

April 28, 2017

Notice to Potential Bidders:

**BULLETIN NUMBER 4
INVITATION FOR BIDS (IFB)
HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) EQUIPMENT
MAINTENANCE AND REPAIR SERVICES
IFB NUMBER 609-JPA**

This Bulletin Number 4 is being issued to provide the requested Belt List, A/C Filter List, and Compliance Test Report. The Belt List is Attachment 1, the A/C Filter List is Attachment 2, and the Compliance Test Report is Attachment 3 to Bulletin Number 4. The Belt and A/C Filter Lists, and Compliance Test Report are final and become part of the HVAC Equipment Maintenance and Repair Services IFB 609-JPA. There are no updates to the Equipment List or Maintenance Schedule.

Bulletin Number 4 will be accessible in electronic Portable Data File (PDF) format by 4:00 p.m. (Pacific Time) on April 28, 2017, via the Department's website at <http://shq.lasdnews.net/shq/contracts/info.html>.

All other Terms and Conditions of the IFB remain in effect.

Should you have questions, please contact Contract Analyst Dernice Samuel at ddsamuel@lasd.org.

BELT LIST

ATTACHMENT 1

**Los Angeles Regional Crime Laboratory Facility
Hertzberg-Davis Forensic Science Center
IFB-609-JPA****PENTHOUSE AND ROOF AREA**

| | | |
|-----------------------------|-------|----|
| COMPRESOR | B98-4 | 4 |
| EXHAUST FAN'S # 7-8-9-10 | 4L220 | 4 |
| EXHAUST FAN # 11 | 4L450 | 2 |
| EXHAUST FAN'S # 1-2-3-4-5-6 | BX112 | 25 |
| EXHAUST FAN'S # 13-14-14-16 | A36 | 4 |
| COOLINH TOWERS 1-2-3 | B-154 | 3 |

FAN BELT STOCK

BX97
BX120
BX154
4L260
4L270
A36
4L460
4L470
P463-A48
P465-4L260
B-154
A36
B112
4L220
4L450
B98

**Compliance Test Report
(For Three (3) Natural Gas-Fired Boilers)**

**Los Angeles Regional Crime Laboratory Facility
Hertzberg-Davis Forensic Science Center
IFB-609-JPA**

Compliance Test Report for three (3) Natural Gas-Fired Boilers at LA Co. Sheriff Dept/LA Regional

Facility ID No. 146897
Facility Location: 1800 Paseo Rancho Castilla
Los Angeles, CA 90032

Equipment Description: Cleaver Brooks Boilers

Test Date(S): June 6, 2014
Issue Date: June 9, 2014

Prepared for:
LA Co. Sheriff Dept/LA Regional
1800 Paseo Rancho Castilla
Los Angeles, CA 90032

For Submittal to:
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765-4182

EES No.: 06062014-LACSD

Prepared By & Title: Batuk Sharma, Project Engineer
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IFB-609-SPA

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COMPLIANCE TEST SUMMARY

**AVERAGE POLLUTANT CONCENTRATIONS FOR THREE (3) BOILERS
LA CO. SHERIFF DEPT./LA REGIONAL
LOS ANGELES, CA**

June 6, 2014

Natural Gas-Fired

CLEAVER BROOKS BOILERS

AS-FOUND LOAD

BOILER # 3

| Parameter | Units | As-Found Load | Permit Limit ppm @ 3% O ₂ |
|-------------------------------|----------------------------|---------------|---|
| NO _x Concentration | ppm @ 3% O ₂ | 9.94 | 12 |
| CO Concentration | ppm @ 3% O ₂ | 28.16 | 100 |

BOILER # 2

| Parameter | Units | As-Found Load | Permit Limit ppm @ 3% O ₂ |
|-------------------------------|----------------------------|---------------|---|
| NO _x Concentration | ppm @ 3% O ₂ | 9.78 | 12 |
| CO Concentration | ppm @ 3% O ₂ | 82.75 | 100 |

BOILER # 1

| Parameter | Units | As-Found Load | Permit Limit ppm @ 3% O ₂ |
|-------------------------------|----------------------------|---------------|---|
| NO _x Concentration | ppm @ 3% O ₂ | 10.80 | 12 |
| CO Concentration | ppm @ 3% O ₂ | 90.66 | 100 |

1.0

INTRODUCTION

Energy Environmental Solutions, Inc. (EES) was contracted by R. F. MacDonald Company on behalf of LA Co. Sheriff Dept./LA Regional to conduct compliance testing on three natural gas-fired boilers located in Los Angeles, California. All testing were performed while the boilers were operating at as-found load condition. The purpose of this source test was to comply with the South Coast Air Quality Management District (SCAQMD) requirements for NO_x and CO emissions limits mentioned in their Permit to Operate.

Copies of the Permit to Operate are attached with this report in Appendix C.

The source test was conducted on June 6, 2014. Batuk Sharma and Rene Cardona of EES performed testing.

The results of the June 6, 2014 source test are discussed briefly in Section 4. The test descriptions are described briefly in Section 3. All raw data, calculations and quality assurance documents are attached in the Appendices.

2.0

EQUIPMENT DESCRIPTION

The equipment tested were as follows:

Boiler # 1, Cleaver Brooks, Water Tube Type, Model FLX700-450-160#HW, Serial No. S185493-1, Rated At 4.5 MMBtu/hr, Natural Gas Fired, with One Cleaver Brooks Low No_x Burner, Model No. PROFIRE-NT and Equipped with a Forced Draft Flue Gas Recirculation System.

Boiler # 2, Cleaver Brooks, Water Tube Type, Model FLX700-450-160#HW, Serial No. S185493-2, Rated At 4.5 MMBtu/hr, Natural Gas Fired, with One Cleaver Brooks Low No_x Burner, Model No. PROFIRE-NT and Equipped with a Forced Draft Flue Gas Recirculation System.

Boiler # 3, Cleaver Brooks, Water Tube Type, Model FLX700-450-160#HW, Serial No. S185493-3, Rated At 4.5 MMBtu/hr, Natural Gas Fired, with One Cleaver Brooks Low No_x Burner, Model No. PROFIRE-NT and Equipped with a Forced Draft Flue Gas Recirculation System.

3.0
TEST DESCRIPTION

3.1 TEST CONDITIONS

The testing at La Co. Sheriff Dept./La Regional was conducted at as-found load condition.

3.2 PHYSICAL MEASUREMENT OF THE SOURCE

Table 3-1 reports the physical dimension of the exhaust stacks. All three boilers were identical. The stack configuration is shown in Appendix B.1

Table 3-1
DIMENSION OF THE STACKS AND SAMPLING PORTS
(All dimensions are in inches)

| | |
|----------------|----|
| Stack Diameter | 16 |
|----------------|----|

3.3 SAMPLING AND ANALYTICAL PROCEDURES

All tests were performed by the methods specified in Table 3-2 and detailed in Appendix E. Test schedules are mentioned in Table 3-3.

3.3.1 Continuous Emissions Monitoring

Exhaust concentrations of NO_x, carbon monoxide (CO), carbon dioxide (CO₂) and oxygen (O₂) were determined by SCAQMD Method 100.1. A representative exhaust gas sample was conveyed through a heated line (to prevent condensation) to a sample conditioning unit, which dried the sample. The sample was then pumped to a distribution manifold, from which the analytical instruments drew the samples. All analyzers were connected to multi-pen strip chart recorder and Darwin Yokogawa Data Acquisition Systems (DAS).

Table 3-2

TEST PROCEDURES AT LA CO. SHERIFF DEPT./LA REGIONAL

| Parameter | Reference Measurement Technique | Method |
|-----------------|--|---------------------|
| NO _x | Chemiluminescence | SCAQMD Method 100.1 |
| CO | Non-dispersive Infra Red Absorption (NDIR) | SCAQMD Method 100.1 |
| O ₂ | Electro-chemical Cell | SCAQMD Method 100.1 |
| CO ₂ | NDIR | SCAQMD Method 100.1 |

Table 3-3

LA CO. SHERIFF DEPT./LA REGIONAL TEST SCHEDULE
June 6, 2014

| Date | Time | Test Type |
|--------------|-----------|-----------|
| June 6, 2014 | 0800/1200 | CEMS |

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4.0

TEST RESULTS AND DISCUSSIONS

4.1 SUMMARY OF POLLUTANT CONCENTRATIONS

Table 4-1 summarizes the "raw" and corrected average NO_x and CO concentrations. The value reported is on 1-minute averages. Concentrations at 3% O₂ on a dry basis are compared with SCAQMD requirements.

Table 4-1

COMPLIANCE TEST SUMMARY

AVERAGE POLLUTANT CONCENTRATIONS FOR THREE (3) BOILERS
LA CO. SHERIFF DEPT./LA REGIONAL
LOS ANGELES, CA

June 6, 2014

Natural Gas-Fired

CLEAVER BROOKS BOILER

AS-FOUND LOAD

BOILER # 3

| Parameter | Units | As-found Load | Permit Limit ppm @ 3% O ₂ |
|-------------------------------|----------------------------|---------------|---|
| NO _x Concentration | ppm | 9.07 | |
| O ₂ | % | 4.56 | |
| CO Concentration | ppm | 25.71 | |
| NO _x Concentration | ppm @ 3% O ₂ | 9.94 | 12 |
| CO Concentration | ppm @ 3% O ₂ | 28.16 | 100 |

BOILER # 2

| Parameter | Units | As-found Load | Permit Limit ppm @ 3% O ₂ |
|-------------------------------|----------------------------|---------------|---|
| NO _x Concentration | ppm | 9.41 | |
| O ₂ | % | 3.69 | |
| CO Concentration | ppm | 79.56 | |
| NO _x Concentration | ppm @ 3% O ₂ | 9.78 | 12 |
| CO Concentration | ppm @ 3% O ₂ | 82.75 | 100 |

BOILER # 1

| Parameter | Units | As-found Load | Permit Limit ppm @ 3% O ₂ |
|-------------------------------|----------------------------|---------------|---|
| NO _x Concentration | ppm | 10.30 | |
| O ₂ | % | 3.82 | |
| CO Concentration | ppm | 86.49 | |
| NO _x Concentration | ppm @ 3% O ₂ | 10.80 | 12 |
| CO Concentration | ppm @ 3% O ₂ | 90.66 | 100 |