMENT DESCRIPTION

Test Cell/Pad #25: Gas Turbine using gaseous or distillate fuel; with an internal combustion engine less than 500 BHP to start the gas turbine being tested.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
 [Rule(s): 53, 62]
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
 [Rule(s): 1410]
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
 [Rule(s): NSR, 21]
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells."
 [Rule(s): 21]



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
[Rule(s): NSR, 21]
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
[Rule(s): NSR, 21]
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $(((\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG}))/2)$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
[Rule(s): NSR, 21]
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $(((\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG}))/2)$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
[Rule(s): NSR, 21]
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
[Rule(s): NSR, 21]
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S})(\text{DF}) + (0.03)(\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
[Rule(s): NSR, 21]



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11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
 [Rule(s): NSR, 21]
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.
 [Rule(s): NSR, 21]
13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
 [Rule(s): NSR, 21]
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
 [Rule(s): NSR, 21, 53, 62]
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
 [Rule(s): NSR, 21]
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
 [Rule(s): NSR, 21]
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
 [Rule(s): 21]
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 -the type of equipment tested
 -operating conditions of the test
 -actual emissions if measured or the emission factor used to calculate emissions
 [Rule(s): 21]
19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District. [Rule 19]

B. DISTRICT-ONLY ENFORCEABLE CONDITIONS

20. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
21. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
PHONE (858) 586-2600 Fax (858) 586-2601
www.sdapcd.org

Sectors: 4, J
Site ID: APCD1976-SITE-01130
App ID: APCD2021-APP-007010

PERMIT ID
APCD2022-PTO-004277


Solar Turbines Incorporated
 EHS Manager Aleks Meyer
 4200 Ruffin Road, MZ KM Safety
 San Diego CA, 92123

EQUIPMENT ADDRESS
 Solar Turbines Inc
 EHS Manager Aleks Meyer
 4200 Ruffin Rd
 San Diego CA 92123

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

EQUIPMENT OWNER

Solar Turbines Incorporated PO Box 85376, MZ T-2, San Diego, CA 92186-5376

EQUIPMENT DESCRIPTION

TEST CELL #16-2: GASEOUS OR DISTILLATE FUEL; INTERNAL COMBUSTION ENGINE UNDER 500 BHP TO START GAS TURBINE BEING TESTED; WITH A COMMON FLARE, MAXON BURNER, 15 MMBTU/HR.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [20C] Non-Aircraft Engine Test Cell/Stand
 BEC: 10939

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

A. FEDERALLY-ENFORCEABLE AND DISTRICT-ENFORCEABLE CONDITIONS

1. Permittee shall comply with all applicable requirements of Rules 53 and 62.
2. A permit shield is granted from enforcement action for the following requirements: Rule(s) 52, 54, 68 and 69.3 based on the District's determination that these rules are not applicable to the above equipment.
3. This equipment shall only be fired with Public Utility Commission (PUC) quality natural gas, propane, butane, or the following distillate fuels: Diesel Nos. 1 and 2, Fuel Oil Nos. 1 and 2, kerosene, Jet A, JP-4 and JP-5 fuels, or a mixture of these fuels. The use of any other fuel shall require prior written approval by the District.
4. The permit conditions listed below shall apply to the turbine engine test cells/pads, duct burner test pad, and thermal oxidizers at this facility. The turbine test cells/pads, duct burner test pad, and the associated thermal oxidizers are together hereinafter referred to as "test cells." (Rules(s):21)



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5. From the five most recent annual submittals of index values, with approved District changes, the highest distillate fuel NOx emission index (DFI) and natural gas NOx emission index (NGI) values, expressed in pounds of NOx per 1000 pounds of fuel, shall be used to calculate the cumulative NOx emissions for each calendar year and determine the maximum allowable combination of fuel usage, such that NOx emissions do not exceed the annual emission limit specified in this permit.
6. No later than June 1 of each year, the permittee shall submit to the District's emissions inventory section emission index values and supporting fuel usage data for the previous calendar year. The index values in the annual submittal shall account for any changes in NOx emission factors and test procedures based on the types and number of engine families that were tested during the previous calendar year. The District shall review the annual submittal, make any changes necessary to the index values, and approve the index values not less than thirty days after notifying the permittee of any changes. The permittee shall maintain records of index values including approved District changes, if any, onsite for a period of five years from the date of the last use of the index values for any calculation pursuant to this permit and make the records available to the District upon request.
7. The permittee shall calculate and record the cumulative NOx emissions from the beginning of the calendar year to the end of each month within 30 calendar days of the end of that month. The cumulative NOx emissions shall be expressed in tons per year and calculated using the following equation: $[(\text{MaxDFI}) \cdot (\text{DF}) + (\text{MaxNGI}) \cdot (\text{NG})] / 2$, where (DF) and (NG) are the respective cumulative fuel usages to the end of the calendar month, expressed in million pounds per calendar year, and (MaxDFI) and (MaxNGI) are the respective highest index values from the five most recent annual submittals to the District, expressed in pounds of NOx per 1000 pounds of fuel, including any District changes that were approved before the end of the calendar month. If the cumulative NOx emissions calculated pursuant to this methodology are greater than the annual NOx emissions limit specified in the permit, the District's Compliance Division shall be notified within 24 hours, in writing, and year-to-date cumulative annual NOx emissions shall be calculated from the beginning of the current calendar year to the end of each month within 30 calendar days of the end of that month using current year emissions factors and fuel usages in accordance with a protocol approved in advance by the District. These emission factors and fuel usages shall be maintained on-site and made available to District personnel upon request. For the purposes of determining compliance with the NOx emission limits specified in this permit, the District-approved emission factor/fuel usage methodology shall take precedence over any emission index methodology.
8. No later than March 1 of each year, the permittee shall calculate and record the NOx emissions for the previous calendar year, expressed in tons per year, using the following equation: $[(\text{DFI}) \cdot (\text{DF}) + (\text{NGI}) \cdot (\text{NG})] / 2$. Where (DF) and (NG) are the respective fuel usages for the previous calendar year, expressed in million pounds per calendar year, and (DFI) and (NGI) are the respective fuel index values for the previous calendar year as submitted to the District, expressed in pounds of NOx per 1000 pounds of fuel. If the District approves a change in a submitted fuel index values for a calendar year, the permittee shall recalculate and record the NOx emissions for that calendar year using the changed fuel index value(s) within 60 days of the date the District approves such a change. For the purposes of determining compliance with the NOx limits specified in this permit, the calculation methodology specified in this condition shall take precedence over any other calculation methodology specified in this permit. The records required by this condition shall be maintained for a minimum of five years and made available to the District upon request.
9. When required to determine compliance with a PM10 emissions limit stated in this permit, permittee shall calculate and record daily PM10 emissions using the following equation: $[(1.16) \cdot (\text{DF}) + (0.47) \cdot (\text{NG})]$, where (DF) and (NG) are the respective fuel usages in 1000 pounds per day.
10. When required to determine compliance with a SOx emission limit stated in this permit, permittee shall calculate and record daily SOx emissions using the following equation: $[(\text{S}) \cdot (\text{DF}) + (0.03) \cdot (\text{NG})]$. Where (DF) and (NG) are the respective fuel usages in 1000 pounds per day and (S) is the weighted average sulfur content of the distillate fuel in pounds of fuel.
11. Calendar year usage of all fuels shall not cause cumulative NOx emissions from all test cells to exceed 183.2 tons per calendar year.
12. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate or 13.5 million pounds of gaseous fuel, on any day thereafter, daily fuel usage shall not cause PM10 emissions from all test cells to exceed 493.8 pounds per day.



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13. When the cumulative calendar year fuel usage exceeds 1.5 million pounds of distillate, on any day thereafter that a fuel with sulfur content greater than 0.10% by weight is used, daily fuel usage shall not cause SOx emissions from all test cells to exceed 543.8 pounds per day.
14. Permittee shall maintain supplier records of the sulfur content of the distillate fuel. Permittee shall keep daily records of fuel usage for any fuel with sulfur content greater than 0.10% by weight. If supplier records are not available, sulfur content shall be determined in accordance with a protocol approved in advance by the District.
15. Permittee shall maintain records of daily and monthly cumulative calendar usage of each type of fuel used in the test cells. All usage records shall be corrected to standard conditions.
16. A non-resettable totalizing gaseous fuel meter shall be maintained on-site to measure fuel usage. The meter shall either be self-correcting to standard conditions (68 deg F and 14.7 PSIA) or shall display meter gas pressure and temperature data.
17. At the request of the District, permittee shall provide a test cell testing schedule covering a two week period. The schedule shall be submitted within 10 calendar days of the District's request and the two week period shall begin on the date the test schedule is submitted. The schedule shall specify the type of turbines to be tested and the type of test to be performed. Any specific measurements or additional data requested by the District shall be handled at the time of the test and may include, if possible, additional emissions readings (e.g., NOx, CO, HC) taken during a given test.
18. Permittee shall maintain records of all tests performed in the test cells. The records shall include:
 - the type of equipment tested
 - operating conditions of the test
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19. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.

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APPENDIX B: RULE REFERENCE TABLE

Rule Citation ¹	RULE TITLE	A/R ²	District Adoption Date ³	SIP FR Approval Date
	REGULATION I - GENERAL PROVISIONS			
1	Title	F	04/30/80	09/28/81
2	Definitions	F	7/11/17	11/12/20
4	Review of Rules	F	01/01/70 [†]	09/22/72
5	Authority to Arrest	F	03/24/76 [†]	NA
6	Minor Violations	D	12/15/99	N/A
	REGULATION II - PERMITS			
10	Permits Required	F	07/25/95	03/11/98
10.1 ^{††}	NSPS & NESHAPS Requirements	D	11/8/76	N/A
11	Exemptions from Rule 10 Permit Requirements	F D	07/08/20 10/13/22	10/28/22 Pending
12	Registration of Specified Equipment	D	11/15/00	N/A
12.1	Portable Equipment Registration	D	05/21/97	N/A
14	Applications	F	04/30/80	09/28/81
15	Permit Process - Public Notifications	D	09/18/90	N/A
17	Cancellation of Applications	F	04/06/93	03/11/98
18	Action on Applications	D	09/18/90	N/A
19	Provision of Sampling and Testing Facilities	F	04/06/93	03/11/98
19.1 ^{††}	NSPS & NESHAPS Provision of Sampling and Testing Facilities Requirements	D	11/08/76	N/A
19.2	Continuous Emission Monitoring Requirements	F D	01/12/79 10/12/23	09/28/81 Pending
19.3	Emission Information	F D	05/15/96 12/09/21	03/09/00 Pending
20	Standards for Granting Permits	F	04/25/89	10/04/18
20.1	NSR - General Provisions	F	10/14/21	09/28/22
20.2*	NSR - Non-major Stationary Sources	F	06/26/19	09/16/20
20.3*	NSR - Major Stationary Source and PSD Stationary Source	F	10/14/21	09/28/22
20.4*	NSR - Portable Emission Units	F	10/14/21	09/28/22
20.5	Power Plants	F	07/05/79	04/14/81
20.6	Standards for Permit to Operate - Air Quality Analysis	F	04/27/16	10/04/18
20.8	Special Offset Requirement Relating to Banking	D	2/16/83	N/A
21	Permit Conditions	F	11/29/94	03/11/98
22	Denial of Applications	D	01/01/69 [†]	N/A
23	Further Information	D	01/01/69 [†]	N/A
24	Temporary Permit to Operate	F	06/29/16	10/04/18
25	Appeals	F	01/01/69 [†]	09/22/72
25	Appeals	D	06/21/00	N/A

26.0	Banking of Emission Reduction Credits (ERCs) - General Requirements	D	06/26/19	N/A
26.1	Standards for Granting Emission Reduction Credits (ERCs)	D	10/22/97	N/A
26.2	Use of Emission Reduction Credits (ERCs)	D	10/22/97	N/A
26.3	Reclassification of Class B Emission Reduction Credits (ERCs)	D	10/22/97	N/A
26.4	Permanency of Banked Emission Reduction Credits (ERCs)	D	10/22/97	N/A
26.5	Transfer of Emission Reduction Credits (ERCs)	D	10/22/97	N/A
26.6	District Banking of Emission Reduction Credits (ERCs)	D	10/22/97	N/A
26.7	Shutdown and Related Emission Unit	D	10/22/97	N/A
26.8	Banking of Limited Emission Reductions	D	10/22/97	N/A
26.9	Emission Reduction Credit Certificates and The Emission Reduction Credit Register	D	10/22/97	N/A
26.10	Banking For BRAC Military Base Closure or Realignment Actions	D	10/22/97	N/A
27	Banking of Mobile Source Emission Reduction Credits	D	11/29/94	N/A
27.1	Federal Requirements for San Diego County APCD Alternative Mobile Source Emission Reduction Program Approved On 9/8/2000	F	08/06/08	06/03/09
	REGULATIONS III - FEES			
40	Permit Fees	D	01/12/23	N/A
42	Hearing Board Fees	D	04/14/22	N/A
44	Technical Reports, Charges for	D	12/7/83	N/A
45	Federally Mandated Ozone Nonattainment Fees	D	6/9/2022	Pending
	REGULATIONS IV - PROHIBITIONS			
50	Visible Emissions	F	08/13/97	12/7/98
50.1††	NSPS & NESHAPS Visible Emissions Requirements	D	11/08/76	N/A
51	Nuisance	F	01/01/69†	09/22/72
52	Particulate Matter	F	01/22/97	12/9/98
52.1††	NSPS & NESHAPS Particulate Matter Requirements	D	11/08/76	N/A
53	Specific Contaminants	F	01/22/97	12/9/98
53.1	Scavenger Plants	F	01/01/69†	09/22/72
53.2††	NSPS & NESHAPS Specific Contaminants Requirements	D	11/08/76	N/A
54	Dusts and Fumes	F	01/22/97	12/9/98
54.1	NSPS & NESHAP Dust and Fumes Requirement	D	11/08/76	N/A
55	Fugitive Dust Control	D	06/24/09	N/A
58	Incinerator Burning	F	01/17/73†	05/11/77
59	Control of Waste Disposal - Site Emissions	D	11/03/87	N/A
59.1	Municipal Solid Waste Landfills	D	06/17/98	N/A
60	Circumvention	F	05/17/94	03/09/00
60.1	Limiting Potential to Emit – Small Sources	D	04/04/12	N/A
60.2	Limiting Potential to Emit - Synthetic Minor Sources	D	04/04/12	N/A
61.0	Definitions Pertaining to the Storage & Handling of Organic Compounds	F	10/16/90	09/13/93
61.1	Receiving & Storing Volatile Organic Compounds at Bulk Plants & Bulk Terminals	F	01/10/95	08/08/95

61.2	Transfer of Volatile Organic Compounds into Mobile Transport Tanks	F	02/10/21	12/16/22
61.3	Transfer of Volatile Organic Compounds into Stationary Storage Tanks	F	10/16/90	06/30/93
61.3.1	Transfer of Gasoline into Stationary Underground Storage Tanks	D	03/01/06	09/03/21
61.4	Transfer of Volatile Organic Compounds into Vehicle Fuel Tanks	F	10/16/90	05/13/93
61.4	Transfer of Volatile Organic Compounds into Vehicle Fuel Tanks	F	03/26/08	01/7/13
61.4.1	Transfer of Gasoline from Stationary Underground Storage Tanks into Vehicles Fuel Tanks	D	03/01/06	N/A
61.5	Visible Emission Standards for Vapor Control Systems	F	09/20/78†	04/14/81
61.6	NSPS Requirements for Storage of Volatile Organic Compounds	D	01/13/87	Withdrawn
61.7	Spillage and Leakage of Volatile Organic Compounds	F	01/13/87	03/11/98
61.8	Certification Requirements for Vapor Control Equipment	F	01/13/87	03/11/98
62	Sulfur Content of Fuels	F	10/21/81	07/06/82
62.1††	NSPS Requirements for Sulfur Content of Fuels	D	11/08/76	N/A
64	Reduction of Animal Matter	F	08/21/81	07/06/82
66.1	Miscellaneous Surface Coating Operations and Other Processes Emitting VOCs	F D	2/24/10 5/11/16	08/09/12 ?
67.0.1	Architectural Coatings	F	02/10/21	12/14/22
67.1	Alternative Emission Control Plans	F	05/15/96	03/27/97
67.2	Dry Cleaning Equipment Using Petroleum - Based Solvent	F	05/15/96	03/27/97
67.3	Metal Parts and Products Coating Operations	F	04/09/03	11/14/03
67.4	Metal Container, Metal Closure and Metal Coil Coating Operations	F	11/09/11	09/20/12
67.5	Paper, Film and Fabric Coating Operations	F	05/15/96	03/27/97
67.6.1	Cold Solvent Cleaning and Stripping Operations	F	02/10/21	10/22/21
67.6.2	Vapor Degreasing Operations	F	02/10/21	10/22/21
67.7	Cutback and Emulsified Asphalts	F	05/15/96	03/27/97
67.9	Aerospace Coating Operations	F	04/30/97	08/17/98
67.10	Kelp Processing and Bio-Polymer Manufacturing	F	06/25/97	06/22/98
67.11	Wood Parts and Products Coating Operations	F	06/27/12	04/11/13
67.12.1	Polyester Resin Operations	F	05/11/16	04/02/18
67.15	Pharmaceutical and Cosmetic Manufacturing Operations	F	05/15/96	03/27/97
67.16	Graphic Arts Operations	F	05/09/12	09/20/12
67.17	Storage of Materials Containing Volatile Organic Compounds	F	05/15/96	03/27/97
67.18	Marine Coating Operations	F	05/15/96	03/27/97
67.19	Coating and Printing Inks Manufacturing Operations	F	05/15/96	05/26/00
67.20.1	Motor Vehicle and Mobile Equipment Coating Operations	D	06/30/10	N/A
67.21	Adhesive Material Application Operations	D	11/14/08	N/A
67.22	Expandable Polystyrene Foam Products Manufacturing Operations	D	05/15/96	N/A

67.24	Bakery Ovens	F	05/15/96	03/27/97
68	Fuel-Burning Equipment – Oxides of Nitrogen	F	09/20/94	04/09/96
68.1††	NSPS Requirements for Oxides of Nitrogen from Fuel-Burning Equipment	D	11/08/76	N/A
69	Electrical Generating Steam Boilers, Replacement Units & New Units	D	12/12/95	N/A
69.2	Industrial & Commercial Boilers, Process Heaters & Steam Generators	F	09/27/94	02/09/96
69.2.1	Small Boilers, Process Heaters and Steam Generators	D/F	07/08/20	Pending
69.2.2	Medium Boilers, Process Heaters and Steam Generators	F	09/09/21	8/23/23
69.3**	Stationary Gas Turbine Engines	F	Repealed	06/17/97 (Withdrawal Pending)
69.3.1**	Stationary Gas Turbine Engines – BARCT	D	12/9/21	Pending
69.4**	Stationary Internal Combustion Engines	F	Repealed	01/04/06 (Withdrawal Pending)
69.4.1**	Stationary Internal Combustion Engines - BARCT	D	07/08/20	Pending
69.5.1	Natural Gas-Fired Water Heaters	D	06/24/15	N/A
69.6	Natural Gas-Fired Fan-Type Central Furnaces	D	06/17/98	N/A
69.7	Landfill Gas Flares	D/F	03/09/23	Pending
70	Orchard Heaters	F	01/17/72	09/22/72
71	Abrasive Blasting	F	03/30/77	08/31/78
	REGULATION V - PROCEDURES BEFORE THE HEARING BOARD			
75	Procedure Before the Hearing Board	D	09/17/85	N/A
75.1††	NSPS & NESHAPS Variance Procedures	D	09/17/85	N/A
97	Emergency Variance	D	07/25/95	N/A
98	Breakdown Conditions: Emergency Variance	D	07/25/95	N/A
	REGULATION VI - BURNING CONTROL			
101	Burning Control	F	09/25/02	04/30/03
	REGULATION VII - VALIDITY AND EFFECTIVE DATE			
140	Validity	F	01/01/69†	09/22/72
141	Effective Date	F	01/01/69†	09/22/72
	REGULATION VIII - SAN DIEGO AIR POLLUTION EMERGENCY PLAN			
126	Applicability	F	05/25/77	08/31/78
127	Episode Criteria Levels	F	09/17/91	03/18/99
128	Episode Declaration	F	09/17/91	03/18/99
129	Episode Termination	F	05/25/77	08/31/78
130	Episode Actions	F	09/17/91	03/18/99
131	Stationary Source Curtailment Plan	F	04/01/81	06/21/82

132	Traffic Abatement Plan	F D	05/01/81 12/17/97	06/21/82 N/A
133	Schools	F	05/25/77	08/31/78
134	Source Inspection	F	04/01/81	06/21/82
135	Air Monitoring Stations	F	05/25/77	08/31/78
136	Interdistrict and Interbasin Coordination	F	05/25/77	08/31/78
137	Emergency Action Committee	F	05/25/77	08/31/78
138	Procedures and Plans	F	05/25/77	08/31/78
	APPENDIX A - Persons to be Notified on Episode Declaration	F		
REGULATION IX - PUBLIC RECORDS				
175	General	F	05/22/74†	05/11/77
176	Information Supplied to District	F	05/22/74†	05/11/77
177	Inspection of Public Records	F D	03/30/77 06/20/01	08/31/78 N/A
REGULATION XII - TOXIC AIR CONTAMINANTS				
1200	Toxic Air Contaminants - New Source Review	D	09/19/23	N/A
1202	Hexavalent Chromium - Cooling Towers	D	07/25/95	N/A
1203	Ethylene Oxide Sterilizers and Aerators	D	07/26/00	N/A
1205	Control of Dioxins Emissions from Medical Waste Incinerators	D	01/01/94	N/A
1206	Asbestos Removal, Renovation, and Demolition	D	11/15/17	N/A
1210	Toxic Air Contaminant Public Health Risks - Public Notification and Risk Reduction	D	09/19/23	N/A

REGULATION XIV - TITLE V OPERATING PERMITS				
1401	General Provisions	F	10/14/21	02/27/04
1410	Permit Required	F	02/27/04	02/27/04
1411	Exemption from Permit to Operate for Insignificant Units	F	03/07/95	11/30/01
1412	Federal Acid Rain Program Requirements	F	01/18/94	11/30/01
1413	Early Reduction of Hazardous Air Pollutants	F	03/07/95	11/30/01
1414	Applications	F	03/07/95	11/30/01
1415	Permit Process-Public Notification	F D	02/27/04 10/12/23	02/27/04 Pending
1417	Pendency & Cancellation of Applications	F	03/07/95	11/30/01
1418	Action on Applications	F	02/27/04	11/30/01
1419	Provisions of Sampling & Testing Facilities & Emission Information	F	03/07/95	11/30/01
1420	Standards for Granting Permits	F	03/07/95	11/30/01
1421	Permit Conditions	F	02/27/04	02/27/04
1422	Denial or Cancellation Of Applications	F	03/07/95	11/30/01
1423	Further Information	F	01/18/94	11/30/01
1424	Applications Deemed Denied	F	01/18/94	11/30/01
1425	Appeals & Judicial Review	F	02/27/04	02/27/04
	APPENDIX A - Insignificant Units	F	02/27/04	11/30/01
REGULATION XV - FEDERAL CONFORMITY				
1501	Conformity of General Federal Actions	F	06/22/99	04/23/99

The following NSPS and NESHAP have been adopted locally by the District. EPA has granted the District delegation for each of these rules. Therefore, these rules, as adopted by the District are the federally applicable requirements. In addition, if an NSPS or NESHAP is revised by EPA and the revised rule not adopted by the District, both versions of the rule are considered federally applicable requirements and the most stringent requirement applies until such time as the District adopts the revised version.

Subpart & Citation	RULE TITLE	District Adoption Date(s)	Federal Delegation Date
Part 60	REGULATION X - STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES	04/06/2021	As shown below
A	General Provisions	04/06/2021	04/08/2021
D	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978	01/29/2020	04/08/2021
Da	Standards of Performance for Industrial-Commercial -Institutional Steam Generating Units	01/29/2020	04/08/2021
Db	Standards of Performance for Small Industrial-Commercial - Institutional Steam Generating Units	01/29/2020	04/08/2021
Dc	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978	01/29/2020	04/08/2021
E	Standards of Performance for Incinerators	01/29/2020	04/08/2021
Eb	Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification Or Reconstruction Commenced After June 19, 1996	06/20/2007	01/03/2008
Ec	Standards of Performance for Hospital/Medical/Infectious Waste Incinerators	01/29/2020	04/08/2021
I	Standards of Performance for Hot Mix Asphalt Facilities	01/29/2020	04/08/2021
J	Standards of Performance for Petroleum Refineries	01/29/2020	04/08/2021
K	Standards of Performance for Storage Vessels for Petroleum Liquids Construct After June 11, 1973 and Prior to May 19, 1978	06/20/2007	01/03/2008
Ka	Standards of Performance for Storage Vessels for Petroleum Liquids Construction after May 18, 1978	06/20/2007	01/03/2008
Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	06/20/2007	01/03/2008
L	Standards of Performance for Secondary Lead Smelters	01/29/2020	04/08/2021
M	Standards of Performance for Secondary Brass and Bronze Ingot Production Plants	01/29/2020	04/08/2021
O	Standards of Performance for Sewage Treatment Plants	01/29/2020	04/08/2021
DD	Standards of Performance for Grain Elevators	01/29/2020	04/08/2021
EE	Standards of Performance for Surface Coating Metal Furniture	01/29/2020	04/08/2021
GG	Standards of Performance for Stationary Gas Turbines	01/29/2020	04/08/2021
QQ	Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing	01/29/2020	04/08/2021
RR	Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations	01/29/2020	04/08/2021
SS	Standards of Performance for the Industrial Surface Coating Large Appliances	01/29/2020	04/08/2021
TT	Standards of Performance for Metal Coil Surface Coating	01/29/2020	04/08/2021
AAA	Standards of Performance for New Residential Wood Heaters	04/06/2021	04/08/2021
BBB	Standards of Performance for the Rubber Tire Manufacturing Industry	01/29/2020	04/08/2021

FFF	Standards of Performance for Flexible Vinyl and Urethane Coating and Printing	01/29/2020	04/08/2021
JJJ	Standards of Performance for Petroleum Dry Cleaners	01/29/2020	04/08/2021
OOO	Standards of Performance for Nonmetallic Mineral Processing Plants	01/29/2020	04/08/2021
UUU	Standards of Performance for Calciners and Dryers in Mineral Industries	01/29/2020	04/08/2021
VVV	Standards for Polymeric Coating of Supporting Substrates Facilities	05/23/2007	01/03/2008
WWW	Standards of Performance for Municipal Solid Waste Landfills	04/06/2021	04/08/2021
AAAA	Standards of Performance for Small Municipal Waste Combustion Units	06/20/2007	01/03/2008
CCCC	Standards of Performance for Commercial and Industrial Solid Waste Incineration Units	04/06/2021	04/08/2021
EEEE	Standards of Performance for Other Solid Waste Incineration Units	01/29/2020	04/08/2021
III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	04/06/2021	04/08/2021
JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	04/06/2021	04/08/2021
KKKK	Standards of Performance for Stationary Combustion Turbines	04/06/2021	04/08/2021
QQQQ	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces	04/06/2021	04/08/2021
TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	04/06/2021	04/08/2021
Part 61 REGULATION XI- NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)			
A	General Provisions	01/13/87	05/24/82
C	National Emission Standard for Beryllium	Unknown	11/08/76
D	National Emission Standard for Beryllium Rocket Motor Firing	Unknown	11/08/76
E	National Emission Standard for Mercury	03/27/90	05/17/91
F	National Emission Standard for Vinyl Chloride	08/17/77 06/16/78	11/21/77

The following ATCM and NESHAP have not been adopted by the District, but are being implemented and enforced by the District as ATCM's.

Subpart & Citation	RULE TITLE
DISTRICT RULES AND REGULATIONS APPENDIX A - CALIFORNIA AIRBORNE TOXIC CONTROL MEASURES (ATCM)	
17 CCR § 93102	Hexavalent Chromium ATCM for Chrome Plating & Chromic Acid Anodizing Operations
17 CCR § 93109	ATCM For Emissions of Perchloroethylene From Dry Cleaning Operations
17 CCR § 93101.5	ATCM to Reduce Emissions of Hexavalent Chromium and Nickel from Thermal Spraying
17 CCR § 93105	ATCM for Construction, Grading, Quarrying, and Surface Mining Operations
17 CCR § 93106	Asbestos ATCM for Surface Applications
17 CCR § 93107	ATCM For Emissions of Toxic Metals From Non-Ferrous Metal Melting
17 CCR § 93111	ATCM for Emissions of Chlorinated Toxic Air Contaminants from Automotive Maintenance & Repair Activities
17 CCR § 93112	ATCM for Emissions of Hexavalent Chromium and Cadmium from Motor Vehicle and Motor Equipment Coatings
17 CCR § 93113	ATCM to Reduce Emissions of Toxic Air Contaminants from Outdoor Residential Waste Burning
17 CCR § 93115	ATCM for Stationary Compression Ignition Engines
17 CCR § 93116	ATCM for Portable Diesel-Fueled Engines
Part 63 DISTRICT RULES AND REGULATIONS APPENDIX B - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) FOR SOURCE CATEGORIES	
A	General Provisions
N	Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks
O	Ethylene Oxide Sterilization Facilities
R	Gasoline Distribution
T	Halogenated Solvent Cleaning
DD	Off-site Waste & Recovery Operations
GG	Aerospace Manufacturing and Rework Facilities
II	Shipbuilding and Ship Repair (Surface Coating)
JJ	Wood Furniture Manufacturing Operations
VVV	Publicly Owned Treatment Works
AAAA	Municipal Solid Waste Landfills
EEEE	Organic Liquids Distribution (non-gasoline)
MMMM	Surface Coating of Miscellaneous Metal Parts and Products
PPPP	Plastic Parts (surface coating)
SSSS	Surface Coating of Metal Coil
VVVV	Boat Manufacturing
WWWW	Reinforced Plastic Composites Production
YYYY	Stationary Combustion Turbines
ZZZZ	Stationary Reciprocating Internal Combustion Engines
DDDDD	Industrial, Commercial, and Institutional Boilers and Process Heaters

GGGGG	Site Remediation
HHHHH	Miscellaneous Coating Manufacturing
PPPPP	Engine Test Cells/Stands
WWWWW	Hospital Ethylene Oxide Sterilizers Area Sources
BBBBBB	Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities
CCCCC	Gasoline Dispensing Facilities
HHHHHH	Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources
JJJJJ	Area Sources: Industrial, Commercial, and Institutional Boilers
QQQQQ	Wood Preserving Area Sources
VVVVV	Chemical Manufacturing Area Sources
WWWWW	Plating and Polishing Operations Area Sources
XXXXXX	Metal Fabrication and Finishing Area Sources
AAAAAAA	Asphalt Processing and Asphalt Roofing Manufacturing Area Sources
CCCCCCC	Paint and Allied Products Manufacture Area Sources

1. Rule Citations marked with an “††” contain no substantive requirements and are listed for informational purposes only.
2. ‘A/R’ Denotes enforceability of the listed applicable requirement as follows:
 - ‘F’ Denotes a Federal applicable requirement that is federally enforceable and District enforceable.
 - ‘D/F’ Denotes a District applicable requirement which is pending SIP approval. For some rules, there are separate versions denoted as “F” and “D” which indicates when there is a SIP version of the rule, denoted by “F”, which is federally enforceable, and an amended version of the rule which has been approved by the District but has not been approved into the SIP. At the time a pending rule is approved into the SIP, it will become fully federally enforceable and replace the previous version of the rule.
 - ‘D’ Denotes a District only applicable requirement. This may include some state requirements that are enforceable by the District.
3. District adoption dates marked with an “†” are the effective date of the rule, the actual adoption date is uncertain.
4. For rules 20.2-20.4 as marked with a “*”, certain provisions were not submitted to EPA as denoted in the SIP submittals, and these provisions are therefore not federally enforceable
5. Rules 69.3 and 69.4 were repealed by the District because the applicable provisions were incorporated into Rules 69.3.1 and 69.4.1 which were submitted to EPA for SIP approval. However, these rules have not been approved due to concerns with startup/shutdown exemptions from emission limits.

APPENDIX C: ABBREVIATIONS THAT MAY APPEAR IN THIS PERMIT

APCO	Air Pollution Control Officer
ASTM	American Society for Testing and Methods
BACT	Best Available Control Technology
CAA	federal Clean Air Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
District	San Diego County Air Pollution Control District
EF	Emission Factor
EPA	US Environmental Protection Agency
HAP	Hazardous Air Pollutant
I&M	Inspection and Maintenance
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
[NSR]	New Source Review based condition
NO _x	Oxides of nitrogen
O ₂	Oxygen
OES	Office of Environmental Services
O&M	Operation and maintenance
Pb	Lead
PM	Total Particulate Matter
PM ₁₀	Particulate matter with aerodynamic equivalent diameter of ≤ 10 microns
PSD	Prevention of Significant Deterioration
RMP	Risk Management Plan
SDCAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SO _x	Oxides of sulfur
Title IV	Title IV of the federal Clean Air Act
Title V	Title V of the federal Clean Air Act
VOC	Volatile organic compound

Units of Measure:

dscf	=	Dry standard cubic foot
g	=	grams
gal	=	gallon
gr/dscf	=	Grains per dry standard cubic foot
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
min	=	minute
MM Btu	=	Million British thermal units
psia	=	pounds per square inch, absolute
scf	=	Standard cubic foot
scfm	=	standard cubic feet per minute
yr	=	year