The Case for Occupational Hygiene Professional Practice and Scope Protection

Authors: Spencer Matthes, M.Sc. CSP, ROH; Sarah McCurdy B.Sc., CRSP, ROHT; Michael Welsh, ROH.

Contributors: Marc-Andre Lavoie, M.Sc. ROH; Letty Wong, ROH; Roberto Sgrosso, ROH; Matthew Brewer, ROHT; Kiet Nguyen, ROH; Lucie Marcotte Ph.D., Chem., ROH

1. Intent

Occupational Hygiene (OH), or Industrial Hygiene (IH), is a critical factor in the common "health and safety" equation. Occupational Hygiene plays an important role in occupational exposure risk assessment, management, and mitigation; melding methodologies of the natural and social sciences, into effective mitigation strategies. Professionally recognized Occupational Hygiene practice (e.g., Registered Occupational Hygienists (ROH), Certified Industrial Hygienists (CIH), or Registered Occupational Hygiene Technologists (ROHT)) requires the thoughtful balance and application of anticipation, recognition, evaluation, control, and confirmation² of occupational health hazards and exposure mitigation in the workplace. To ensure that workers, and communities at large, are best served in the mitigation of occupational health risks in the workplace, we advocate for both the title and scope of practice protection of the Occupational Hygienist (Professional [e.g., ROH, CIH] & Practitioner level [e.g., ROHT]) and the practice of Occupational Hygiene in Canada. This paper details the professional competency requirements, education, skills, and valuable contributions of accredited Occupational Hygienists in ensuring the health and wellbeing of workers across Canada. These protections are needed to ensure that the workforce, and by extension the public, are best served by an occupational hygiene professional. There is a clear distinction between professional occupational hygiene practice and an unaccredited "OHS" person or other professional who may be certified and dedicated to occupational safety.

2. Health versus Safety Hazards

The Occupational Hygienist, (also known as Industrial Hygienist), is concerned with the anticipation, recognition, evaluation, and control of health hazards in the working environment which could lead to injury, illness, or impairment of workers. These hazards concern the numerous physical, chemical, and biological agents to which exposure may occur in workplaces.

The term *hazard* applies equally to both the "health" and the "safety" branches within occupational health and safety (OH&S). However, between these two branches of OH&S, there is a distinct difference in the type of hazard addressed. Health, hazards requiring the health-focused scientific knowledge of the Occupational Hygienist include exposure to radiation (ionizing and non-ionizing), harmful biological substances (e.g., bacteria, mycotoxins, bloodborne pathogens, etc.), toxic substances (e.g., heavy metals, volatile organics, carcinogens, etc.), physical hazards (e.g., excessive noise levels, extreme temperature, etc.), or ergonomic hazards (e.g., repetitive motions, vibration, posture, etc.)¹. In contrast, safety hazards include moving parts of machinery that may cause injuries and damage, equipment failure, workplace violence, and electrical hazards.² "Health", as addressed in the workplace by the Occupational Hygienist, generally relates to the absence of physical illness, pain, injury or discomfort, while safety refers to a state

¹Creason, T. (2018).

² Ali, W. (2018).

of being safe, where 'safe' is a condition of protection from physical, social, or emotional consequences of a workplace incident³.

According to the Board for Global EHS Credentialling (BGC), formally the American Board of Industrial Hygiene (ABIH), the occupational hygienist has traditionally become proficient by some combination of education, training, and experience. Ideally, this knowledge is used to anticipate when a hazardous condition/health hazard may occur and then to take corrective action. But not everything can be anticipated, so the Industrial Hygienist must be able to use foresight to recognize conditions that could lead to adverse health effects to workers or a community population. Once anticipated or recognized, the hazard could then be evaluated and eventually controlled to eliminate or reduce the impact of the hazard"⁴.

The American Industrial Hygiene Association (AIHA) describes the expertise profile of occupational hygienists as follows: "IH/OH is the art and science of preventing illness and disease from occupational exposures. IH/OH practitioners come from varied backgrounds. They can be chemists, engineers, biologists, physicists, physicians, nurses and other professionals, all of whom have chosen to apply their skills to protecting the health of workers"⁵. Occupational hygiene is multidisciplinary, so the Occupational Hygienist must develop knowledge across many different areas, typically starting with foundational courses in basic science and math (e.g., chemistry, biology, algebra, etc.), with a progression to courses of more in-depth fundamental scientific areas (e.g., toxicology, health physics, fluid dynamics, ventilation, etc.) and finally, application of that knowledge and work experience to perform exposure risk assessments, manage the risk, and communicate the risk to protect health in the workplace⁶. Therefore, occupational hygienists are the most competent, based on training and education, for mitigating and managing occupational health hazards. The OH competencies aligned in the mitigation of occupational and environmental health hazards are described in the following paragraphs.

3. Hazards

Occupational hygiene focuses directly on the health of the worker. The word "hygiene" derives from "Hygieia", the daughter of the healer Asclepius and so has its roots in ancient Greece. To best anticipate, recognize, evaluate, and control health hazards, a knowledge of human anatomy and physiology is necessary. Health hazards can affect many systems in the body, including specific organs, through multiple pathways. The following agents describe the specific health hazards and their effects on an exposed individual.

3.1 Physical Agents

Physical agents are sources of physical energy that may cause injury or disease. These are best exemplified by noise, vibration, electromagnetic radiation (ionizing and non-ionizing), and extremes in temperature.

3.1.1 Noise and Vibration

The Occupational Hygienist must be able to demonstrate knowledge of and apply principles of the physics of noise and vibration to perform measurements in the evaluation of worker exposure risk. This is done through the identification of situations with the potential to cause noise-induced hearing loss or vibration-related injury design and develop control strategies to protect against excessive exposures.

³ Ibid.

⁴ Board for Global EHS Credentialing. (n.d.).

⁵ American Industrial Hygiene Association. (2018).

⁶ International Occupational Hygiene Association. (2008).

3.1.2 Electromagnetic Radiation

Occupational Hygienists must be knowledgeable about radiation and its risks to human health; requiring the knowledge of the characteristics and health/biological effects of both ionizing radiation (alpha, beta, gamma, neutron and x-radiation) and non-ionizing radiation (electromagnetic fields; static electric and magnetic fields; lasers; radio frequencies; microwaves; ultraviolet, visible and infrared light radiation) to recommend adequate controls based on measurement and evaluation of exposure.

3.1.3 Temperature (Heat and Cold Stress)

Occupational Hygienists can conduct exposure assessments and assist departments with the development of procedures to minimize the adverse effects of heat and cold stress amongst their employees. Working in extreme temperatures, hot or cold, can lead to the failure of the body's temperature control system. When the body is unable to warm or cool itself properly, illness can result. Heat and cold stress can contribute to adverse health effects that range in severity from discomfort to death⁷.

3.2 Biological

The Occupational Hygienist recognizes, evaluates, and controls biological agents associated with potential occupational exposure such as viruses, bacteria, fungi, molds, allergens, toxins from biological sources, bloodborne pathogens, and infectious diseases that are potentially harmful to humans and other biological organisms. Once identified, the Occupational Hygienist must be able to evaluate the potential exposures to the biohazards and recommend controls to reduce or eliminate those exposures.

3.3 Chemical

The Occupational Hygienist must apply scientific and technical knowledge to minimize the potential for human exposure to natural, controlled, accidental, and intentional releases of chemical agents (solids, liquids and gases) into the occupational environment with emphasis on exposures related to work. Occupational Hygienists specify approaches to prevent, control, and remediate chemical exposure from inhalation, skin absorption, ingestion and injection of chemicals into the body. Occupational Hygienists must be able to recognize physical hazards of chemicals, such as flammability, combustibility, and explosivity and be familiar with chemicals which may cause simple or chemical asphyxiation.

3.4 Ergonomic

The practice of ergonomics is an important part of keeping people healthy at work. The Occupational Hygienist must be able to identify, evaluate, and recommend controls to mitigate ergonomically stressful jobs using principles from anthropometry, human factors engineering, biomechanics, work physiology, human anatomy, and physical engineering solutions to prevent injuries and illnesses and improve the efficiency and comfort of workers.

4. Review of Occupational Hygiene vs. Occupational Safety

Safety professionals are typically trained to a level of health exposure hazard assessment to qualitatively determine if an occupational hazard may affect worker health, such as the presence of hydrogen sulfide gas or noise on an oil and gas site. These practices fall under the banner of general safety concerns common to all workers on the site, specific concerns relevant to the industry, safety aspects associated with the process and production process, and building/structural safety⁸. A person in a health and safety managerial position, may not have the requisite training, education, or experience to anticipate, appreciate, prevent, or control emerging and systemic occupational health hazards. Safety personnel typically do not

⁷ Princeton University. (2023).

⁸ Creason, T. (2018).

impact the health side of the "health & safety" label, as they provide support to incident investigation, recordable injury frequency/total injury frequency (RIF/TIF) frequency tracking, safety hazard communication, leading/lagging indicator tracking, hazard assessment, and safety training. Accreditation in safety competency in Canada is provided by the Board of Canadian Registered Safety Professionals (BCRSP), offering the accreditations of Canadian Registered Safety Professional (CRSP®) and Canadian Registered Safety Technician (CRST) to qualified candidates.

In contrast to the safety professional, the accredited Occupational Hygienist uses rigorous scientific methodology relying on both qualitative and quantitative models and data analysis methods to identify potential health hazards and evaluate the level or risk and exposure⁹. This is an inherently proactive practice to preserve and protect worker health, including both hypothesis generation and testing procedures. As further explained by the AIHA, "the field of occupational hygiene often requires professional experience in identifying hazards, determining the potential for exposures, and ascertaining risk in the workplace and community. This aspect of occupational hygiene is often referred to as the "art" of occupational hygiene and is used in a similar sense to the "art" of medicine. Occupational Hygiene may be considered an aspect of preventive medicine, in that its goal is to prevent occupational injury, illness and disease"¹⁰. Canadian universities offering Master level degree programs in Occupational Hygiene have placed them under schools of medicine or public health.

The Occupational Hygienist specializes in the health component of health and safety, their professional accreditations requiring a higher level of education (university degree in applicable science) and several years of related experience depending on your level of education. Recognized occupational hygiene accreditations in Canada (and globally) include the CRBOH's ROH credential (also offering the practitioner ROHT) and the BGC's CIH credential.

Overall, the two components of health and safety are correctly differentiated where the occupational safety deals with exposure risk of physical hazards from a physical injury/loss standpoint within the operational working environment (e.g., fracture or amputation from unguarded machinery on a production line), whereas occupational health deals with the health exposure risk of the worker within the operational working environment (e.g., inhalation exposure to toluene vapours from a solvent tank on the production line).

Both occupational safety and occupational hygiene personnel work with employers to ensure workplace conditions comply with relevant OH&S laws, regulations, and company policies in order to minimize safety and health concerns for employees¹¹. The following points highlight key distinctions in the respective health and safety branches ¹²:

- Health is the efficient and proper functioning of an individual's body; safety is the state of being safe from undesirable events or consequences.
- Health hazards affect the healthy functioning of workers' bodies (e.g., inhalation of organic solvent vapours), safety hazards make the surrounding conditions unsafe (e.g., poor housekeeping) or risky (e.g., welding on a container that has contained flammables).
- Health risks can take a long time to show their effects (e.g., silicosis or asbestosis), while safety risks usually have immediate effects (e.g., slip or fall).
- Safety hazards are often obvious (easily observed in most cases) and they are well understood; health hazards can be invisible and insidious as they can have delayed effects (latent effects due to chronic exposure unless acute effects are present).

⁹ Ali, W. (2018).

¹⁰ American Industrial Hygiene Association. (2018).

¹¹ Ibid.

¹² Ibid.

- Data collection and inferences are easier for safety hazards and are typically pre-set and understood metrics, such as descriptive statistics and discrete counts (e.g., safety observations, hazard identifications cards, incident rates, etc.). Whereas health hazard metrics are less obvious and rely on more inferential methods, such as descriptive and predictive exposure statistics.
- On June 10, 2021, the CRBOH and BCRSP signed a partnership agreement as they recognize the benefits of a collaborative partnership to improve safety and health in workplaces and the development of occupational health and safety practitioners at all levels.
 - The CRBOH and BCRSP will work cooperatively to:
 - Support the recognition and achievement of both occupational hygiene and safety certifications.
 - Identify opportunities for shared projects and collaboration to advance the occupational health and safety profession.
 - Exchange research data, aggregated organization data, and statistics to promote health and safety.
 - Since the partnership agreement, the two executive boards meet continuously and work on outlining the differences in their competency framework.

5. Importance of Occupational Hygiene

Often occupational health concerns are overlooked in typical management systems, leading to increased worker compensation claims due to occupational illnesses. This is evidenced in current statistics which imply a higher rate of fatalities due to occupational illness in comparison to injuries across Canada. Studies from the University of Regina¹³ (Tucker & Keefe, 2019), which looked at provincial Worker's Compensation Board (WCB) claims, the studies indicate that both gross fatality numbers and fatality rates per 100,000 workers are increasing in Canada. For instance, in 2017 there were a total of 252,625 lost time injuries, 326 injury-related fatalities, and 625 occupational disease-related fatalities (Tucker & Keefe, 2019). Additionally, the aggregate of occupational disease fatality rates from 2012-2017 were 3.62 per 100,000 workers, while the aggregate injury fatality rates from 2012-2017 were 3.17 per 100,000 workers (Tucker & Keefe, 2019). The incidence of occupational disease can be anticipated to increase as the workforce ages and long-latency diseases such as asbestosis and silicosis continue their trends. Furthermore, the development of new materials and processes introduce new health hazards to the workplace. Consequently, if this professional distinction between safety risk and health risk, is not made, it will lead to overlooked harmful health agents that progressively impact worker health negatively.

In light of these concerns, occupational hygienists are best equipped to identify, evaluate, control, and provide feedback to both workers and the public on occupational health hazards and should be the ones to professionally practice within this domain as "occupational health professionals", while the safety side is practiced by "occupational safety professionals". If uniting the occupational health and safety professions under a single umbrella is considered, work must be done to delineate competencies and practice between 'safety' and 'health' fields.

6. The Case of Occupational Exposure Limits (OEL) and Where They Come From

The assessment of occupational health risks is at the core of what Occupational Hygienists do and involves the observance of and analysis of exposure to the OELs. Canadian jurisdictions adopt (not necessarily implement immediately) or reference the Threshold Limit Value (TLV®) guidelines published by the

¹³ Tucker, S. & Keefe, A. (2019).

American Conference of Governmental Industrial Hygienists (ACGIH) into enforceable OELs. These TLVs are devised with the assistance of governmental industrial hygienists for use by industrial/occupational hygienists. It is notable that for the ACGIH, which produces the TLVs, all governmental industrial hygienists working on committees are accredited occupational/industrial hygienists (ROH or CIH). The ACGIH expressly discusses in each TLV and BEI handbook the scientific basis and requirements of use of the guidelines as follows (ACGIH, 2022):

- "The TLVs are guidelines to be used by professional industrial hygienists." (ACGIH TLV Book: Introduction to Chemical Substances)
- "ACGIH proposes guidelines known as TLVs® and BEIs® for use by <u>industrial hygienists</u> in making decisions regarding safe levels of exposure to various hazards found in the workplace." (TLV Book: Statement of Position)
- "These values are not fine lines between safe and dangerous concentrations and should not be used by anyone untrained in the <u>discipline of industrial hygiene</u>." (TLV Book: Special Note to User)

These are the terms of use of the ACGIH for the use of their TLVs, of which users of TLVs engage in a form of contract when applying these TLVs in the workplace. This demonstrates the importance that ACGIH places on occupational hygienists in the interpretation and application of the TLVs. When these terms and conditions are not met and required by governments who use the TLVs©, the governments jeopardize employers and the workers they serve to protect, while violating the terms of use of the ACGIH TLVs©.

Canadian Federal, Provincial, Territorial (FPT) Occupational Health and Safety legislations have all used the TLVs® published by the ACGIH, but their legislation does not meet the ACGIH's expressed terms and conditions regarding use *by a professional Industrial Hygienist*. Furthermore, this lack of adherence to ACGIH policy includes their own government inspectorates and without enforcement may extend to employers/workers/unions and/or their consultants. Persons who are not qualified professional Occupational Hygienists both consult and use the ACGIH-based OELs to evaluate workplaces in contradiction of the expressed ACGIH terms and conditions. As a direct result of the absence of title and scope of practice protections in occupational hygiene, many unaccredited service providers in health and safety in Canada do not possess the ACGIH TLV Book or the required "ACGIH Documentation of the TLVs" to understand the basis and limitations of the TLVs and therefore the legislated OELs. Such individuals, while possessing no qualifications in occupational hygiene actively promote themselves as Occupational Hygienists and, without consequence, may declare themselves on reports and business cards to be Occupational Hygienists.

7. The Case for Recognition and Title Protection of Occupational Hygiene in Canada

There are no regulated criteria for education, knowledge, ethics, conduct or skills for a person practicing Occupational Hygiene in Canada. Unlike the protected titles of Professional Engineer, Chartered Professional Accountant, Social Worker, Architect, Acupuncturist, Forestry Technician, X-Ray technician, Naturopath etc., anyone in Canada can call themselves an Occupational Hygienist. Neither the Health and Safety profession, the safety profession or the occupational hygiene profession are regulated or licensed anywhere in Canada's jurisdictions.

Occupational hygiene competency is assessed in Canada by the Canadian Registration Board of Occupational Hygienists (CRBOH), who offer two levels of accreditation based on the education and experience levels of candidates. The Registered Occupational Hygiene Technologist (ROHT[™]) designation is available for experienced-level practitioners, while the Registered Occupational Hygienist (ROH[™]) designation is available for experienced professionals. Both the ROHT and ROH exams provide

for the assessment of technical written communication by way of multiple-choice and long answer essay questions, while the ROH exam takes professional communication standards one step further by adding an oral exam based on situational questions to assess real-time problem-solving and communication skills of the candidates. The oral exam is only realized if the candidate has passed both the long answer and multiple-choice written exams.

To put this into perspective, the ABIH's CIH exam is strictly multiple choice and computer based. Given that the CRBOH has existed for over 30 years and has shepherded professional occupational hygiene practice in Canada while Canadian jurisdictions have failed to ensure an equal commitment to the public interest. The ANSI/ICE (American National Standards Institute/Institute for Credentialing Excellence) Standard 1100 Assessment Based Certificate Programs distinguishes between a training certificate and a professional certification, stating that holders of training certificates may not use letters or acronyms behind their names, nor may they use "certified" in describing their credentials¹⁴. An un-credentialed and self-declared "knowledgeable or qualified person" may endanger the health and safety of workers. The employers/workers seeking help in a field they know nothing about may be unknowingly hiring unqualified individuals claiming to be experts in these regards and who may underbid accredited professional consultant occupational hygienists. The competency of the "knowledgeable person" is legally ambiguous and is rarely assessed to enable the employer/workers who are looking for genuine professional OH assistance to find it.

Regulatory documentation commonly addresses the need for "expertise" in OH using broad terminology, such as a "knowledgeable person" or "competent person" or "qualified person". Canada is un-harmonized in the use of terminology, so the terms may vary between jurisdictions. Specific terms may be refined in regulatory guidelines which sometimes refer to recognized credentials, but regulatory guidelines, by-in-large remain unenforceable.

A few of Canada's health and safety jurisdictions have taken small steps in recognition. In British Columbia, guidelines to the health and safety legislation reference specific sections, such as Sections 6.4: *conduct inventory/sampling of ACM*; 6.6: *conduct risk assessments and activity classifications*; and 6.27: *waste removal procedures*, "...appropriate credentials for <u>qualified persons</u> include the following:

Certified industrial hygienist (CIH), registered occupational hygienist (ROH), certified safety professional (CSP), Canadian registered safety professional (CRSP), or professional engineer (P.Eng.), provided that the holders of these qualifications have experience in the recognition, evaluation, and control of asbestos hazards, or a combination of experience and education/training..."

Unfortunately, this BC guideline appears to overlook the distinct differences between the health versus safety specialties and accreditations, and instead establishes their equivalency. In this guideline a CRSP may conduct work corresponding to the specific health hazard sphere of expertise of the ROH.

The province of Nova Scotia further states in their *Disclosure of Information Regulations* under Section 82 of the Occupational Health and Safety Act:

1. In the Act and these regulations,

(b) "health professional" means a qualified physician, *industrial hygienist*, toxicologist, epidemiologist or nurse

Unfortunately, the greater public good is let-down in the majority of Federal/Provincial/Territorial (FPT) Jurisdictions who:

¹⁴ ICE 1100: 2019

- Refer to credentialed Occupational Hygienists in their Vendor of Record specifications, Policy and Procedures, Service Contracts, Government Job Descriptions, Orders issued by Inspectors,
- May refer to credentialed Occupational Hygienists in OSH guidelines, enforcement guidelines, bulletins, and manuals. (BC, Ontario),
- Call to the stand and face accredited Occupational Hygienists as qualified expert witnesses during prosecutions, and yet avoid mention and prioritization of Occupational Hygienists in health and safety regulations and support documents concerning occupational exposures in the workplace, and do not regulate the profession, to the detriment of the public interest and public protection.

A credentialed professional Occupational Hygienist prevents occupational injury and occupational disease and serves as a recognized competent expert for employers and workers. Since the title and practice of occupational hygiene have not been restricted by law, anyone, regardless of knowledge and competency, can call themselves an "Occupational Hygienist" or "Industrial Hygienist" in Canada. CRBOH and BGC were established to protect the public and aid employers facing the competency problem. Canadian jurisdictions in health and safety have failed to ensure the public interest in this matter. The fundamental question is why are competent, professional Occupational Hygienists not expressly mentioned in Canadian legislation as the foremost practitioners for health protection in the workplace, without equivalence? The answer must be provided to protect the Canadian workforce and ensure the greater public good

8. References

Ali, W. (2018). Differences Between Health Hazards And Safety Hazards. HSE Blog. Retrieved from: https://www.hseblog.com/differences-between-health-hazards-and-safety-hazards/

American Conference of Governmental Industrial Hygienists (ACGIH). (2022).TLVs and BEIs (ISBN: 978-1-607261-52-0). Cincinnati, OH: ACGIH

American Industrial Hygiene Association. (2018). Core Competencies for the Practice of Industrial/Occupational Hygiene (2018 Ed.). Retrieved from: https://www.aiha.org/publications/core-competencies-for-the-practice-of-industrial-occupational-hygiene

American Industrial Hygiene Association (AIHA). (2020). Competency framework: Understanding how ARECC works within occupational exposure assessment. AIHA University: Falls Church, VA. Retrieved from: https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Frameworks/Competency-Framework-Understanding-How-ARECC-Works-Within-Occupational-Exposure-Assessment.pdf

Blessing, R. (2019). Stress in the World of Industrial Hygiene: Is It Understood?. Occupational Health & Safety, May 2019. Retrieved from: https://ohsonline.com/articles/2019/05/01/stress-in-the-world-of-industrial-hygiene.aspx

Board for Global EHS Credentialing. (n.d.). What is the Certified Industrial Hygienist (CIH) Credential?. Retrieved rom: https://gobgc.org/cih/

Creason, T. (2018). What is the difference between industrial safety and industrial hygiene?. Q&A Presented by AD Safety Network, in Safeopedia. Retrieved from:

https://www.safeopedia.com/7/4080/environmental-health--safety-ehs/what-is-the-difference-between-industrial-safety-and-industrial-

hygiene#:~:text=Industrial%20hygienists%20use%20rigorous%20scientific,challenges%20identified%20b y%20industrial%20hygienists.

ICE 1100: 2019 - Standard for Assessment-Based Certificate Programs.

International Occupational Hygiene Association. (2008). Occupational/Industrial Hygiene Knowledge and Competency Requirements. Retrieved from: https://cdn.ymaws.com/saioh.site-ym.com/resource/resmgr/Docs/Knowledge_Competence____Final.pdf

Princeton University. (2023). Heat & Cold Stress. Princeton University Environmental Health & Safety. Retrieved from: https://ehs.princeton.edu/workplace-construction/occupational-health/heat-cold-stress

Tucker, S. & Keefe, A. (2019). 2019 Report on Work Fatality and Injury Rates in Canada. University of Regina. Retrieved from: https://www.uregina.ca/business/faculty-staff/faculty/file_download/2019-Report-on-Workplace-Fatalities-and-Injuries.pdf

Tulane University. (2021). What Is Industrial Hygiene? Protecting Workplace Safety. School of Public Health and Tropical Medicine. Retrieved from: https://publichealth.tulane.edu/blog/what-is-industrial-hygiene/

The Case for Occupational Hygiene Professional Practice and Scope Protection – CRBOH Position Paper FAQ

Since the CRBOH published their "Position Paper" we have received feedback to which we have decided to address through an attached FAQ. The FAQ will be updated regularly as more questions or comments are forwarded to the CRBOH. This Position Paper is the opinion of the CRBOH and our membership and not that of our stakeholders. The CRBOH stands firmly behind the opinions expressed in this document.

Definitions

Occupational	*Term used in the "Position Paper" * This is usually defined (and limited) by local
Disease	regulations. These are the statistics usually used to define fatality rates. These
	numbers would be limited to successful insurance claims.
Work Related	This number includes lost time and deaths due to interactions between
Disease	occupational exposures and other factors and emphasizes chronic diseases. Work-
	related diseases are one – to –two orders of magnitude more the occupational
	diseases. (World Health Organization)
Workplace	This could be both Occupational Disease as well as Work Related Disease, as not all
Illness	workplace illnesses are successful insurance claims. It is important to note as both
	terms will emphasize the need for recognition of occupational hygiene/industrial
	hygiene professionals.

Q1: How will the CRBOH be communicating the position paper beyond their membership?

A1: The CRBOH plans on sharing this publicly through their LinkedIn network, the CRBOH Website, through their strategic partners (if willing), through their Educational Institute Partners (NAR Fast Track Schools), and any other means that the board or members would like to share with.

Q2: The paper lists the professional practice of occupational hygiene in Canada as (ROH, ROHT, & CIH), then, it classifies an ROH, CIH at the professional level, while the ROHT at the practitioner level. When and if the scope of practice protection is developed, will an ROHT have any professional sign off privileges on hygiene work?

A2: This is still in the development stages, as the CRBOH works with the Board of Canadian Registered Safety Professionals (BCRSP) and the Alberta Society of Health and Safety Professionals (ASHSP) on competency outlines. For example, we can use the subject of indoor air quality. A ROHT would have the competency to develop a sampling plan, perform indoor air quality testing using the appropriate instrumentation, interpret results, but likely (based on personal experience levels), would not be able to complete a ventilation assessment or know all the calculations required to complete the ventilation assessment. Whereas a ROH could do all that in addition to the ventilation assessment. It is a bit of a

grey area, as it also depends on someone's level of competency in the subject area they're working in, background, educational experience, etc.

To answer the question, it is believed that both the practitioner and the professional would have "sign off" authority, that would be dependent on the level of competency obtained or achieved.

Q3: What are the new titles going to be for hygienists if/when title protection is granted?

A3: The CRBOH will not be changing the names of their respective titles. ROH and ROHT are trademarks in which we will keep. The ASHSP will be aligning with the CRBOH and calling them Occupational Hygiene Professional (ROH) & Occupational Hygiene Practitioner (ROHT).

Q4: What is CRBOH's plan of action to inform and influence public authorities for the recognition of our professional practice?

A4: The CRBOH's Future of the Profession Committee will meet and develop a plan of action that will include:

- Reviewing Provincial/Territorial processes for applying for a regulated profession.
- Continuing to provide public outreach to young professionals or students, with the intent to grow (strengthen) the profession.
- Attending conference or public events on behalf of the profession.
- Meeting with Colleges/Universities to discuss the profession and the potential for future programming.