LEADERSHIP IN THE FUTURE OF THE INDUSTRIAL HYGIENE PROFESSION

Carter Ficklen III, CIH, CSP
NASA Langley at a Glance

Langley’s Economic Impact (2015)
• National economic output of ~$2.3b and generates over 17,400 high-tech jobs
• Virginia economic output of ~$1.1b and generates over 8,800 high-tech jobs

Workforce .................................................. ~3,470
Civil Servants .......................................... ~1,840
Contractors (on/near-site) .................. ~1,630

Infrastructure/Facilities
156 Buildings ........................................... 764 acres
Replacement Value ................................. ~$3.6b

<table>
<thead>
<tr>
<th>AERONAUTICS</th>
<th>SCIENCE</th>
<th>SPACE TECH</th>
<th>HUMAN EXPLORATION</th>
<th>EDUCATION</th>
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<tr>
<td>$191m</td>
<td>$232m</td>
<td>$33m</td>
<td>$41m</td>
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Center Management & Operations
(Facilities, IT, Engineering, Tech Authority, B&P, IRAD, Safety/Mission Assurance, Legal, Finance, Procurement, Human Resources)

Agency Management & Operations
(NASA Engineering & Safety Center, Office of Chief Engineer, Agency IT)

Construction Environmental Compliance & Restoration
(Revitalization Plan)
the Yuma Pacific Southwest AIHA Local Section Website
www.ypsaiha.org/

The Yuma Pacific Southwest (YPSW) section is part of the American Industrial Hygiene Association. The American Industrial Hygiene Association (AIHA) is ...

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https://www.walmart.com/store/1474/whats-new

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American Industrial Hygiene Association’s Yuma Pacific Southwest ...
www.exponent.com/newevents/events/2017/.../yuma-pacific-southwest-section-of-aiha

Mr. Del Malcahn, Principal Scientist in the Health Sciences practice will be presenting at the 42nd Annual Yuma Pacific Southwest (YPSW) section of the ...
...so why am I here, better yet, how am I here

☐ An IH Leader
There was some early resistance to the foundation’s program by AIHA members who feared a large influx of industrial hygienists would saturate the market and cause possible unemployment. However, Newell E.
SUMMARY

Gigantic strides have been made during the past four decades in characterizing and controlling environmental health hazards in the workplace. In many industries where full concept industrial hygiene programs are in effect, the off-the-job stresses such as smoking, alcohol consumption, drug use, and hobby activities often have a greater effect on worker health than that of on-the-job activities where the stresses associated with the job have been studied and controlled. These off-the-job stresses offer a tremendous opportunity for the development of relevant preventive programs in which the industrial hygienist can participate.

Industrial technology is rapidly changing the characteristics of many industries in that high technology is increasingly being applied with the emergence of different types of health stresses. The industrial hygienist must keep abreast of these changes along with the procedures for their recognition, evaluation, and control.

It is vital that the techniques used in measuring occupational health stresses cover all the relevant components of each stress and that these are incorporated into the control program strategy. The practice of industrial hygiene rests on proper judgment in evaluating valid data, combined with effective follow-through.

The high quality and relevancy of the industrial hygiene profession have been proven in meeting the challenge of maintaining a healthful working environment in the presence of an ever advancing and increasingly complex industrial technology.

The following chapters cover comprehensively the theoretical basis and rationale for the science of industrial hygiene.
CHAPTER ONE
Rationale

LEWIS J. CRALLEY, Ph.D., and
LESTER V. CRALLEY, Ph.D.

1 BACKGROUND

The emergence of industrial hygiene as a science has followed a predictable pattern. Whenever a gap of knowledge exists and an urgent need arises for such knowledge, dedicated people will gain the knowledge.

The harmful effects from exposures to toxic substances in the workplace, producing disease and death among workers, have been known well for over two thousand years. Knowledge on the toxicity of materials encountered in industry and means for control of exposure to toxic materials as well as techniques for its measurement and evaluation, however, were not available during the earlier period of industrial development. With few exceptions, the earliest attention given to worker health was in applying the knowledge at hand, which concerned primarily the recognition and treatment of illnesses associated with the job.

However, the devotion of prime attention to the preventive aspects of worker health maintenance through controlling job-associated health hazards became quite evident if the best interest of the worker was to be served in preventing occupational diseases. Not until around the turn of the twentieth century, though, did major effort begin to be directed toward the recognition, measurement, evaluation, and control of workplace environmental health stresses in the prevention of occupational diseases.

The aim of this chapter is not to document or present chronologically the major past contributors to worker health and their relevant works or the events and episodes that gave urgency to the development of industrial hygiene as a science. Rather, the purpose of the chapter is to place in perspective the many factors involved in relating environmental stresses to health and the rationale.
Examples of created macrocosmic stresses of the earth’s surface plate structures, jetstream, layers of gases and air, etc., that shields the earth from excessive ultraviolet radiation through the release of large quantities of some organic compounds into the air, the excessive burning of fossil fuels that increase the carbon dioxide level and temperature of the atmosphere, or excessive industrial, community, or life-style pollution over a prolonged period that may affect the quality of the air, water, or soil.

Figure 1.1. Inseparability of environment and health.
Leadership is "motivating and organizing a group of people to achieve a common goal".
Mellisa Williamson, 35, a Bullitt Avenue resident, worries about the effect on her unborn child from the sound of jackhammers.
IH Leadership Model

- IH Technical Mastery
- Management Skills / Business Acumen
- Individual & Organizational Leadership Skills

Which one needs more focus in Professional Development opportunities?
Is “Leadership” different for IHs?

1. 45 seconds. Go
Is “Leadership” different for IH Professionals?

- When many teams are doing their best work, it is very visible
  - Launching a new product
  - Installing new equipment
  - Signing new contracts

- When IHs are doing their best work, it is usually not visible because we are preventing incidents
  
  ...in many ways similar to Quality or Security
Write down three leadership characteristics that are important for IHs

2. 90 seconds – Go
   - 
   - 
   -
Top 10: Leadership Characteristics & Skills for Occupational Hygiene Professionals

1. Character
2. Science and Technical Skills
3. Interpersonal Skills
4. Communication Skills
5. Change Agent
6. Builds Strength Through Diversity
7. Decision Making Skills
8. Community Builder
9. Business Acumen
10. Innovative Problem Solving
The DiSC Personal Profile® uses a series of 28 questions to determine the intensity of four individual Dimensions of Behavior:

- **Dominance**: Emphasis on shaping the environment by overcoming opposition to accomplish results.
- **Influence**: Emphasis on shaping the environment by influencing or persuading others.
- **Steadiness**: Emphasis on cooperating with others within existing circumstances to carry out the task.
- **Conscientiousness**: Emphasis on working conscientiously within existing circumstances to ensure quality and accuracy.

DiSC® is the leading personal assessment tool used by more than 40 million people to improve work productivity, teamwork, and communication.
DiSC helps people understand behavior (their own and others) in various situations.

- The instrument was developed during the 1920s – 1930s
- Not actively used until about 1970
- Environment/life situation can have a major influence

Validity rate of between 88% and 91%

- Study conducted by Dr. Russell J. Watson of Wheaton College March of 1989 and 1983 by Dr. Sylvan J. Kaplan.
DiSC Reference Points

- **Dominance**
  - direct, strong-willed and forceful

- **Influence**
  - sociable, talkative and lively

- **Steadiness/Supportive**
  - gentle, accommodating and soft-hearted

- **Conscientiousness**
  - private, analytical and logical

- **Your DiSC Style is a tendency**
  - However you need to work to have each of the four in your toolbox
N => 500
How do IHs compare to the population?

- D
- I
- S
- C
How does DiSC fit into IH Leadership

- Some situations call for particular traits that may not perfectly align with our personality profile
  - Fatality in the workplace
  - Finding an error in a complex set of data
  - Handling pressure from regulatory agency
  - Performance appraisals

- We need to have all 4 traits in our toolbox

- We need to be aware of our tendencies
  - ...and also aware of others
So what does that mean?

- Let's talk
What is the most important skill for future IHs?

3. 15 seconds
Listening

IT’S NOT ABOUT THE NAIL

https://www.youtube.com/watch?v=-4EDhdAHrOg
The Honest Boss

http://www.youtube.com/watch?v=kof75Dl43Fl
How are Lumbergh’s Listening Skills?

http://www.youtube.com/watch?v=Fy3rjQGc6lA
Thank you!!!!