



OCT. 28 2015

Mr. Sanford Campbell
Styrotek, Inc
PO Box 1180
Delano, CA 93216-1180

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # S-1075
Project # 1153981**

Dear Mr. Campbell:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes installation of an economizer on boiler S-1075-7.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

San Joaquin Valley Air Pollution Control District Authority to Construct

Add Economizer to Boiler to Increase Thermal Efficiency

Facility Name: Styrotek Inc Date: October 26, 2015
Mailing Address: PO Box 1180 Engineer: Richard Edgehill
Delano, CA 93216-1180 Lead Engineer: Dan Klevann
Contact Person: Sanford Campbell and Rachael Startin DK 10-28-15
Telephone: (661) 725-4957 (SC) and (661) 282-2200 (RS)
email: scampbell@styrotek.com; startin@trinityconsultants.com
Application #(s): S-1075-7-8
Project #: 1153981
Deemed Complete: October 21, 2015

I. PROPOSAL

Styrotek Inc (Styrotek) requests an Authority to Construct (ATC) to add a stack condensing economizer to the boiler S-1075-7. No change in throughput, emissions, or permit conditions is proposed.

The project is not an NSR Modification (please see the Compliance Section). Therefore the requirements of BACT, offsets, and public notice do not need to be considered.

Styrotek is a Major Stationary Source with a Title V permit. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Styrotek must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

Current PTO S-1075-7-6 is included in **Attachment I**.

II. APPLICABLE RULES

District Rule 2201	New and Modified Stationary Source Review Rule (9/21/06) – not applicable as stated above
District Rule 2520	Federally Mandated Operating Permits (06/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/92)
District Rule 4301	Fuel Burning Equipment (12/17/92)

- District Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
- District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
- District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (3/17/05)
- District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
- District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
– **not applicable** – not Major NOx source
- District Rule 4801 Sulfur Compounds (12/17/92)
- CH&SC 41700 Health Risk Assessment
- CH&SC 42301.6 School Notice
- Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
- California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

Styrotek, Inc. is located approximately 4 miles east of Delano, California at the intersection of Road 176 and Avenue 4. There are no schools within 1,000 feet of the operation.

IV. PROCESS DESCRIPTION

An economizer will be installed to increase thermal efficiency. Manufacturer's information on the economizer is included in **Attachment II**.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

PTO S-1075-7-6: 28.6 MMBTU/HR CLEAVER-BROOKS MODEL CB-700 SYSTEM 20 NATURAL GAS/PROPANE-FIRED BOILER WITH A CLEAVER-BROOKS MODEL NTI-15-700 ULTRA LOW NOX BURNER, FGR, AND O2 TRIM SYSTEM

Proposed Modifications:

ATC S-1075-7-8: MODIFICATION OF 28.6 MMBTU/HR CLEAVER-BROOKS MODEL CB-700 SYSTEM 20 NATURAL GAS/PROPANE-FIRED BOILER WITH A CLEAVER-BROOKS MODEL NTI-15-700 ULTRA LOW NOX BURNER, FGR, AND O2 TRIM SYSTEM: ADD ECONOMIZER

Post Project Equipment Description:

PTO S-1075-7-8: 28.6 MMBTU/HR CLEAVER-BROOKS MODEL CB-700 SYSTEM 20 NATURAL GAS/PROPANE-FIRED BOILER WITH A CLEAVER-BROOKS MODEL NTI-15-700 ULTRA LOW NOX BURNER, FGR, AND O2 TRIM SYSTEM

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

No change to the NO_x control technology (ultra low-NO_x burner) is proposed

VII. GENERAL CALCULATIONS

A. Assumptions

Operation: 24 hrs/day, 365 days/yr

Daily emissions are based on a 4-hr startup and shutdown period.

B. Emission Factors

No changes in emissions factors for NO_x, SO_x, CO, PM₁₀, and VOC are proposed.

C. Calculations

S-1075-7

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	see	below		
SO _x	0.00285	28.6	24	2.0
PM ₁₀	0.0076	28.6	24	5.2
CO	0.0737	28.6	24	50.6
VOC	0.0055	28.6	24	3.8

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.008	28.6	8,760	2,004
SO _x	0.00285	28.6	8,760	714
PM ₁₀	0.0076	28.6	8,760	1,904
CO	0.074	28.6	8,760	18,465
VOC	0.0055	28.6	8,760	1,378

Startup/Shutdown

$$\text{NO}_x: 0.0109 \text{ lb/MMBtu} \times 28.6 \text{ MMBtu/hr} \times 4 \text{ hr/day} + 0.008 \times 28.6 \text{ MMBtu/hr} \times 20 \text{ hr/day} = \underline{5.8 \text{ lb/day}}$$

The emissions profiles are included in **Attachment III**.

VIII. COMPLIANCE

Rule 2201 New and Modified Stationary Source Review Rule

Installation of the economizer does not meet the following criteria for a Modification, as defined in Section 3.26, and is therefore not subject to this rule.

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- Addition of any new emissions unit which is subject to District permitting requirements.
- A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Compliance with this rule is expected.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and

- b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application. The Compliance Certification Form is included in **Attachment IV**.

Rule 4001 New Source Performance Standards

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction).

However, no newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). Therefore, the requirements of Subpart Dc do not apply to this unit.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). Boiler S-1075-7 is currently operating in compliance with the rule and the project is not expected to affect compliance status.

Rule 4102 Nuisance

There is no increase in emissions proposed for the project. Continued compliance with this Rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

There is no increase in emissions and therefore a HRA is not required.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic

foot. Boiler S-1075-7 is currently operating in compliance with the rule and the project is not expected to affect compliance status.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2

The unit is natural gas-fired with a maximum heat input of 25.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

In addition, the unit is also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy requirements of District Rule 4305.

Conclusion

Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

The unit is currently in compliance with all of the requirements of the rule. Continued compliance is expected.

Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr

The unit is currently operating in compliance with all of the requirements of the rule. Continued compliance is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

The unit is currently operating in compliance with all of the requirements of the rule. Continued compliance is expected.

California Health & Safety Code 42301.6 (School Notice)

This facility is not located within 1,000 feet of a school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) do not trigger Best Available Control Technology (BACT) and do not trigger Toxic Best Available Control Technology (T-BACT) requirements.

Issuance of permits for emissions units not subject to BACT or T-BACT requirements is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct S-1075-7-8 subject to the permit conditions on the attached draft Authority to Construct in **Attachment V**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1075-7	3020-02-H	28.6 MMBtu/hr	\$ 1080.00



Attachment I
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1075-7-6

EXPIRATION DATE: 06/30/2016

SECTION: NE32 **TOWNSHIP:** 24S **RANGE:** 26E

EQUIPMENT DESCRIPTION:

28.6 MMBTU/HR CLEAVER-BROOKS MODEL CB-700 SYSTEM 20 NATURAL GAS/PROPANE-FIRED BOILER WITH A CLEAVER-BROOKS MODEL NTI-15-700 ULTRA LOW NOX BURNER, FGR, AND O2 TRIM SYSTEM

PERMIT UNIT REQUIREMENTS

1. The unit shall only be fired on PUC-regulated natural gas, and propane. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Except during startup and shutdown, emissions shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2, or 0.0055 lb-VOC/MMBtu. [District NSR Rule, 4305, and 4306] Federally Enforceable Through Title V Permit
3. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 4305 & 4306] Federally Enforceable Through Title V Permit
4. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rules 2080, 4305 & 4306] Federally Enforceable Through Title V Permit
5. Emissions of NOx shall not exceed 5.8 lb/day or 2004 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Tulare County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District NSR Rule, 4305 and 4306] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

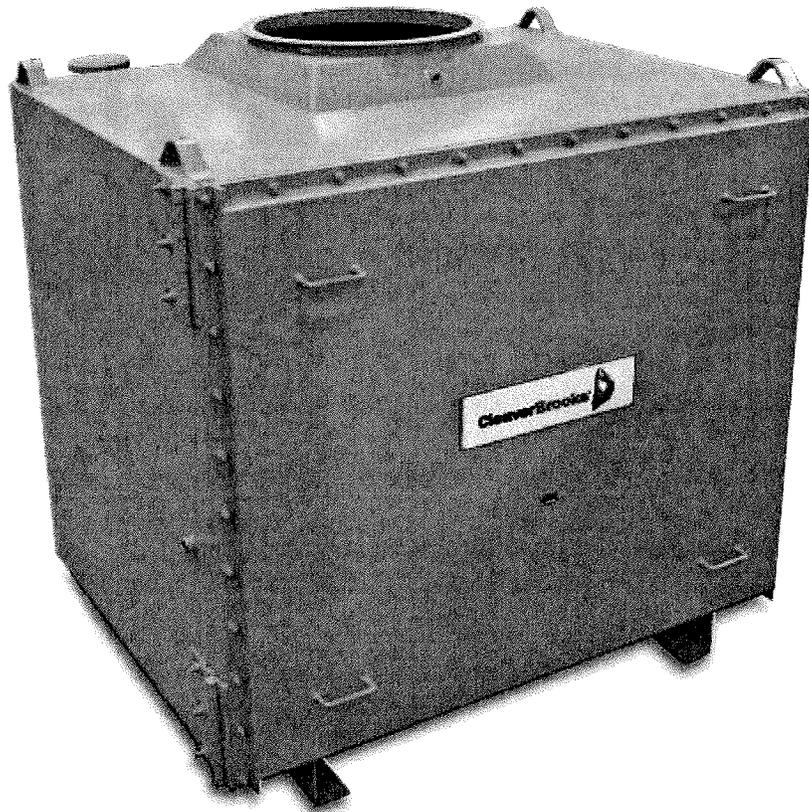
12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
22. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Tulare County Rule 407, SJVUAPCD Rules 1081, 4305, and 4306. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
23. This unit commenced construction prior to June 9, 1989. This unit has not been used to produce electricity for sale. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Attachment II
Manufacturer's Information



SAVE ENERGY AND REDUCE EMISSIONS
STACK CONDENSING ECONOMIZER



2-Stage Economizer
For 100-2200 HP Boilers

Up to 90% Fuel to Steam Efficiency

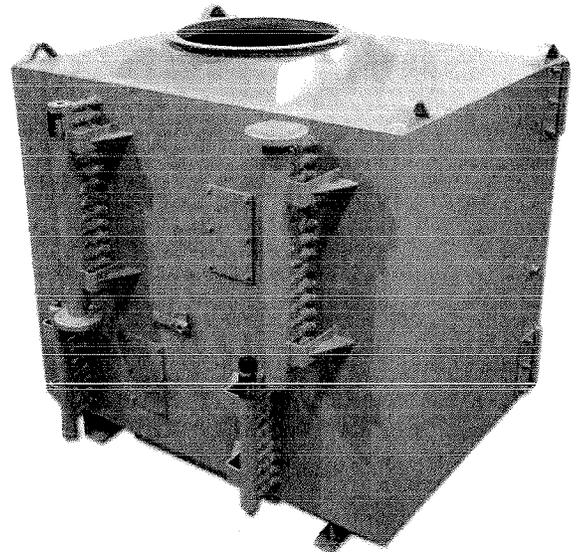
- Reduce your fuel cost by up to 15% over a conventional steam boiler
- Reduce Greenhouse gas emissions by up to 15%
- Typical payback is less than one year

System Features:

Separate upper and lower coils – allows heating of two completely separate liquid streams without cross contamination

Steaming in the economizer coils is eliminated, reducing harmful scaling and high stresses

Integrated system includes: Economizer, modulating makeup bypass valve, modulating 3-way bypass valve, ASME relief valves, (2) gas side temperature thermometers, (4) liquid side temperature transmitters, and a controller.



Economizer Features

- All upper coil components are 316 stainless steel
- All gas side surfaces are 316 stainless steel to eliminate corrosion
- Tube core assemblies are individually removable and made from 316 stainless steel tube with aluminum fins (Al-Fuse)
- Tube to header connections are externally located compression fitting, no welding is required for tube replacements
- 316 stainless steel exhaust gas bypass, interior shell, condensate drain, and transition connections
- 2" of factory insulation, inlet/outlet gaskets and drain are included
- Hinged, full face access door for inspecting
- ASME Stamp-SEC.VIII:DIV.I("UM")
- Standard design pressure of 300 psig/1st stage and 150 psig/2nd stage – higher pressures are also available
- 12 gauge 316 stainless steel exterior

Condensing Economizer Control Options

Hawk ICS Advanced

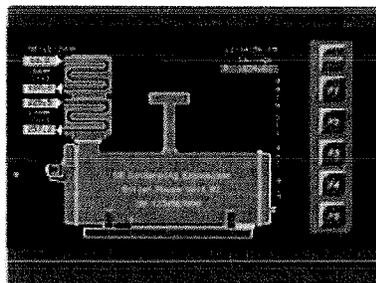
10" color HMI

CEC200

5.7" color HMI
8 DI, 4 AI, 6 RO

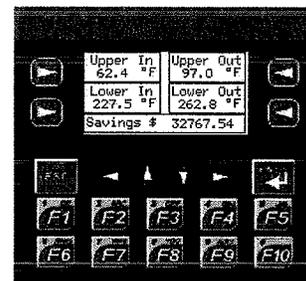
CEC100

2" LCD
8 DI, 4 AI, 6 RO



CEC200

Standard



CEC100

Applications:

- Domestic hot water heating Wash water
- Boiler feed water
- RO water to improve RO performance
- Basically any liquid stream that needs to be heated

Scope:

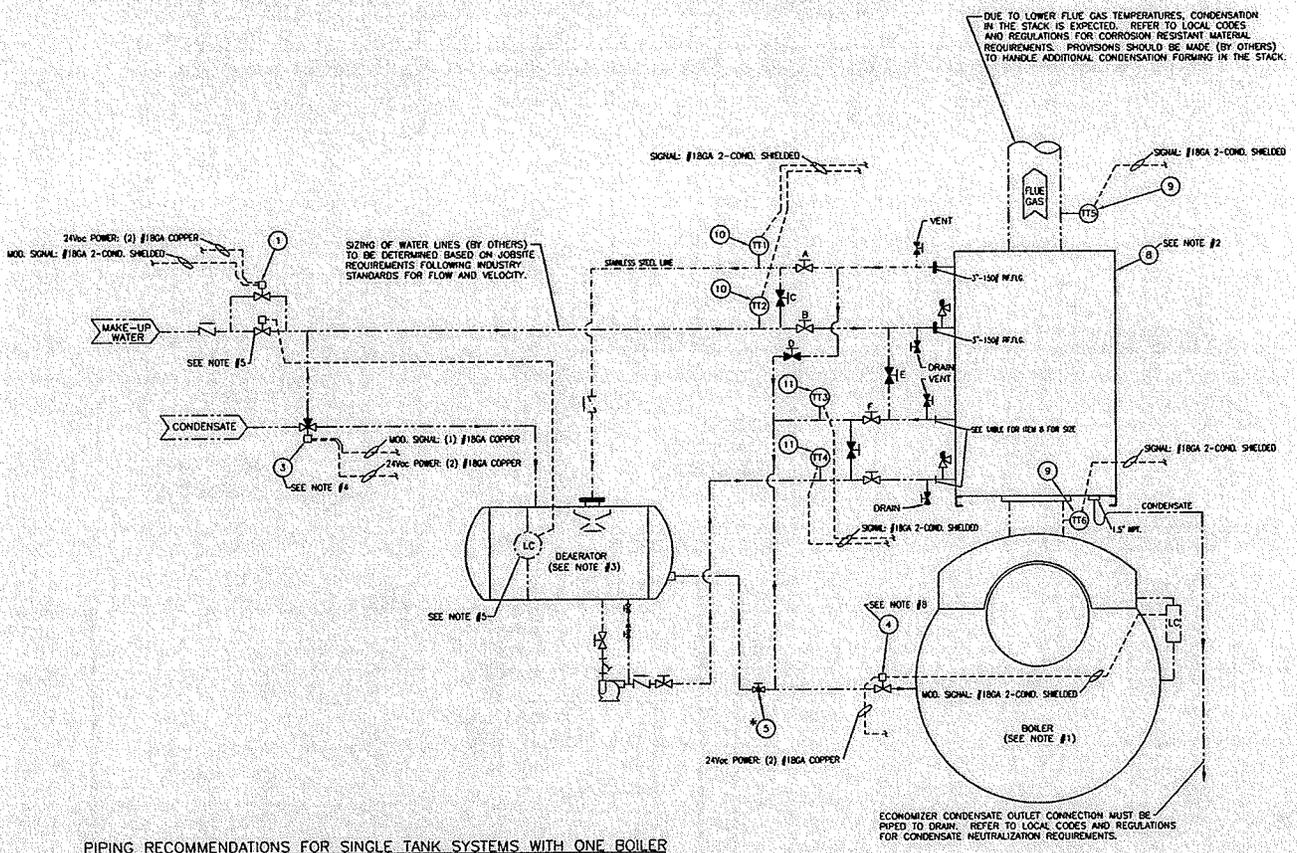
- 100-2200 HP high pressure and low pressure steam boilers
- Natural gas firing - #2 oil backup only
- 50-225 operating pressure

Maintain Peak Efficiency while Firing Different Fuels.

The *lower section* of the economizer recovers energy by preheating the boiler feed water. The *upper section* preheats virtually any cool liquid stream (makeup water, wash water, hot water preheating, etc.) and the *control system* maximizes condensing when firing natural gas, then automatically switches to a near condensing mode when firing #2 oil (if applicable).

The upper coil, lower coil, modulating valves, control system and other system components are sized as a system to deliver the maximum possible cost savings.

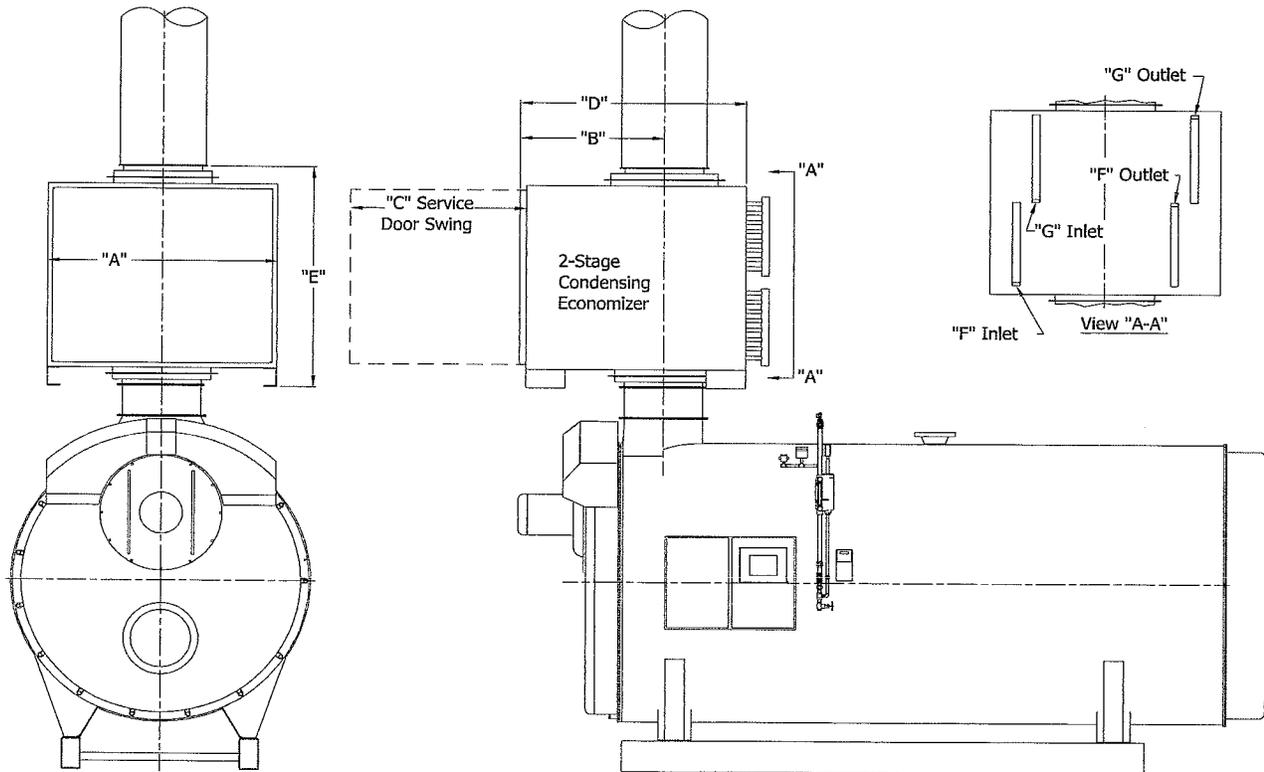
Boiler and Condensing Economizer Piping Schematic



TECHNICAL DETAILS

Economizer Model	Boiler HP	Dimensions (inches)							Surface Area	Econo. Weight	Wet Weight
		A	B	C	D	E	F	G			
C2X-K3466AL	100	52	29	50	43	43.9	2" NPT.	2" NPT.	635	1105	1166
C2X-K36a6AL	125	52	29	50	43	59	2" NPT.	2" NPT.	1079	1545	1647
C2X-K37C6AL	150	52	29	50	43	67.6	2" NPT.	2" NPT.	1335	1805	1931
C2X-K3Ac6AL	200	52	29	50	43	76.3	2" NPT.	2" NPT.	1590	2045	2195
C2X-M38B6AL	300	70	38	68	58	65.5	2" NPT.	2" NPT.	1907	2401	2575
C2X-M3Ac6AL	400	70	38	68	58	76.3	2" NPT.	2" NPT.	2383	2861	3078
C2X-R3Ac6AL	500	80	43	78	66	76.3	2.5" NPT.	2.5" NPT.	2780	3255	3501
C2X-R3BE6AL	600	80	43	78	66	87	2.5" NPT.	2.5" NPT.	3337	3785	4080
C2X-S3BE6AL	700	88	47	86	73	87	2.5" NPT.	2.5" NPT.	3813	3995	4336
C2X-S3Cf6AL	800	88	47	86	73	97.8	2.5" NPT.	2.5" NPT.	4450	4601	4998
C2X-T3Df6AL	900	98	53	96	82	102.1	2.5" NPT.	2.5" NPT.	5291	5455	5952
C2X-T3DH6AL	1000	98	53	96	82	108.6	2.5" NPT.	2.5" NPT.	5720	5865	6402
C2X-T3Ei6AL	1100	98	53	96	82	119.4	2.5" NPT.	2.5" NPT.	6435	6555	7159
C2X-U3DH6AL	1200	106	58	104	90	108.6	2.5" NPT.	2.5" NPT.	6355	6415	6999
C2X-U3Ei6AL	1300	106	58	104	90	119.4	2.5" NPT.	2.5" NPT.	7150	7175	7831
C2X-U3FK6AL	1400	106	58	104	90	130.2	2.5" NPT.	2.5" NPT.	7945	7935	8664
C2X-U3Gi6AL	1500	106	58	104	90	141	2.5" NPT.	2.5" NPT.	8740	8695	9534
C2X-U3HN6AL	1800	106	58	104	90	151.7	2.5" NPT.	2.5" NPT.	9535	9455	10,370
C2X-U3JQ6AL	2200	106	58	104	90	173.3	2.5" NPT.	2.5" NPT.	11,123	10,975	12,041

* Values are approximate and/or subject to change. See customer submittal drawing for specific model data.



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 01/10

Attachment III
Emissions Profiles

Permit #: S-1075-7-8	Last Updated
Facility: STYROTEK INC	10/24/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	2004.0	714.0	1904.0	18465.0	1378.0
Daily Emis. Limit (lb/Day)	5.8	2.0	5.2	50.6	3.8
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Attachment IV
Compliance Certification Form

**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

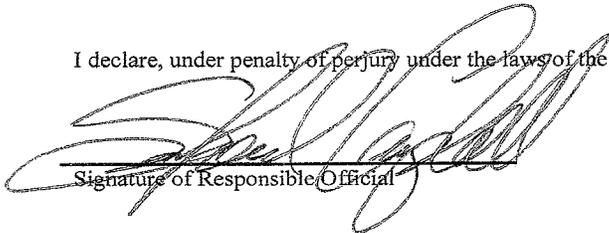
- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Styrotek, Inc.	FACILITY ID: S - 713
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name:	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the source identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:



 Signature of Responsible Official

10-14-15

 Date

Sanford Campbell
 Name of Responsible Official (please print)

Operations Manager
 Title of Responsible Official (please print)

Reduce the number of presses to 38.

Attachment V
Draft ATC



San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1075-7-8

LEGAL OWNER OR OPERATOR: STYROTEK INC
MAILING ADDRESS: PO BOX 1180
DELANO, CA 93216-1180

LOCATION: 545 ROAD 176
(ROAD 176 & AVENUE 4)
DELANO, CA 93215

SECTION: NE32 **TOWNSHIP:** 24S **RANGE:** 26E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 28.6 MMBTU/HR CLEAVER-BROOKS MODEL CB-700 SYSTEM 20 NATURAL GAS/PROPANE-FIRED BOILER WITH A CLEAVER-BROOKS MODEL NTI-15-700 ULTRA LOW NOX BURNER, FGR, AND O2 TRIM SYSTEM: ADD ECONOMIZER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The unit shall only be fired on PUC-regulated natural gas, and propane. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Except during startup and shutdown, emissions shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2, or 0.0055 lb-VOC/MMBtu. [District NSR Rule, 4305, and 4306] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 4305 & 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjolle, Director of Permit Services

S-1075-7-8 - Oct 24 2015 4:51PM -- EDGEHILR : Joint Inspection NOT Required

6. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rules 2080, 4305 & 4306] Federally Enforceable Through Title V Permit
7. Emissions of NO_x shall not exceed 5.8 lb/day or 2004 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Tulare County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District NSR Rule, 4305 and 4306] Federally Enforceable Through Title V Permit
10. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
24. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Tulare County Rule 407, SJVUAPCD Rules 1081, 4305, and 4306. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
25. This unit commenced construction prior to June 9, 1989. This unit has not been used to produce electricity for sale. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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