

1 **DECLARATION OF AUSTIN STEWART**

2 I, Austin Stewart, declare:

3 1. I am an Air Quality Engineer II for the Engineering and Permitting division of the South  
4 Coast Air Quality Management District (“District”). Unless otherwise stated expressly below, I  
5 make this declaration based on personal knowledge and, if called as a witness in this action, could  
6 and would testify competently to the matters discussed herein.

7 2. I received a Bachelor of Science Degree in Chemical Engineering and a minor in Material  
8 Science from Cal Poly Pomona.

9 3. I have been employed at the District since October 2021.

10 4. Respondent Flexfirm Holdings LLC (“Respondent”) operates a textile coating facility  
11 located at 2300 North Chico Avenue in South El Monte, CA (“Facility”).

12 5. As relevant to this case (Case No. 6239-1), I am familiar with the Coating/Curing Oven  
13 with Afterburner under Permit to Operate G52678 (“VOC Oven” and “Afterburner”) and a  
14 Coating/Curing Oven under Permit to Operate G75719 (“Non-VOC Oven”) at Respondent’s  
15 Facility.

16 6. Also, as relevant to this case, I am familiar with the District Hearing Board’s Order and  
17 Findings and Decision (“Order”) following the July 25, 2023 hearing on this matter.

18 **Rule 1128**

19 7. I am familiar with District Rule 1128- Paper, Fabric, and Film Coating Operations, last  
20 amended March 1996.

21 8. The Facility’s VOC Oven and Afterburner under Permit to Operate G52678 and Non-VOC  
22 Oven under Permit to Operate G75719 are subject to Rule 1128.

23 9. Per, Rule 1128(c)(2)(B), a person shall not use or apply any coating in any paper, fabric or  
24 film coating application process, with or without heating ovens, unless: (A) The coating contains  
25 less than 265 grams of VOC per liter of coating less water, and less exempt compounds, as  
26 applied; or (B) VOC emissions are collected and reduced by an approved emission control system  
27 pursuant to subdivisions (d) and (j) of Rule 1128.

28 10. For the Non-VOC oven under Permit to Operate G75719, I have insufficient information

1 from Respondent to determine if the coating contains less than 265 grams of VOC per liter of  
2 coating less water, and less exempt compounds, as applied. Furthermore, upon information and  
3 belief, Respondent uses and/or applies plastisols in the Non-VOC oven. Per Rule 1128(c)(3), a  
4 person shall not use or apply any plastisol to any paper, fabric, or film substrate unless the coating  
5 contains less than 20 grams of VOC per liter of coating, less water, and less exempt compounds,  
6 as applied. A true and correct copy of the VOC Listings provided by Respondent show VOC  
7 content of plastisols applied at the Facility with limits exceeding Rule 1128(c)(3), is attached  
8 hereto as Exhibit 1. Specifically, the VOC Listings from Respondent identify Product ID K Base,  
9 a PVC- Plastisol with a VOC content of 240 g/L, and Product ID Skee Dee, a PVC-Plastisol with  
10 a VOC content of 105 g/L.

11 11. For the VOC Oven under Permit to Operate G52678, Condition No. 6 of the permit allows  
12 for use of coatings where the VOC content cannot exceed 6.2 pounds of VOC per gallon of coating  
13 (approximately 743 g/L). As this exceeds 265 grams of VOC per liter of coating, Respondent must  
14 ensure that VOC emissions are collected and reduced by an approved emission control system  
15 pursuant to (d) and (j) of Rule 1128.

16 12. Specifically, subject to Rule 1128(d), Respondent's Afterburner must meet a VOC  
17 destruction efficiency of at least 95%.

18 13. On or around December 12, 2023, I received the source test results for the Afterburner  
19 conducted on November 10, 2023. The results of the source test demonstrated a VOC destruction  
20 efficiency of 74.5%, which did not meet the Rule 1128 requirements of a VOC destruction  
21 efficiency of at least 95%. The VOC emission rate into the afterburner was measured at 70.4  
22 pounds per hour and the exhaust emissions rate after the control device was recorded at  
23 approximately 17.9 pounds per hour. Attached as Exhibit 2 is a true and correct copy of the  
24 November 10, 2023 source test result cover letter and an excerpt showing less than 95%  
25 destruction efficiency.

26 14. To date, I have not received any source test results or other information from the Facility to  
27 demonstrate that the Afterburner has met a VOC destruction efficiency of at least 95%.

## 28 **Permit Issues**

15. Condition No. 5 of the Order required Respondent to submit applications to modify its

1 permit(s) and/or for new permits to accurately represent the equipment located at the Facility, the  
2 equipment configuration, and the applicable rules and emissions limitations by August 31, 2023.

3 16. Permit to Operate G52680 was a near identical permit to Permit to Operate G52678 with  
4 both permits having conditions and description for the VOC Oven. The District needed to revise  
5 Permit to Operate G52680 to reflect the Non-VOC oven.

6 17. On or around September 1, 2023, the District received one permit application from  
7 Respondent for an administrative change to Permit to Operate G52680. The application had three  
8 separate requests that could not be completed. The first request was to add a condition to comply  
9 with Rule 1147 to Permit to Operate G52680, which cannot be completed under an administrative  
10 permit application. The second request was for the re-issuance of Permit to Operate M05526 to  
11 reflect the proper description of the equipment and include a condition for Rule 1147 compliance.  
12 This cannot be completed since M05526 is not a Flexfirm Holdings permit and issued to an entirely  
13 different entity. I understood this reference to be a mistake and Respondent meant to refer to Permit  
14 to Operate M05528. Nevertheless, this permit may still not be re-issued because this is an inactive  
15 permit for another entity Flexfirm Products, Inc. Facility ID 24462. Lastly, Respondent requested to  
16 cancel Permit to Operate G52678, which could not be completed because this is an active operating  
17 permit for the VOC Oven.

18 18. After receipt of the permit application, I made attempts from October to December 2023 to  
19 contact Respondent to explain the remaining permit applications that were required and/or why the  
20 requested permit actions could not be taken. No substantive response was received to my  
21 correspondence.

22 19. Additionally, I requested the SDS for all coatings used by the Facility in an email dated  
23 October 3, along with requests for corrected permit applications. The requested SDS and VOC  
24 Listing were not provided to the District until May 3, 2024.

25 20. In an effort to move the process forward, District staff issued Permit to Operate G75719 on  
26 April 12, 2024, to update the equipment description for the Non-VOC Oven in accordance with the  
27 Order Condition 5. Under the administrative permit application submitted, Permit to Operate  
28 G52680 was correctly updated to its original prior Permit M05528. The permit's equipment

1 description and permit conditions were updated to be identical to its prior Permit M05528. Except,  
2 Condition Nos. 1, 2 and 6 were added, which are standard South Coast AQMD conditions. I  
3 updated Permit to Operate G52680 to reflect the Non-VOC Oven because this was the  
4 appropriate permit to correct from the District's engineering records.

5 21. We still need, at a minimum, two change of condition permit applications to Permits to  
6 Operate G52678 and G75719 to add all applicable rules and emission limitations, as well as one  
7 administrative permit application to split the Afterburner from Permit to Operate G52678 to its  
8 own operating permit. If Respondent modifies their control equipment, additional permit  
9 applications will be needed.

10 **Rule 1147**

11 22. I am familiar with District Rule 1147- NOx Reductions from Miscellaneous Sources, last  
12 amended May 6, 2022.

13 23. The Facility's VOC Oven and Afterburner under Permit to Operate G52678 and Non-VOC  
14 Oven under Permit to Operate G75719 are subject to Rule 1147.

15 24. Based on review of the time data provided by Respondent for the two ovens, it is my  
16 understanding that both ovens currently comply with Rule 1147(d)(7) with emissions for NOx less  
17 than 1 pound per day averaged over one calendar month. Therefore, the two ovens would be  
18 exempt from provisions of Rule 1147(d)(1) - (d)(6).

19 25. Based on my review of the Afterburner's configuration and manufacturer's specifications,  
20 the Afterburner is not exempt from Rule 1147 subject to subdivision (m).

21 26. Specifically, the Afterburner is not subject to (m)(3)(D) because the equipment does not  
22 have an integrated thermal fluid heat exchanger that captures heat from the afterburner. The Facility  
23 uses an air-to-air heat exchanger to capture heat from the Afterburner. Air, which is the medium to  
24 transfer heat, is not a fluid or a thermal fluid.

25 27. Additionally, the Afterburner is not subject to exemption (m)(3)(E) because the VOC  
26 effluent is not being mixed in the unit's burner with combustion air or fuel prior to or at  
27 incineration in the burner. There is a separate natural gas fuel line which enters through the burner.  
28 The VOC effluent is not being mixed in the unit's burner with the natural gas fuel. The VOCs are

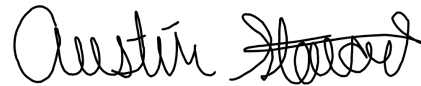
1 in a gas stream moving past the burner flame to be combusted; therefore, an exemption also does  
2 not apply per Rule 1147(m)(3)(E)(i). A true and correct copy of the Afterburner configuration with  
3 flow indication and the manufacturer's specifications provided by Respondent are attached hereto  
4 as Exhibits 3 and 4, respectively. Additionally, a true and correct copy excerpt from the Rule 1147  
5 Staff Report from December 2008 describing the exemption applicability is attached hereto as  
6 Exhibit 5 [noting "exemption does not apply to burner with separate fuel line."]

7 28. As such, per Rule 1147(d)(2), the owner or operator shall meet Table 2 – NOx and CO  
8 emissions limits for the Afterburner. The applicable NOx limit is 20 ppmv at 3% O2 and the CO  
9 limit is 1000 ppmv at 3% O2.

10 29. To date, I have not received any source tests or other information from the Facility to  
11 demonstrate that the Afterburner has met the applicable NOx limit under Rule 1147.

12 I declare under penalty of perjury under the laws of the State of California that the  
13 foregoing is true and correct.

14 Executed this 17th day of May, 2024, at Diamond Bar, California.

15 

16 \_\_\_\_\_  
17 Austin Stewart

# EXHIBIT 1

### VOC LISTINGS

Facility Name: Flexfirm Holdings, LLC / dba Flexfirm Products Facility ID#: 187620

#### Master List of all Voc Containing Materials Used at This Facility

Product ID	Manufacturer	Material Category	Voc of Coating (lb/gal) as Applied	Voc of Material (lb/gal) as Applied	VOC of Material g/L as Applied	Vapor Pressure (mm Hg)	Substrate/Activity
LFB	Flexfirm Products	PVC - Plastisol	0	0	<u>0</u>		Nylon, Polyester, Fiberglass, Cotton
SAB	Flexfirm Products	PVC – Plastisol	0*	0	<u>0</u>		Nylon, Polyester, Fiberglass, Cotton
Neoprene	Flexfirm Products	Neoprene	3.6	3.6	<u>544g/L</u>		Nylon, Polyester, Fiberglass, Cotton
Z BASE	Flexfirm Products	PVC – Plastisol	0 *	0	<u>0</u>		Nylon, Polyester, Fiberglass, Cotton
Solution/Heat Seal	Flexfirm Products	PVC - Organasol	2.3	2.3	<u>347g/L</u>		Nylon, Polyester, Fiberglass, Cotton
DMS	Flexfirm Products	PVC – Plastisol	0 *	0	<u>0</u>		Vinyl
K BASE	Flexfirm Products	PVC – Plastisol	1.6	1.6	<u>240g/L</u>		Nylon, Polyester, Fiberglass, Cotton
SKEE DEE	Flexfirm Products	PVC – Plastisol	**	0.7	<u>105g/L</u>		Fiberglass
LATEX	Flexfirm Products	PVC – Latex	0	0	<u>0</u>		Nylon, Cotton
XELENE	<u>Exxon Mobil / Various</u>	Solvent/Cleaning					Clean Up

- **\* Formulation change (~2014) – No longer using Toluene, Propanol, or Xylene to lower viscosity. Viscosity lowered using plasticizer only.**
- **\*\* Value of 7.0 likely a typo. Current lb/gal updated.**

# EXHIBIT 2





## COMPLIANCE SOURCE TEST REPORT VOC DESTRUCTION EFFICIENCY

Flexfirm Products  
2300 N. Chico Ave  
South El Monte, CA 91733

Facility ID: 187620

Source to be Tested: Afterburner  
Proposed Test Date: November 10, 2023  
Submittal Date: December 11, 2023

Project No. AST-2023-3469

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Prepared By:  
Alliance Technical Group  
10602 Walker Street  
Cypress, CA 90630

AST Report Writer  
AST Report Reviewer

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Prepared For:  
Flexfirm Products  
2300 N. Chico Avenue  
South El Monte CA 91733

Tulasi Gyawali  
Charles Figueroa

**2.0 Summary of Results**

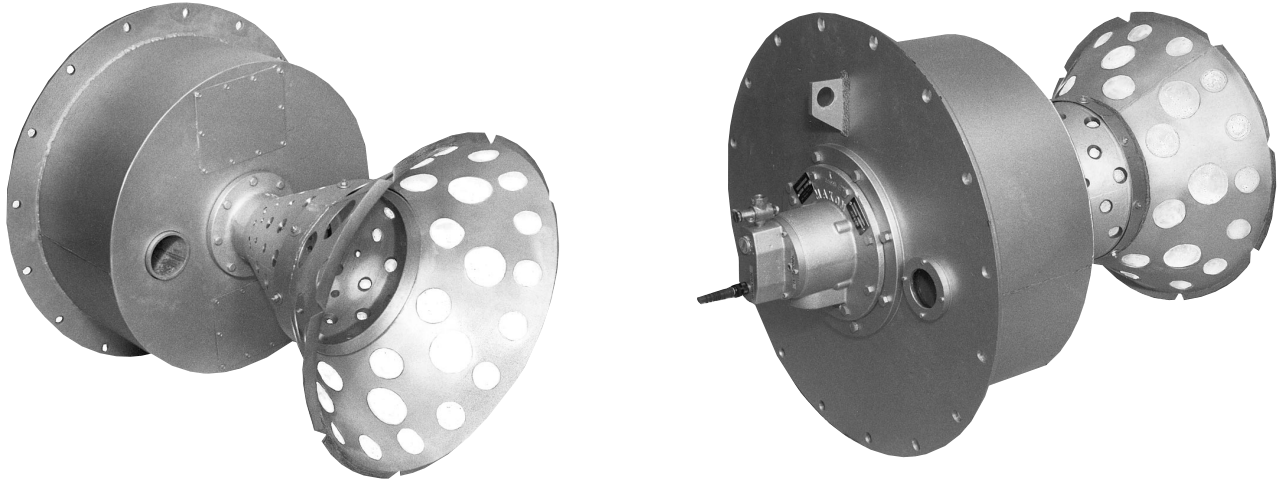
Alliance conducted the testing at the Flexfirm Products facility in South El Monte, California on November 10, 2023. Table 2-1 provides summary of the emission testing results with comparisons to the applicable permit limits. Any difference between the summary results listed in the following tables and the detailed results contained in appendices is due to rounding for presentation.

**Table 2-1: Summary of Test Results**

Test Data	Units	Inlet Test Results	Outlet Test Results	Allowable Limits
Test Date	mm/dd/yy	11/10/23	11/10/23	
Test Start Time	hh:mm	11:20	11:20	
Test End Time	hh:mm	12:20	12:20	
<b><u>Sampling Data</u></b>				
Stack Temperature	°F	262	795	
Moisture Content	%	2.14	5.17	
Oxygen (O <sub>2</sub> ) content, as measured	%	19.5	16.9	
Carbon Dioxide (CO <sub>2</sub> ) Content, as measured	%	0.50	2.25	
Gas Velocity	ft/sec	39.8	53.3	
Stack Flow Rate	acfm	4,777	9,599	
Stack Flow Rate	scfm	3,403	3,793	
Carbon Monoxide (CO)	ppmv	-	857	2,000 (Rule 407)
<b><u>SCAQMD Method 25.1/25.3 – ROG (VOC as NMNEOC)</u></b>				
Concentration (as methane)	ppmv	9,112	2,088	
Mass Emission Rate (as Hexane C1)	lb/hr	70.44	17.99	
<b><u>VOC Destruction Efficiency</u></b>				
Calculated as Hexane	%	74.5		≥95% (Permit)

# EXHIBIT 3

## Circular INCINO-PAK® Burners



*Circular INCINO-PAK® Burner shown with wall mounting plug*

- **Circular INCINO-PAK® Burners** have been specifically designed for the thermal incineration in cylindrical combustion chambers of combustible gaseous effluents from a wide variety of industrial processes.
- **These special cone-type COMBUSTIFUME® Burners** provide outside-the-duct access to the raw gas pilot, ignitor, and flame safeguard components. The vital parts are easily retractable and protected from the heat from the combustion chamber. Easy installation, operation, and maintenance are assured.
- **Considerable savings in primary energy** are realized since the raw gas Circular INCINO-PAK® Burners do not require any external combustion air source. All the oxygen for combustion comes from the oxygen content normally in most effluent air streams.
- **Two popular sizes are offered:** 4,000,000 or 8,000,000 maximum Btu/hr capacities. Both sizes provide 20:1 turndown capabilities on natural gas.
- **Application of a Maxon Circular INCINO-PAK® Burner greatly simplifies** the construction of your cylindrical incinerator chamber, since both burner sizes are available as “standard” with a through-the-wall mounting, or complete with an insulated “wall mounting plug” that further simplifies burner installation.



**CORPORATION** 201 East 18th Street, P.O. Box 2068, Muncie, Indiana, 47307-0068. Phone: (765) 284-3304. FAX: 765-286-8394

## Circular INCINO-PAK® Burners

### Principle of Operation

The time-tested Maxon AIRFLO® Burner principles are also designed into the Circular INCINO-PAK® Burner. A customer-installed **profile plate** surrounds the burner and **creates a pressure drop** which directs the passing effluent air stream through the **burner's cone and extension ring** at a high velocity where it is mixed with a controlled volume of fuel gas. With the intensive mixing and turbulent condition created within the burner's mixing cone, a rapid temperature rise from the combustion reaction is produced to help ensure complete incineration of the effluents.

The burner is a **nozzle-mixing type** which does not need external combustion air; only the fuel gas flow needs to be controlled.

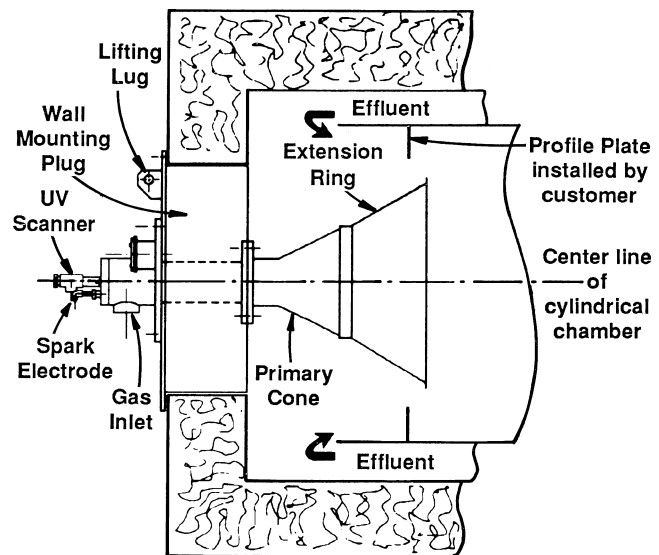
The burner can be ignited by means of the integrated raw gas pilot, or by direct-spark ignition of the main burner. **Direct-spark ignition must incorporate a "low fire start" inter-lock.**

A special feature is the **central gas inlet on which a spark ignitor, a pilot and sight tube for the UV-scanner are mounted.** These vital parts are easily retractable and protected from the heat emanating from the combustion chamber. **Neither the pilot nor ignitor/sight tube need any compressed/cooling air.**

The **mixing cone is two-part:** the **primary cone** of a special stainless steel, which can withstand very high temperatures. It not only guarantees resistance to high-reaching temperatures but also ensures accurate supply of oxygen-bearing effluent to the burner.

**Radial and tangential drillings in this primary cone create the right swirl** required to mix oxygen-bearing effluent and gas correctly inside the mixing cone resulting in an excellent flame stability and a large turndown.

The **special connection between the primary cone and extension ring** allows for expansion in all directions. The construction is such that **no mounting or support brackets are required**, thus avoiding deformation.



Cross sectional view

If necessary, the **extension ring** can be replaced, e.g. if the burner has to operate under severe working conditions.

A complete **Circular INCINO-PAK® Burner system** normally includes a gas train, an adjustable gradient-type gas control valve and a combustion control panel. Your Maxon representative can help you choose from the broad range available.

### Circular INCINO-PAK® Burner applications

This burner is typically used for direct gas-fired incineration of combustible gaseous effluents in applications such as:

- |                     |                    |
|---------------------|--------------------|
| Coil coating lines  | Paint baking ovens |
| Fiberglass curing   | Printing processes |
| Lithographing ovens | Textile dryers     |
| Metal coating lines | Wire enameling     |



CORPORATION 201 East 18th Street, P.O. Box 2068, Muncie, Indiana, 47307-0068. Phone: (765) 284-3304. FAX 765-286-8394

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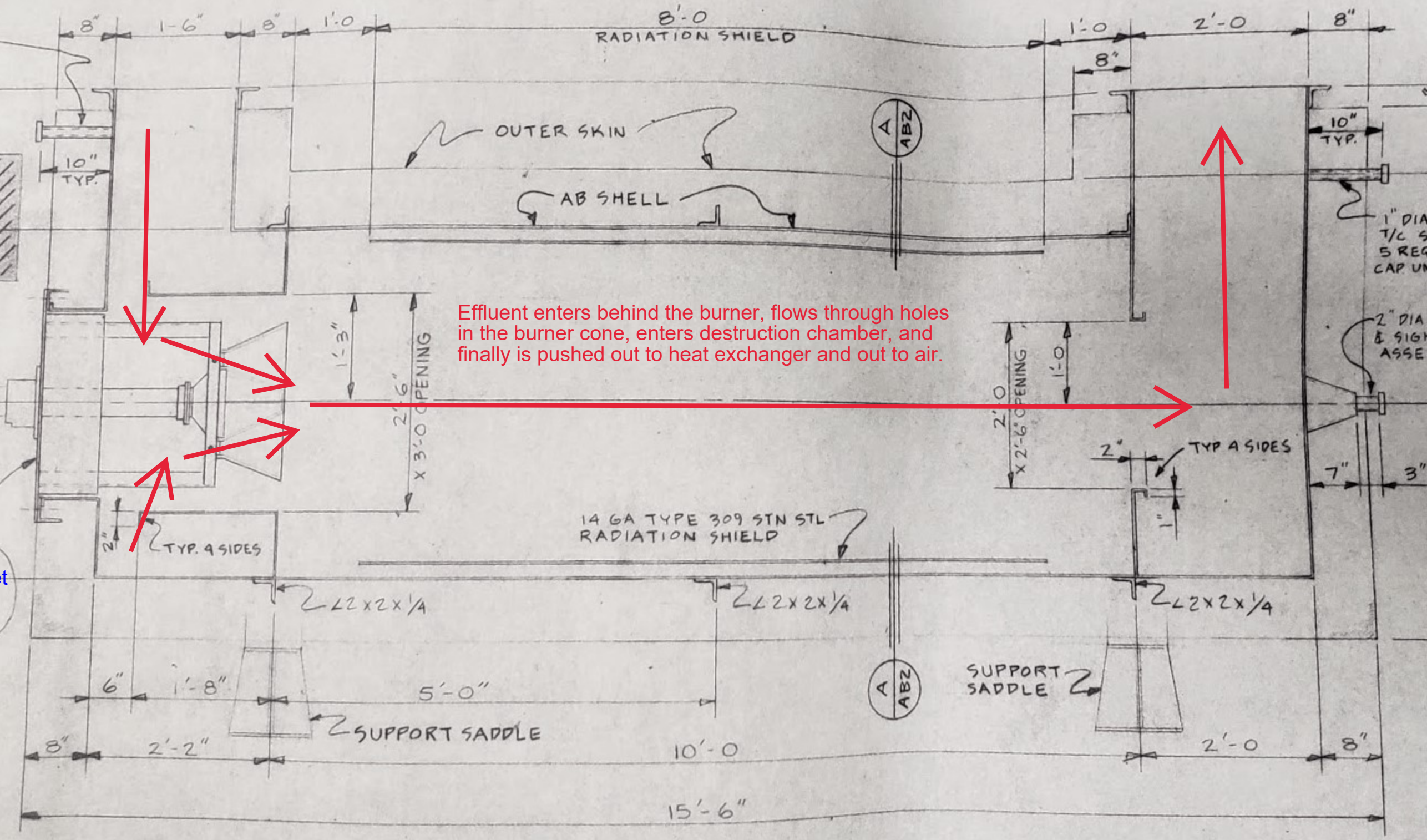
# EXHIBIT 4

PIPE T/C SLEEVES  
END. CAP  
SLEEVES.

GAS AREA  
RANGE  
OF

2'-0" DIA O.D.  
NATURAL GAS INLET

BURNER MOUNT  
SHT AB3



Effluent enters behind the burner, flows through holes in the burner cone, enters destruction chamber, and finally is pushed out to heat exchanger and out to air.

Natural gas inlet

# EXHIBIT 5



# **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

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## **Staff Report**

### **Proposed Rule 1147 – NO<sub>x</sub> Reductions from Miscellaneous Sources**

**December 2008**

#### **Deputy Executive Officer**

Planning, Rule Development, and Area Sources  
Elaine Chang, Dr. PH

#### **Assistant Deputy Executive Officer**

Planning, Rule Development, and Area Sources  
Laki Tisopulos, Ph.D., P.E.

#### **Planning and Rules Manager**

Planning, Rule Development, and Area Sources  
Joe Cassmassi

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Author:

Wayne Barcikowski – Air Quality Specialist

Reviewed by:

Gary Quinn, P.E. – Program Supervisor  
Linda Vogel – Senior Deputy District Counsel  
Barbara Baird – District Counsel

million Btu emission limit. AQMD staff will consider alternatives submitted for review in test protocols.

### **Compliance Determination, Certification and Enforcement**

PR1147 also identifies test methods for determining compliance with rule requirements and establishes a framework for manufacturers wanting to certify the emission level of their products. Among the list of approved test methods, two rely on portable analyzers and one method allows compliance determination with the lb/mmBtu emission limit option. Emissions testing using the lb/mmBtu option is one alternative for evaluating emissions from processes that operate at high oxygen concentrations (more than 18%). Copies of source test results and certifications must be kept on site by the operators of affected units and made available to the AQMD upon request. The AQMD will inspect distributors, retailers and installers as well as operators and conduct tests as necessary to ensure compliance of affected units.

Instead of requiring owners and operators of affected units to re-test each unit after a number of years, staff is proposing to implement a testing program where the District randomly tests a statistically significant sample of units annually to determine the state of compliance with the emission limits. This testing program could be implemented starting in 2012 after half of the equipment have replaced burners and completed their initial source tests and manufacturers have certified equipment.

The testing program would be funded by assessing a fee to all facility operators with equipment affected by PR1147. These funds would offset the costs incurred by the AQMD in conducting the testing program. Sample sizes and unit selection will be based upon standard sampling and statistical techniques. The cost to fund the testing program would be up to \$100 per unit per year. A typical cost for a source test is about \$1,200 per test. Staff will evaluate billing options and develop a proposal for consideration by the Board when amending Regulation III.

### **Exemptions**

Exemptions are provided for equipment and processes at RECLAIM facilities and that are regulated by other AQMD source specific rules in Regulation XI. An exemption is also provided for flare, afterburner, degassing unit, remediation unit, thermal oxidizer, catalytic oxidizer and vapor incinerator processes in which a fuel, including but not limited to natural gas, propane, butane or liquefied petroleum gases, is mixed with air toxics, VOCs or other combustible vapors prior to incineration in the unit in order to start-up or maintain combustion or temperature in the unit. This exemption does not apply to a burner with a separate fuel line used to heat up or maintain temperature of a unit or incinerate air toxics, VOCs or other combustible vapors in a gas stream moving past the burner flame.

An exemption is also provided for flares, afterburners, degassing units, thermal oxidizers or vapor incinerators in which a fuel; including but not limited to natural gas, propane, butane or liquefied petroleum gases; is only used to maintain a pilot for vapor ignition. PR1147 also exempts solid fuel-fired units and provides an exemption for existing afterburners incorporating a heat exchanger that captures heat from an oven or furnace.

PR1147 in addition provides a temporary exemption from the NO<sub>x</sub> emission limit for new afterburners, degassing units, thermal oxidizers, catalytic oxidizers, vapor incinerators, and spray booth make-up air heaters installed after adoption of PR1147 and before January 1, 2011. New food ovens, fryers, heated process tanks, parts washers, and evaporators installed after date of adoption and before January 1, 2013 are also exempt from the emission limit in Table 1 at the time of installation. These two categories of units must comply with the NO<sub>x</sub> emission limit on or before July 1 of the year the unit becomes 15 years old. New and relocated remediation units installed before January 1, 2011 are exempt until the unit is moved or a combustion modification is made.