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## INTRODUCTION TO AIR HYGIENE STACK TESTING



# 30 MINUTE LUNCH AND LEARN PRESENTATION

Table of Contents		Slide
•	E'MISSION STATEMENT	1 •
•	TRAINING	2 •
•	SUPPORT	3 •
•	TECHNOLOGY	4
•	FIELD WORK	5 •
•	SCHEDULING	6
•	EXPERIENCE	7
•	VERSATILITY	8
•	REGULATORY	9 •
•	BEHIND THE SCENES	10
•	EQUIPMENT	11
•	SOURCES	12
•	ACCREDITATION	13
•	CAPABILITIES	14

click on a blue button to jump to the slide click on the AHI logo to jump back

## E'MISSION STATEMENT

Air Hygiene's core philosophy of "Second-to-None (2-2-0)", demands extra mile customer service anchored on dignified character and family-oriented principles to deliver unmatched quality stack testing, worth paying for every time.

Supporting this mission we utilize revolutionary technology and Air Hygiene University to create the best educated work force to define the future of stack testing.



Strategically located in the heartland of the United States, Air Hygiene's corporate headquarters in Broken Arrow, Oklahoma is a 32,000 square foot building which houses both cutting edge equipment and employees who are leaders in their specialties.

#### **TRAINING**

Air Hygiene's culture extends to our warehouse through the practices of <u>Kaizen</u> and <u>Continuous Improvement</u>. Here we employ the concepts of Lean and 5S to create an organized and safe environment that focuses on error reduction.

Air Hygiene employees benefit from a one-of-a-kind training environment that includes an <u>in-house stack</u>. By utilizing our dedicated training balcony to introduce employees to new concepts, then combining that theory with actual hands-on, real-world training and repetition; mistakes are discovered and corrected before employees have a chance to make them in the field. The result is cost savings, which are passed on directly to our customers.



President - Quinn A. Biermai

# **INSTRUMENT ROOM**

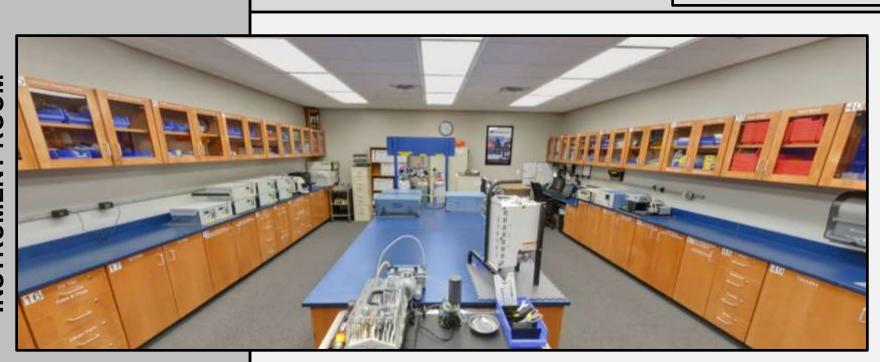


Under the watchful eye of our company President, Quinn Bierman, the Instrument Room is the hub of maintaining our most technically advanced real-time analyzers. From Fourier Transform Infrared (FTIR) Analyzers to field Gas Chromatographs (GCs), everything is routinely serviced and tested prior to mobilization.

#### **SUPPORT**

Air Hygiene's management provides support to our field crews through constant phone and internet contact. Air Hygiene's technical staff provides support to our field crews by maintaining a fleet of <a href="mailto:backup equipment">backup equipment</a> to eliminate

downtime on the job. The result is flawless testing that is performed on budget and on time.



Air Hygiene's quality program begins in the lab, which is operated by Sean Barnes, PhD chemist and managed by Jake Fahlenkamp, Air Hygiene's Executive Director of Quality Management.

#### **TECHNOLOGY**

Air Hygiene's owners have a long standing practice of investing company profits back into <a href="employees and test">employees and test</a> <a href="employees">equipment</a>. The Warehouse, Instrument Room, and Laboratory all contain technically superior, state-of-the art

equipment that is operated and maintained by the best qualified staff in the industry.







At Air Hygiene it is important not just to know the E'mission Statement, but also to practice it on a daily basis. Our business is our clients' satisfaction, which we support by guaranteeing our service is...

> **Second-to-None** (2-2-0)

#### FIELD WORK

All of the training, support, and technology culminates at your site. Air Hygiene's field crews are equipped with the best equipment available. Project managers are leaders trained technically as well as with the management side of crew delegation and customer support. All of this "extra" effort is in place to support 2-2-0 customer service.





Air Hygiene's Director of Operations, <u>Danny Parr</u> is always just a phone call or email away from being able to answer your questions about <u>scheduling</u>.

Holding certifications for QSTI I, II, III, and IV, Danny has made himself an integral member of the Air Hygiene family. His expertise includes: compliance startup projects, engine compliance tests, and relative accuracy test audits. After having completed over 3,000 emissions tests, Danny provides excellent oversight and direction for Air Hygiene clientele.



#### **SCHEDULING**

Scheduling source emission testing can be challenging. We guarantee 24 hour response time.

To assist our clients, Air Hygiene maintains additional field offices with ready for field use testing labs and/or personnel in the following cities:

- Shreveport, LA
- Austin, TX

Pittsburgh, PA

- Fort Worth, TX
- · Chicago, IL

Las Vegas, NV





#### **EXPERIENCE**

Air Hygiene has worked for a variety of companies, many just like yours and we have a long list of satisfied customers.

#### CLIENT REFERENCES

wtec

**NV**Energy

Mitsubishi Power 407-688-6270





Calpine

Attento



(928) 346-7000

(830) 262-4400

Getald Butcher

(405) 247-3351

(802) 250-1383

Andrea Adams

(303) 339-8847

(972) 559-6308

Marty Anderson

970) 212-0651

lobal Abdulally

(860) 285-4183

(918) 665-7693

Karet Postma

(970) 879-2561

(702) 369-6175

William Stark

(303): 299-5200

Charles Gibbs

(678) 627-4457

MidAmercan Energy

PIC World

RW Beck

Came MacDougali

Enercon

Rod Klauer

Arizona Public Service Co.

ADA Carbon Solutions

Peerless Manufacturing

Omega Energy Consulting

Kim Williams



National Power and national grid

(303) 790-1900



LJ/E

BLACK & VEATCH

zephyr

HITACHI

Coperdrax

Don Fritz Wood Group (702) 632-8630

Qasem Bdein Bechtel (301) 228-8209

Roosevelt Huggins Black & Veston 79131-458-7864

Dale Mitter Coountrix (208) 659-7857



(805) 721-2181



Yoshito Suzuki Hitachi (712) 365-7940



(702) 651-1217











(712) 366-5372 Allen Poppe Stanley Consultants



ALSTOM

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GROUF

MIDAMERICAN

C ENERCON



Sargent & Lundy

Kelson

Holdings

CEMTEK

(312) 269-6269 Wayne Whitehead

Ketson Energy

(409) 746-2201

















SINC-LAVALIN

@ conEdison, inc.























We pride ourselves on our ability to maintain strong client relationships.

We are always looking to add new companies to our customer base and would enjoy the opportunity to work for you.

Your first contact at Air Hygiene may likely be our Director of Business Development, JJ Cavender. Whether you meet him at a trade show, information forum, or through a request

for quote need, JJ can help to get your work quoted.





In the spirit of Continuous Improvement our Director of Customer Service, Paul Little, and his staff reach out to each and every customer to ensure our job performance is great.

This effort is to ensure we exceed our client's expectations and continually raise the bar on best field practices and setting best work standards.



#### **VERSATILITY**

Air Hygiene works hard to meet client needs through versatility, flexibility, and mobility. Using our fleet of vehicles and test trailers; collection of real-time analyzers and wet chemistry test equipment; and host of experienced and well trained field crews, Air Hygiene makes a commitment to be there when you need us each and every time.







Air Hygiene University is the vehicle and mechanism that Air Hygiene utilizes to keep both clients and personnel current on the potential gaps that exist between regulatory language and actual hands-on application of newly developing equipment.

Under the direction of Thomas Graham, AHU is focused on becoming a world wide presence in stack testing training.



#### **REGULATORY**

Regulatory changes and their impact on our clients is critical.

Air Hygiene participates in many conferences including Source Evaluation Society (<u>SES</u>); Electric Power Research Institute (<u>EPRI</u>); and Gas Machinery Research Council (<u>GMRC</u>) Engine Emissions Stack Testing and Analyzer Workshop.

We then bring information back to our employees to educate them about changes in our testing environment.





Air Hygiene's Chief Financial Officer, Clint Davis maintains the cash flow that is critical to a mid-sized business that allows us to always own the best testing equipment, employ the best staff, and continue to grow our business. Each of these things contributes to ultimate client satisfaction.



#### **BEHIND THE SCENES**

No company can operate, and field testing would be impossible, without <u>strong leadership</u> engaged in actively monitoring and evaluating the pulse of Air Hygiene's staff, financial outlook, and test equipment. Each Director of each division looks to track key performance metrics and tie that performance back to the short and long term goals of our company and our clients.

Air Hygiene Vice President,
Swanson Bierman, champions our
Kaizen improvement activities and also,
along with his staff, maintains the
warehouse, ready to stage and mobilize
equipment at a moments notice.







Craig McCarty, Director of Test Equipment, personally oversees that each piece of <u>field</u> <u>equipment</u> is properly <u>cleaned</u>, <u>calibrated</u>, and <u>serviced</u> between each project.



David Martin, Director of
Construction, and his staff
custom build each Air
Hygiene test trailer to state-ofthe art specifications



#### **EQUIPMENT**

Great stack testing companies are not just built on the backs of their employees, but also live and die by the **quality** of their **sampling equipment**.

#### With equipment that includes:

- Reference method real-time gas analyzers
- · Isokinetic/wet chemistry sampling trains
- Flow, temperature, and pressure measurement
- On-site chemical analysis

Air Hygiene is the clear choice for all stack testing needs.



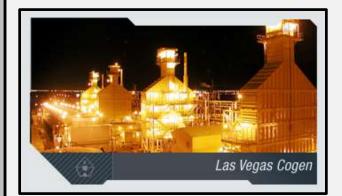


From natural gas fired power plants in the early 2000s to the massive clean coal plant startups of the last 8 years, Air Hygiene has made its mark on the industry by standing out as a leader in the field of tuning, performance, and initial startup compliance testing.

These jobs require flexibility along with creative scheduling and planning. We have a staff of seasoned professionals ready to be at your site to get your plant online and emissions tested within your budget and meeting your deadlines.

## **SOURCES**

- Coal
- Natural Gas
- Fuel Oil
- Biomass













### <u>ACCREDITATION</u>

The USEPA requires board certification for specific regulations under 40 CFR Part 75 and has referenced ASTM D7036 as the primary standard for Air Emission Testing Bodies (Stack Testers) and individual accreditation through the QSTI (Qualified Stack Testing Individual) program. These regulations require Air Hygiene to maintain both a company wide accreditation along with individual certifications for our employees. We make sure you get the very best!

- Air Hygiene maintains a staff of professionals each with multiple QI certifications to their names. The company is proud to hold 48 individual QI certifications among its respective field managers.
- Air Hygiene was very first company to achieve the combined three level stack testing accreditations audited by A2LA. These included ASTM D7036, International Standard ISO/IEC 17025:2005, and ilac-MRA.



A sample of our reference method tests include:

- Methods 1-4: Flow / Moisture
- Method 3a: O<sub>2</sub> and CO<sub>2</sub>
- Method 5: PM
- Method 6c: SO<sub>2</sub>
- Method 7e & 20: NOx
- Method 8, 8a, and CTM-013:
   H<sub>2</sub>SO<sub>4</sub> and SO<sub>3</sub>
- · Method 9 and 22: Opacity
- Method 10: CO
- Method 11: H<sub>2</sub>S
- · Method 12: Lead
- · Methods 13: Total Fluoride
- Method 15: Reduced Sulfur
- Method 16: TRS
- Method 17: PM
- Method 18: VOC
- · Method 19: F-Factor
- · Method 23: Dioxins and Furans
- Method 25a: THC
- Method 26 and 26a: Hydrogen Halides and Halogens
- · Method 29: Metals
- · Method 30b: Hg
- Method 201a: PM<sub>10/2.5</sub>
- Method 202: Condensable PM
- Method 306: Total Chromium
- · Method 308: Methanol
- Method 316: Formaldehyde
- Method 320: FTIR
- Method 321: HCl
- ASTM D6348: FTIR
- ASTM D6522: Portable Analyzer
- ASTM D6784: Speciated Hg

## **CAPABILITIES**

From <u>power utilities</u> to <u>oil and gas companies</u>; from instrumental methods to wet chemistry testing, Air Hygiene is capable of getting your scope of work accomplished correctly, accurately, on time, and within your budget every time. Our Service is what you will remember!

We make a point of living our mission each and every day, which results in a long list of clientw that come back to us for all of their source testing needs.

Air Hygiene also continues to perform stack emissions testing for the following industries as well:

- Asphalt
- Pulp & Paper
- Glass Plants
- Chrome Electroplating
- Metal & Non-metallic Mineral Processing
- Printers
- Chemical Plants
- Cement Kilns
- Solid and Hazardous Waste Incinerators
- Manufacturers



If you would like a better view of our facility, please take a look at our 360° spins at:

http://newspin360.com/tour/ok/brokenarrow/airhygiene/

## **QUESTIONS?**

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