Analysis of Occupational Safety Practices across Regional Campuses at Ohio University

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Master of Science

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This thesis titled
Analysis of Occupational Safety Practices across Regional Campuses at Ohio University

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ABSTRACT

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Analysis of Occupational Safety Practices across Regional Campuses at Ohio University

Director of Thesis: Diana J. Schwerha

As regional university campuses continue to increase in enrollment, centralized safety and health management structures may not be able to meet all of the demands. Currently Ohio University institutes safety in a centralized location in the Environmental Health and Safety Department at the main campus in Athens, where they help the regional campuses on an as needed basis. The primary objective of this study was to gain insight into managerial perceptions from the Environmental Health and Safety Department and from the regional campuses with regard to safety and health services and training received and/or needed. The goal was to identify the gaps between what is currently being done and what management perceives is needed. Results suggest that there are misperceptions within management at the regional campuses and between the regional campuses and the main campus at Ohio University. A lack of acknowledgement of formalized safety and health programs and appropriate incident recording indicate a need for process improvements. It is recommended that Ohio University should consider the development of a regional safety coordinator and the implementation of an established safety and health program for all campuses.
This thesis was written in dedication to my son, Peyton.
ACKNOWLEDGMENTS

First, I would like to thank my husband for his support and encouragement throughout this entire process. Second, I would also like to thank my parents for their assistance, support and encouragement. Next, I want to thank Jeff Campbell and EHS personnel for their generosity, support and assistance with this study. I also want to thank Brian Hoyt for his guidance in my undergraduate studies and for always believing in my potential. I would also like to thank my thesis committee Dr. Koonce, Dr. Ryan and Dr. Weckman for their time and consideration for my research. Lastly, I want to thank my thesis adviser and personal mentor, Dr. Schwerha. Without her support, assistance and advice, this thesis would not have been possible.
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CHAPTER 1: INTRODUCTION

In the United States, nearly fifty workers are injured every minute of a typical forty-hour workweek and approximately seventeen people ultimately die every day (OSHA, 2013). Workplace incidents are preventable through the utilization of safety and health programs; however, based on statistics provided by OSHA, approximately thirty-percent of all business practices do not include safety and health program development and implementation (OSHA, 2013). A lack of consistency, knowledge, perseverance and resources ultimately cause organizations to omit safety and health programs from workplace goals and objectives.

Safety and health programs consider every aspect of the organization in occupational safety for all employees, faculty and staff. Pertinent application of these specific types of programs value and utilize the opinions of all employees within the organization. Safety and health programs characteristically require the knowledge and resources that only a qualified safety professional can provide. Within any organization, a safety professional provides the strength, knowledge and uniformity specifications required for the enactment of an excellent safety and health culture. A resilient safety and health culture should be consistent throughout the entire organization and should provide essential contributions for safety and health program initiatives, communication and trust.

It is important for all organizations to provide pertinent information to employees and institute specific awareness of safety hazards within the
workplace. Specific rules and regulations necessitate the need for a safety and health program. Proper execution of safety and health programs promotes compliance and increases safety climate perceptions through safety awareness strategies and programmatic expectations (Komaki, Barwick, & Scott, 1978).

Successful safety and health programs require management commitment, proper communication and safety awareness across the organization, identification and prevention of workplace incidents, safety training, safety and health audits, and resource leverage (Cohen, Gjessing, Fine, Bernard, & McGlothlin, 1997) (Chaplin & Hale, 1998) (DeJoy D., 1985). Safety and health program element components are imperative to successful program implementation. Identified components are established in Table 1: Safety and Health Program Element Components. Each program element is reliant upon its individual components for completion and success (Chaplin & Hale, 1998).
Table 1: Safety and Health Program Element Components

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(Chaplin & Hale, 1998)

The need for this research was identified through the recognition of expressive concerns from Ohio University faculty and staff. It was acknowledged that the regional campuses currently operate independently from the main campus and it was suggested that current processes need to be analyzed for recognition and improvement strategies. The establishment of current safety practices will provide interpretive insight into next steps for the Environmental Health and Safety (EHS) department and the regional campuses.

The purpose of this study was to identify the gaps between what is currently being done and the perceptions of what is being done through management attitudes and beliefs at the regional campuses and EHS at the main
campus at Ohio University. Established research questions provided assistance in the achievement of the anticipated objectives within this study:

- What types of safety and health practices are commonly performed by regional campuses, and which practices are not?
- What types of safety and health practices would benefit from remaining on-site rather than being centralized in one location?
- How is information leveraged across regional campuses when there is not a dedicated safety professional or department on-site?
- What processes require adjustment for the provision and implementation of a current safety and health program?

Ohio University currently has five main regional campuses that operate independently from EHS on the main campus. These campuses include Chillicothe, Eastern, Lancaster (Pickerington), Southern (Proctorville), and Zanesville. The purpose of this research is to examine current practices for safety initiatives within these particular regional campuses; to identify important factors that influence safety needs, and; to develop a model that incorporates the superlative way to implement a safety and health program with the incorporation of knowledge leverage across the organization while being cost efficient.
CHAPTER 2: LITERATURE REVIEW

2.1 Need For and Components of Safety and Health Programs

Safety and health programs are vital components for the assurance of advantageous safety measures and organizational success. Accurate information, informed design, precision and accuracy are critical to ensuring the success, and dedication to successful program execution and quality. For safety and health programs, it is imperative to consider the importance of involvement from all levels of the organization to ensure overall quality of the program (Boylston, 1990) (Griffin & Mathieu, 1997) (Neal & Griffin, 2006).

Successful implementation of any safety and health program relies on management commitment, performance clarification, program expectations and efficient resources (Komaki, Heinzmann, & Lawson, 1980). To promote change and endorse motivation Hale, Guldenmund, VanLouenhout, and Oh (2010) defined four characteristics to assist in the initiation of change: ingenious support and guidance; inspiration and engagement for knowledge; management training and education, and; organized, planned and vigilant execution.

2.1.1 Safety Program Initiatives

Successful safety and health programs require adequate preparation and awareness to enhance program effectiveness. DeJoy (1985) assigned the following recommendations for safety program initiatives:

- A competent person should complete all incident investigations (DeJoy D., 1985);
• Incident investigations should be summarized and provided to all relevant personnel (DeJoy D., 1985);

• Any and all safety messages should be carefully developed and generated for simple comprehension and fortitude to ensure safety awareness logic for all relevant employees (DeJoy D., 1985);

• Incident reports should be submitted through a formalized process (DeJoy D., 1985);

• Management training should provide all necessary qualifications and definitiveness in the recognition and importance of diagnostic evaluation and interpretation to any and all safety issues or concerns (DeJoy D., 1985);

• Management systems should understand and distinguish the implications that any and all incidents are preventable, which is indicative of the justification for safety programs into the total management system (DeJoy D., 1985) (Biggs S. E., Banks, Davey, & Freeman, 2013).

These recommendations offer specific solutions that can be easily distinguished and validated for content and accuracy. Incorporation of these objectives into organizational desires provides valuable content and structure for successful program execution.

2.1.2 Formalized Safety and Health Programs

Formal criteria are used to determine the definition of what is safe work, the knowledge requirements of safe work and any required training techniques.
(Vojtecky & Schmitz, 1986). One last justification for formal safety and health programs is the lack of program evaluations through informal procedures (Vojtecky & Schmitz, 1986). Continuous improvement efforts and a safe work environment rely on the effectiveness of all imperative components and evaluations for continued success and overall safety. If safety and health programs are not formalized, program evaluations cannot be completed and continuous improvement is unattainable.

2.1.3 Safety and Health Program Elements

Safety and health programs need to be organized so that they can efficiently address the technical regulations that are put forth in applicable standards. With respect to safety and health programs, the element with the utmost importance is the recognition for the desire of program implementation within the organization (Boylston, 1990). Organizational needs may only be acquired through the utilization of management leadership and the receipt of their active support for the program (Boylston, 1990). The developmental process should incorporate the viewpoints of every employee who would ultimately be affected through implementation of the program (Boylston, 1990).

Established elements of a program include management commitment, supervisory participation, safety training, maintenance, recordkeeping, continuous education and safety personnel coordination (Cohen A., 2013). These elements are imperative to proper execution and placement of program initiatives within the organization.
2.1.4 Contributing Factors and Characteristics of a Successful Safety and Health Program

Contributing factors and characteristics of a successful safety and health program resemble those factors associated with an efficacious organization. Management commitment is a vital component in safety and health programs, and it is imperative to obtain active support from management and the employment of a full-time safety officer (Cohen A., 1977).

- A safety officer retains the necessary qualifications and aspirations to leverage their knowledge learned with management to increase their participation and commitment to organizational issues for safety (Cohen A., 2013) (Smith, Cohen, Cohen, & Cleveland, 2013);

- The safety director holds the responsibility to communicate with management and all relevant employees with respect to safety concerns and initiatives (Cohen A., 2013) (Smith, Cohen, Cohen, & Cleveland, 2013);

- Open communication is an imperative component for the promotion and allowance for all employees to express their safety concerns free from obligation and fear of avoidance or rejection (DeJoy D., 1985).

Among other responsibilities, the safety director may develop a committee to provide assistance in the developmental process of the safety and health program. Safety committee members assist the safety director through the provision and application of safety training and education for all new employees.
of the organization. In some cases, the committee may also contribute their own knowledge to the safety director in the initiation and performance of incident investigations to identify areas in which the organization can improve their compliance for safety.

Cohen (2013) states that safety program success can be recognized through established safety committees, proper institution of incident investigations, up-to-date compliance with rules and regulations, daily safety observations and extensive safety training. In other words, the utilization of a qualified safety director, overall commitment of all levels of management and the proper formulation of a safety committee are all imperative components, factors and characteristics for a successful safety and health program (Smith, Cohen, Cohen, & Cleveland, 2013).

2.1.5 Supporting Evidence of Successful Safety and Health Programs

Supporting evidence of successful safety and health programs may be defined through informed design and applicable criteria. Cohen (1977, 2013) defined seven basic criteria in which safety and health program success may be measured:

1. Strong exhibition of management commitment for their immediate support and participation in safety activities (Cohen A., 1977) (Cohen A., 2013);
2. Demonstration of open lines of communication throughout the entire organization for all safety issues and concerns (Cohen A., 1977) (Cohen A., 2013);
3. Establishment of a workforce that is mostly impenetrable to employee turnover (Cohen A., 1977) (Cohen A., 2013);

4. Adequate environmental conditions for regular housekeeping procedures (Cohen A., 1977) (Cohen A., 2013);

5. Management responsibility with respect to job placement and selection (Cohen A., 1977) (Cohen A., 2013);

6. Recognition for the importance of safety training toward compliance and occupational safety (Cohen A., 1977) (Cohen A., 2013);


Inclusion of these seven criteria enhances program capability and distinguishes between successful and unsuccessful program components.

2.1.6 Barriers to a Successful Safety and Health Program

Some organizations choose to not implement a safety and health program due to specific barriers that may be present in their specific situation. Barriers identified by OSHA indicated that safety and health improvements establish guidelines and accrue costs that may prevent the organizations’ acknowledgement of any necessary modifications (OSHA, 2013). Associated costs for safety interventions present a barrier when the organization does not want to risk spending money for safety alterations or programs that may not be a
guaranteed improvement. Barriers are also present when change is necessary and the organization does not essentially want to take responsibility to implement change due to lack of resources or experience (OSHA, 2013). In some circumstances, geographical barriers might exist that prevent utilization of specific resources required for implementation. Program enablers have the potential to enhance program outcomes and establish comparative benefits. Program barriers resist change and develop the potential for program failure. Fleming and Lardner (2002) defined program enablers and barriers to successful safety and health programs and are identified in Table 2: Enablers/Barriers to Successful Safety and Health Programs.

Table 2: Enablers/Barriers to Successful Safety and Health Programs

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2.2 Safety Climate and Culture

Safety climate and culture as a subset of organizational culture emphasizes the importance of safe behaviors and organizational safety (Nielsen K. J., 2014). Safety climate is defined as individual perceptions and reflections based upon personal attitudes and opinions toward safety (Wu, Liu, & Lu, 2007) (Zwetsloot, Aaltonen, Wybo, Saari, Kines, & Beeck, 2013). Wu, Liu, and Lu (2007) describe safety climate as employees’ perceptions that eventually influence safe behavior, which is directly correlated to the safety manager and their responsibilities. Wu, Liu and Lu (2007) also identified organizational and individual factors that influence the resolution of a safety climate. Organizational factors acknowledged were factors associated with size, safety management systems and committees, and location (Wu, Liu, & Lu, 2007). Individual factors recognized included gender, age, title, incident experience and safety training (Wu, Liu, & Lu, 2007).

To obtain and maintain a successful safety climate, it is imperative to place emphasis on the specific risks within the organization (Zwetsloot, Aaltonen, Wybo, Saari, Kines, & Beeck, 2013). Neal, Griffin and Hart (2000) demonstrated that the acquisition of safety performance measures must follow a secure organizational and safety. The integration of positive and constructive reinforcements, attitudes and beliefs into the safety climate process and the elimination of negativity will enhance safety culture transitions and motivate change (Taylor & Francis Ltd., 1991).
A culture of safety within an organization provides promotional efforts and increased awareness for safety protocols, policies and procedures. Safety climate ultimately sets the tone for specifications and importance of safety throughout the entire organization (O'Toole, 2002). A strong safety culture implies positive workplace assertiveness, assessable goals and objectives, policies and procedures and training throughout the entire organization (O'Toole, 2002). Some basic elements in consideration to safety climate and culture includes the right for every individual to work within a safe environment, the designation of responsibility for personal safety, and the provision for protection and governance to other workers within the organization (OSHA, 2013).

A strong culture of safety is reliant upon management desires and their capability to adjust to necessary changes and incorporate specific value sets for safety climate within the organization (Hale A., Guldenmund, Van Louenhout, & Oh, 2010). Optimum occupational safety and health practices are dependent upon the allegiance and the tenacious attitudes and behaviors of the management force and the dedication to the development of a strong culture of safety (Geminiani, Smallwood, & Fee, 2013).

Hale (2000) described safety culture as being a part of organizational culture with momentous influence on safety behaviors. This specific type of influence has a substantial impact on all aspects of safety within the organization (Nielsen K. J., 2014). Stability of a strong safety culture can be measured through observations and expressive enthusiasm toward knowledge and
education (Geminiani, Smallwood, & Fee, 2013). This implies that proper utilization and development of a strong safety climate and culture leads to organizational success in which safety takes precedence over all other elements.

2.2.1 Safety Perceptions, Attitudes and Behaviors

Safety policies, programs and procedures are often established through an analysis based on safety perceptions and reactions to safety requirements. Based on this concept, safety programs are generally recognized through the attitudes and behaviors of the affected individuals and typically do not define effective remedies for successful safety program implementation. Employees and management perceptions reflect personality and individual behavior that should be considered when decisions are made toward safety and health program design. Interventions and controls are engineered to reflect these behaviors and, in turn, focus on compliance for state and federal regulations to compensate for a lack of focus or understanding of the core safety issues (Bailey, 1993).

Safe behaviors are sufficiently analyzed through the institution of a baseline for precision and accuracy in safety and health program attainment and execution. An established baseline facilitates appropriate guidelines that may be used in the design process of a successful safety and health program (Moraru, Babut, & Cioca, 2011). The validity of baseline measurements are identified through safety observations conducted by management and through an acknowledged list of critical safety comportments that would inhibit successful
safety and health program execution (Moraru, Babut, & Cioca, 2011). Baselines are beneficial in the establishment of feedback procedures and the incorporation of behavior shifts (Fleming & Lardner, 2002).

2.2.2 Approaches to Safety Climate and Culture

Cultures of safety are not immediately acquired and must be a part of total system integration (Biggs S. E., Banks, Davey, & Freeman, 2013). A culture of safety is derived from extensive learning over time and the consideration of all employees and management knowledge and interpretation (Biggs S. E., Banks, Davey, & Freeman, 2013) (DeJoy D., 1985). Safety culture must be influenced through management motivation and should flow through the entire organization from a top-down approach (Biggs S. E., Banks, Davey, & Freeman, 2013).

2.2.3 Employee Involvement

It is important to involve every employee in the improvement process. It is imperative that extensive focus be placed upon employee observations into the development of organizational safety culture. It has been suggested that without employee involvement, safety culture does not have the capacity to be improved upon (Ryan, 2009).

2.2.4 Safety Climate and Incidents

When employee perceptions are low, their attitudes, beliefs and behaviors will decrease along with their aptitude to comply with rules and regulations. Neal and Griffin (2006) suggest that a decrease in compliance, caused by poor perceptions will increase incidents in the workplace. This specifies the
importance of safety climate initiatives and the establishment of a resilient safety climate and culture.

A sustainable safety climate ensures group participation and compliance specifications toward safe or unsafe behaviors (Neal & Griffin, 2006). Group safety climate influences safety motivation and identifies expectations for safety and health programs (Neal & Griffin, 2006). When organizational beliefs and justifications are made relevant and regarded with high importance, the workforce responds with safe behavior which, in turn, leads to a reduction in workplace incidents (Neal & Griffin, 2006).

A reduction in workplace incidents is deliberated through personal employee analysis for risk identification and performance perceptions. There is a direct correlation between workers’ involvement and responsibility for their own safety and individual risk perceptions (Flin, Mearns, O’Connor, & Bryden, 2000). It has been validated that individual perceptions that are indicative of a positive safety climate lead to advanced efforts in participation in safe activities (Neal & Griffin, 2006). Employee involvement ensures the values associated with risk perception are reflected through safe job performance and participation in safe work activities.

2.2.5 Safety Climate Perceptions

Neal and Griffin (2006) suggested that improvements in safety should focus on change within the work environment to enhance motivation and promote participation in safety activities. This is because misinterpretations occur with and
through organizational levels in accordance with individual perceptions, which influence individual actions and behaviors (Bailey, 1993). Griffin and Mathieu (1997) established that perceptions of individuals in a hierarchical setting directly influence the perceptions of individuals at other levels of the organization.

Rules and regulations within organizations reflect their value and belief systems, with the incorporation of various top-down approaches. Griffin and Mathieu (1997) defined four guiding principles for organizational climates within hierarchical settings:

1. The values and norms associated with management perceptions transfer to lower levels of the organization. This association implies that employees typically internalize and retain the perceptions of their management team(s) (Griffin & Mathieu, 1997);

2. The overall behavior of the leaders ultimately has a valuable impact on all individuals within the organization (Griffin & Mathieu, 1997).

3. Teamwork and group settings influence individual behavior (Griffin & Mathieu, 1997);

4. The ingrained organizational climate promotes the value for individual motivation, education, knowledge and training (Griffin & Mathieu, 1997) (Neal, Griffin, & Hart, 2000).

2.2.6 Safety Perception Surveys

Safety perception surveys are an excellent and resourceful tool for the attainment of employee insights of workplace procedures. These particular types
of surveys focus on the safety aspect of all possible scenarios within the workplace and aim to provide interventions for safety improvement measures (O’Toole, 2002) (Ryan, 2009) (Wu, Liu, & Lu, 2007). Employee involvement within the developmental process for safety and health programs ensures complete acceptance and familiarity of specific behaviors and techniques in which employees perform their jobs (O’Toole, 2002) (Ryan, 2009) (Wu, Liu, & Lu, 2007). In some cases, a safety and health program is better utilized when the program is applied to specific job scenarios and objectives.

Safety perception surveys analyze every work area within an organization to ensure safety compliance and safe work practices for every employee (MacLeod, 2006). Safety perception surveys are utilized when the need to define perceptions exist when the presentation of opportunities for improvement of other analyses cannot capture such perceptions (Ryan, 2009). Safety perception surveys own the potential to improve the safety culture within the organization and enable employees to express their opinions and provide for the possibility of future improvements and interventions (O’Toole, 2002). Utilization of safety perception surveys assists in the identification of the job and organizational factors that may be acquired through safety and health audits. Safety perception surveys also enable quantification and statistical analysis to human factors that audits to do not typically identify (Ryan, 2009).

Employee safety perception surveys are valuable tools utilized for generalizations of employee attitudes within the organization. Perception
surveys assist management in the establishment of a visual interpretation of the safety culture within the organization (O'Toole, 2002). When an organization decides to conduct safety perception surveys, they should identify specific purposes for implementation and define explicit outcomes for the benefit of the organization. The overall purposes for safety perception survey implementation are the identification of what the organization hopes to achieve, employee participation, designation of completed results and what implications the survey will ultimately have on the organization (Ryan, 2009).

2.3 Proactive Approaches in Sustaining a Successful Safety and Health Program

Safety culture and cultural maturity reflect an organization's well-being and overall readiness for safety and health program design and implementation (Fleming & Lardner, 2002). Cultural maturity is defined through safety culture elements which are held in high regard and of the utmost importance (Fleming & Lardner, 2002). These specific elements pertain to management commitment, trust and communication (Fleming & Lardner, 2002). When an organization has not yet reached cultural maturity, they risk safety and health program failure caused by lack of cohesiveness within their safety culture.

Fleming and Lardner (2002) also suggested that behavioral safety program implementation may be achieved more easily through worker preparedness and active safety committees. Safety and health program design should always consider the needs of the organization, which will also ensure program success (Fleming & Lardner, 2002). Adequate resources, especially
staffing resources are an essential component for program success and implementation (Fleming & Lardner, 2002). Fleming and Lardner (2002) also recommend appropriate staffing and scheduling strategies for workload requirements.

Successful organizations utilize proactive approaches for assistance in the identification and anticipation for issues of safety and security (Cohen, Gjessing, Fine, Bernard, & McGlothlin, 1997). Organizations who proactively seek to eliminate hazards prior to their initiation display responsibility and integrity for safety expectations within the workplace. Developed safety and health programs provide reference tools and measurement analysis to establish a basis for organizations who are proactively seeking alternatives and interventions for safety compliance. The institution of proactive approaches for sustainability of successful safety and health programs is dependent upon successful program elements, which include management commitment, communication, safety awareness, workplace incidents, safety training, program evaluations, resource allocation, and safety and health audits.

2.3.1 Management Commitment

Control efforts for safety and health require assurance of management commitment as a key component in the determination of worksite analysis and safety protocols (Cohen, Gjessing, Fine, Bernard, & McGlothlin, 1997). Effective management commitment demonstrates the proper usage of policy statements in terms of maintenance and preservation of best practices for safety measures
Particular policies should include a safe work environment for all employees with the expectations of full cooperation from each employee and the designation of lead roles associated with safety maintenance and preservation.

It is the responsibility of management to define authority within the organization on the basis of singular leadership efforts for the assurance of employee safety and health (MacLeod, 2006). The responsibility of safety, for an entire organization, should not be delegated to individuals who may lack appropriate knowledge and execution. It is imperative to elect one individual to take complete responsibility for the safety of all individuals within the organization (Boylston, 1990).


Communication efforts are designed through extensive outreach and assistance for organizational safety issues (Cohen A., 1977) (Cohen A., 2013). Management responsibility also revolves around organizational capacity to assign and employ a well-respected safety officer (Cohen A., 1977) (Cohen A., 2013). Through the appointment of a safety officer and continued management commitment, successful program implementation is dependent upon hazard
recognition diplomacies, safety training and various incident prevention techniques (Cohen A., 1977) (Cohen A., 2013). Thorough implementation, program assembly and design is reliant upon management support and communication (Moraru, Babut, & Cioca, 2011).

2.3.2 Communication

Effective safety and health programs require appropriate communications through the organization. Communication in the workplace is a vital component in consideration to safety efforts and each job within the organization must be efficiently communicated to all managers, supervisors, and employees (Boylston, 1990). Communication is utilized as a tool to ensure safety concerns take precedence over other organizational constituents.

Excellent communication skills are required for success in any organization. Communication is imperative in situations in which face-to-face meetings cannot be established. With respect to safety initiatives and programs, communication provides a foundation for success that cannot be overlooked. It is important for all personnel to feel comfortable during any situation to communicate their safety concerns to management or the safety director.

Communication, trust and empowerment between management and employees are key components to successful safety and health programs. Improved communications and management participation in safety activities supports the reduction of the administrative distance between managers and employees (DeJoy D. M., 1985). This increase in administration separation
enables management to place emphasis on more pressing matters such as incident investigations, environmental control and housekeeping (DeJoy D. M., 1985). This emphasis enables management to justify and corroborate the validity of these specific factors and regard them with high importance (DeJoy D. M., 1985). Endorsement and awareness for these particular factors place prominence on management and their commitment to safety and opens up a necessary line of communication between management and employees (DeJoy D. M., 1985).

2.3.3 Safety Awareness

Awareness for safety hazards and organizational behaviors is a key factor in the establishment of a safety and health program. Similarly, safety awareness provides a mechanism for the prevention of incidents among employees in the workplace (Boylston, 1990). The importance of safety awareness within the organization promotes specific efforts for the provision of education and training resources to employees in an attempt to increase overall awareness of safety implications (Boylston, 1990). Increase in awareness has been shown to decrease the occurrence of workplace incidents.

2.3.4 Workplace Incidents and Incident Investigations

Boylston recommends four specific and fundamental activities that may be utilized for the prevention of workplace incidents (1990). He suggested that the development of engineering controls should be validated in specificity towards elimination and the reduction of workplace incidents (Boylston, 1990). The
second recommendation relies on management preparation and the implementation of safe work practices (Boylston, 1990). The third requirement provides justification for the development of education and training programs (Boylston, 1990).

Geminiani, Smallwood, and Fee identified three main objectives for safety inspection performance: hazard identification, corrective action, and performance measurement (2013). DeJoy recommends that safety inspections and hazard audits be conducted by any supervisor who may also be responsible for corrective actions and safety training (1985). Ryan (2009) suggested that a thorough incident investigation will uncover the ideology that, in most cases, employees are typically aware of the hazard prior to the incident and could have prevented the incident occurrence. This is indicative of the lack of safety initiatives and proactive approaches for the prevention of workplace incidents and the execution of safety training.

2.3.5 Safety Training

In every organization, training is an important component in organizational success and proper implementation of intended design for system performance. It is imperative for workplace safety initiatives that each employee along with their immediate supervisors understands performance efforts with their assigned task(s), understand how their task(s) should be performed and should not deviate away from their assigned task(s) as specified through management (Boylston, 1990).
Training programs should establish current safety and health trends and specify techniques that can be used to recognize potential incidents in the workplace (Boylston, 1990). OSHA has established five classifications in which training can be maximized in accordance to effectiveness and efficiency (2013):

1. All trainees should acquire knowledge and understand the premise behind the relevant training program (OSHA, 2013);
2. Provided information for the program should be organized for maximum efficiency and usefulness (OSHA, 2013);
3. Design opportunities for hands-on experimentation in a timely and proficient manner (OSHA, 2013);
4. Ensure that feedback is given to trainees in a timely and proficient manner (OSHA, 2013);
5. A well-established training program should incorporate various types of learning styles into the educational experience (OSHA, 2013).

Individuals involved with safety should recognize the importance for training and distinguish the potential that training has on all aspects of safety (Hale A., 1984). Immense potential for safety training often interferes with careful evaluations which inhibit full potential to be realized (Hale A., 1984). Safety training success is reliant upon the thoroughness of the preparation and the determination of present consequences for unsafe behaviors (Komaki, Heinzmann, & Lawson, 1980).
A direct correlation between training and injury does not exist (Johnston, Cattledge, & Collins, 1994). Johnston, Cattledge, and Collins (1994) also recommend that other factors influence the relationship between training and injury. These factors include both individual and organizational factors; individual factors consider dynamics such as motivation, usefulness, attitudes and relevance to job transitions and acquired knowledge (Johnston, Cattledge, & Collins, 1994). Organizational factors pertain to administrative absence and lack of support for the strengthening of educational achievements (Johnston, Cattledge, & Collins, 1994).

Johnston, Cattledge, and Collins (1994) suggest that any organization that actively supports safety training and advocates safety awareness typically retain four main components, which includes a needs assessment, program development, goal setting, and knowledge of results through feedback procedures. The primary goals for safety training, in most instances, corroborate with incident prevention tactics for the enhancement of safer working conditions (Johnston, Cattledge, & Collins, 1994). In lieu of the fact that incidents are rare, the focus for safety training tends to examine training effort in terms of knowledge, attitudes and behaviors (Johnston, Cattledge, & Collins, 1994).

2.3.6 Training Program Evaluations

Safety and health training, as provided through a comprehensive training program is a vital component in the overall goal of reducing occupational injury and illness (Vojtecky & Schmitz, 1986). The capability of safety and health
training programs with respect to occupational safety is of the utmost importance which provides the necessity to evaluate program capacity and effectiveness (Vojtecky & Schmitz, 1986). The primary goal for safety training is to prevent workplace incidents and occupational injury (Johnston, Cattledge, & Collins, 1994). Because of this, effective evaluation of all training programs is necessary and vitality important (Johnston, Cattledge, & Collins, 1994).

2.3.7 Resource Allocation

Program evaluation provides justification and validity with respect to appropriate allocation of resources (Vojtecky & Schmitz, 1986). The amount of resources and the number of employees trained is dependent upon the specific program, organizational needs and associated costs (Fleming & Lardner, 2002). Leverage of resources and knowledge throughout an organization is essential for the provision of safety analysis and interpretation. Conservation of resources with respect to safety awareness enables managers to designate those resources that are utilized for safety and to identify the overall influence that safety measures impose on all employees (O’Toole, 2002). Technological advances increase the advantages for utilization of leveraging resources across multiple locations and decreasing time and money.

2.3.8 Safety and Health Audits

Safety and health audits, as they pertain to successful safety and health programs, are dependent upon various goals and objectives in the determination of a safer work environment. Specific goals for safety audit procedures include
maintenance in the provision for a safe and healthful work environment; identification of unsafe working conditions and precarious work practices; safety awareness improvement; participatory compliance, and; the prevention workplace incidents (Boylston, 1990).

The assignment of responsibility for safety and health audits is important and is reliant on managerial commitment and support. The achievement of a successful safety and health audit requires managers to assume overall responsibility and assign other specific responsibilities to all other levels of the organization (Boylston, 1990). Assigning responsibility necessitates the need for appropriate training and discussion motivation for effectiveness and efficiency (Boylston, 1990). Upon completion of a safety and health audit, it is imperative that managers follow up on the specific results and outcomes acquired through the audit to initiate follow up activities for the reduction and prevention of any and all established risks (Boylston, 1990).

2.4 Process Improvement

The assurance of excellence and success in safety and health programs is dependent upon the actions of managerial staff and safety personnel. Petersen defined and established six steps required for excellence in the organization for continued process improvement (2005):

1. Demonstration of a culture of safety as a core value through proactive assessments performed by supervisors (Petersen, 2005);
2. Management should be involved as key players of process improvement opportunities and institutions (Petersen, 2005);

3. Managerial staff should visibly display safety execution (Petersen, 2005).

4. Encourage employee participation in daily activities for safety performance measures (Petersen, 2005);

5. Enforce flexibility to ensure employee participation and offer opportunities for improvement in consideration for staff capabilities and opinions (Petersen, 2005);

6. Employees think positively when the organization continuously examines opportunities for improvement (Petersen, 2005).

Safety is a continuous process improvement effort and requires management commitment, communication and awareness. For a safety and health program to be successful, it is important to establish guidelines for continuous improvement and sustainability to ensure the continuation of safety efforts.
CHAPTER 3: METHODOLOGY

3.1 Survey Development

The survey used in this study was based on equivalent ideologies in the obtainable literature for successful safety and health programs for interpretation of current occupational safety practices at Ohio University Regional Campuses. The questions were developed to establish: 1) a baseline for the current status of safety programs at regional campuses and 2) a characterization of what regional campuses would want in a safety program. A pilot survey was completed by several individuals from Campus 1 and the questions were edited based on their perceptions of the survey content.

3.1.1 Finalized Surveys

For the complete analysis, two finalized surveys were developed and distributed. The first survey was specific to regional campus perceptions and the second survey was specific to Main Campus EHS department perceptions. Both surveys consisted of two sections with various sub-sections included in Section II. Section I included demographic information (10 questions), and Section II included perceptions about current safety practices (a total of 46 questions). Section II included these sub-sections: programmatic activities (10 questions), staffing (10 questions), training (3 questions), interventions (3 questions) and safety climate (20 questions). Finalized surveys can be found in Appendices A and B.
3.2 Work Safety Scale

Two subscales in the Work Safety Scale, developed by Hayes, Perander, Smecko, and Trask (1998) were utilized in this study. The Work Safety Scale incorporates five sub-sections but for the purpose of this study only two sub-sections were used: Management Safety Practices and Safety Programs (Policies). Information obtained through this scale is useful to identify management perceptions of a current safety climate. Copyright clearance was acquired and the completed Work Safety Scale can be found in Appendix C.

3.3 Survey Participants

Survey participants were identified through the examination of the organizational charts and the recognition of Campus Deans/Administration, Facilities Management, and Safety Personnel. Survey respondents were not paid for this experiment and all participation was on an informed-consent basis. Original lists of contacts identified four to five individuals at each regional campus. Regional Campus Deans received an invitation letter through e-mail which described the purpose of the research and provided a list of individuals that would be contacted at their campus. Upon the receipt of approval from the IRB and each Regional Campus Dean, the rest of the identified participants were e-mailed using the same invitation letter and description.

3.4 The Interview and Data Collection Process

Upon receipt of communication from voluntary participants at each campus, interviews were scheduled and conducted. Surveys were sent to the
respondents at least one week prior to the interview and the meetings lasted approximately one hour. Initial contact was made with four to five individuals at each campus, approximately ten individuals did not respond; therefore, a total of twenty-two individuals participated in the survey. Interviews were not conducted for four of the individuals due to scheduling conflicts and time constraints.
CHAPTER 4: RESULTS

The overall approach and assessment of the results focused on the relationship between the regional campuses and main campus EHS. The goal was to establish and identify where specific gaps and misinterpretations exist for the provision of future intervention research. Detailed analyzes focused on the specific components of the survey content to obtain appropriate information for the attainable goals of this study. Emphasis was placed on questions related to services received, services needed, training received, existing safety and health programs and safety climate and work safety scale perceptions.

4.1 Demographics

Participants were randomly selected with emphasis focused on managerial personnel who included Deans and Administration, and any persons responsible for safety in their respective campuses. The mean age of the respondents was 51 years (with a std. dev. of 8.5 yrs.) with a mean employment history of 104 months (approx. 8.5 yrs. with a std. dev. of 8 yrs.). The population distribution was 73% male and 27% female. Most participants (82%) had never experienced a workplace injury and more than half identified not having an on-site safety supervisor. A detailed table of demographics from every campus is included in Appendix D.

4.2 Services Received

The recognition of services received within the regional campuses and the perceptions associated with EHS provide a baseline opportunity for analysis and
identification of the existence of gaps. The survey distributed to the regional campuses asked the following question: in the past year, this campus has received assistance in one of more of the following areas (a list of EHS services was given). The survey distributed to the EHS department similarly asked: in the past year, this campus has provided assistance to the regional campuses in one or more of the following areas (EHS services). EHS was also asked to specify which campuses to which they had provided assistance.

EHS perceived that they had provided assistance to at least one regional campus in all of their eleven areas of expertise. Analysis indicated that at least one regional campus had received assistance in most of the areas but excluded Ergonomics and General Safety Concerns. See Figure 1: EHS Perceptions – Provided Assistance to the Regional Campuses for specific details.
EHS personnel identified providing assistance to Campuses 2, 3 and 5; however, only Campus 5 recognized the receipt of their assistance within the specified areas. Other EHS personnel specified only providing assistance on an as needed basis or when requests are submitted. Appendices E and F provide detailed graphs for each individual campus. The following bullets represent campus perceptions and acknowledgement of assistance from EHS:

- Campus 2 – All participants (a total of 3) recognized receiving assistance from EHS in Fire Safety, Hazardous Materials and Occupational Safety.
- Campus 3 – One of two participants provided recognition for assistance in Sanitation and Pest Control.
• Campus 4 – None of the participants (a total of 6) recognized receiving any assistance from EHS.

• Campus 5 – One out of four participants recognized receiving assistance in Biosafety, Environmental Safety, Fire Safety, Industrial Hygiene, Infectious Waste, Laboratory and Radiation Safety.

• Campus 6 – None of the participants (a total of 3) recognized receiving any assistance from EHS.

4.3 Services Needed

The acknowledgement of services needed by the regional campuses, whether the service is assistance or training, is an important consideration for this study. The identification of gaps is established through EHS perceptions of what they provide and regional campus perceptions of what they receive yet still need or desire is noteworthy in the recognition of potential and existing gaps. Regional campuses were asked the following question: in the past year, this campus has had a need or a desire for training (or assistance) in one or more of the following areas (a list of EHS services was given). EHS was asked: in the past year, this campus has received a request (from the regional campuses) for training in one or more of the following areas (EHS services). EHS was also asked to identify all campuses from which they had received requests.

EHS perceived that they had received requests from the regional campuses for training in Biosafety, Industrial Hygiene, Infectious Waste, Occupational Safety, and Laboratory and Radiation Safety. EHS also perceived
the receipt of specific requests from Campuses 2, 3 and 5 within the recognized areas of expertise. Campus 2 recognized a need or desire for training in General Safety Concerns; however, EHS did not acknowledge the receipt of that request. Campuses 3 and 5 did identify the need for training in the specified areas provided by EHS; however, Campus 3 also recognized the need for training in all respective areas. At least one representative from each campus identified a need or desire for training in all EHS service areas but EHS only acknowledged requests for training in five out of eleven categories. See Figure 2: EHS Perceptions – Requests for Training from the Regional Campuses. See Appendices G and H for detailed graphical representation of individual campus perceptions.
In the acquisition of needs from each campus, EHS was also asked to recognize areas in which they felt they needed assistance to provide better services to the regional campuses. Regional campus representatives and EHS personnel agreed and acknowledged a need or desire for assistance in all specified areas. See Figure 3: EHS Perceptions – Need or Desire for Assistance. See Appendices I and J for descriptive visual interpretations for campus perceptions.

Survey participants established and recommended their own interpretations in their needs for assistance. A participant from Campus 5
suggested a semi- or annual OSHA training session both in consideration for
general work practices and student workers in occupational safety hazards.
Another participant from Campus 5 specified the unnecessary utilization of their
own workers and expressed a desire for safety personnel on-site. A Campus 6
representative suggested a need for proactive approach to training and
frequency of training availability. One EHS representative conveyed the need for
the employment of a regional safety coordinator.

The following bullets represent campus perceptions for needs in training
and assistance:

- Campus 2 – All four participants recognized a need for training and
  assistance in General Safety Concerns.

- Campus 3 – Both participants (a total of 2) provided recognition for
  training in Environmental Safety, Fire Safety, Occupational Safety, and
  General Safety Concerns and only one participant recognized a need in
  Biosafety, Ergonomics, Hazardous Materials, Industrial Hygiene,
  Infectious Waste, Sanitation and Pest Control, and Laboratory and
  Radiation Safety. For assistance, one participant identified with a need in
  Laboratory and Radiation Safety and General Safety Concerns.

- Campus 4 – One out of six participants provided recognition for a need in
  training in Hazardous Materials and a need for assistance in Industrial
  Hygiene and Laboratory and Radiation Safety.
• Campus 5 – Three participations (a total of 4) recognized a need for training in General Safety Concerns and one individual established a need in Hazardous Materials and Laboratory and Radiation Safety. One participant identified with a need for assistance in Environmental Safety, Ergonomics, Hazardous Materials, Industrial Hygiene, and Laboratory and Radiation Safety.

• Campus 6 – Two out of three respondents identified a need for training and assistance in all areas.

4.4 Training Received

The specification of the difference between EHS perceptions and campus perceptions and the provision and receipt of training is another important component of this study. The regional campuses were asked: in the past year, this campus has received training in one or more of the following areas (a list of EHS services was given). EHS was asked a similar question and they were asked to recognize which campuses they had provided training to: in the past year, this campus has provided training in one or more of the following areas to the regional campuses (EHS services).

EHS perceived that they had provided training to at least one regional campus in every service area offered. Regional campus personnel identified the receipt of training in most of the areas but excluded Ergonomics and Industrial Hygiene. EHS also recognized provided services to Campuses 2, 3 and 5. Campus 2 and 5 acknowledged the training and Campus 3 did not. Appendices
K and L contain detailed graphical representation of campus perceptions. See Figure 4: EHS Perceptions – Provided Training to the Regional Campuses for a detailed representation and analysis of the difference in perceptions between regional campuses and EHS.

Regional campuses and EHS personnel acknowledged that occasionally training is only provided as needed and when regional campuses contact EHS. Successful safety and health programs are dependent upon safety training approaches and availability. Potential disconnects between regional campuses and EHS generate barriers for implementation of successful safety and health program execution.
The following bullets represent all campus perceptions about any training received in the past year:

- Campus 2 – All representatives (a total of 3) recognized receiving training in Fire Safety, Hazardous Materials and Infectious Waste and one individual provided recognition for training in Laboratory and Radiation Safety.
- Campus 3 – None of the participants (a total of 2) recognized receiving training in any of the specified areas.
- Campus 4 – None of the participants (a total of 6) recognized receiving training in any of the specified areas.
- Campus 5 – One out of four representatives provided recognition for training in Biosafety, Environmental Safety, Fire Safety, Infectious Waste, Occupational Safety, Laboratory and Radiation Safety, and General Safety Concerns.
- Campus 6 – Two out of three respondents provided recognition for training in Fire Safety, Infectious Waste, Occupational Safety, Sanitation and Pest Control, Laboratory and Radiation Safety, and General Safety Concerns and one individual recognized receiving training in Biosafety.

4.5 Existing Safety and Health Program

The recognition of potential gaps within the system emphasizes the need for an established safety and health program across the university. The implementation and introduction of a safety and health program will enable the
regional campuses and EHS in the development of a standardized process and reduction or elimination of existing gaps. To assist in this identification several questions were included in the survey content to establish various areas in which necessary adjustments are required for successful safety and health program design.

4.5.1 Safety and Health Program

First, regional campuses and EHS were asked if their respective campuses have an established safety and health program. Table 3: Required Adjustments - Safety and Health Program provides the equivalent answers and interpretations from each campus. Approximately sixty-eight percent of respondents acknowledged the existence of a current safety and health program.

Table 3: Required Adjustments – Safety and Health Program

<table>
<thead>
<tr>
<th>Established Safety and Health Program</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Campus 2</td>
<td>3</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Campus 3</td>
<td>2</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Campus 4</td>
<td>6</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>Campus 5</td>
<td>4</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Campus 6</td>
<td>3</td>
<td>33%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Campus 2 specified that their safety and health program is utilized by their facilities staff only and does not currently have a campus-wide program.

Campus 3 had two respondents and both of them agreed that they do not have a formalized program but that they have a book of policies and that their overall
process is extremely informal. One participant from Campus 3 expressed their immediate concern for campus-wide safety practices for faculty/staff and acknowledged a need for safety implementation beyond the annual review process. An individual perception for Campus 4 specified that their current safety and health program is a fragmented approach and that they are strongest in their science labs and noticeable segmentation in physical plant and facilities. Campus 5 identified the implementation of a scheduled meeting to discuss the design and execution of planned drills and scheduled training, faculty coordination, AED/CPR training for faculty/staff and orientation for student services and aggressive students. Campus 6 perceived that they currently implement what EHS has in place based on the Workplace Safety Initiative, with a few minor exceptions due to size constraints and resources.

4.5.2 Safety Audits

Second, regional campuses and EHS were asked whether or not safety audits were completed periodically and on an annual basis. Additionally, EHS was asked to identify whether or not they conduct these audits for the regional campuses. Perceptions were based upon analysis of campus-wide job responsibilities and safety. See Table 4: Required Adjustments – Safety Audits for interpretive answers and perceptions. Analyzes indicated a variety of different answers and perceptions for whether or not safety audits are performed at the regional campuses.
Table 4: Required Adjustments – Safety Audits

<table>
<thead>
<tr>
<th>Safety Audit Completion</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>25%</td>
<td>25%</td>
<td>50%</td>
</tr>
<tr>
<td>Campus 2</td>
<td>3</td>
<td>67%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Campus 3</td>
<td>2</td>
<td>50%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Campus 4</td>
<td>6</td>
<td>83%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Campus 5</td>
<td>4</td>
<td>50%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Campus 6</td>
<td>3</td>
<td>33%</td>
<td>67%</td>
<td></td>
</tr>
</tbody>
</table>

EHS respondents specified that they will perform audits for the regional campuses upon request. Campus 2 identified that audits are performed either through EHS or conducted through an outside source. One respondent from Campus 3 specified apprehensions about communication and lack of information provided to them from EHS about specific areas that should be audited. This particular participant was concerned that they could be doing things wrong or that they could be missing key concepts at their campus without proper communication from EHS. Campus 4 identified that safety audits are only performed through informal visual observations and as part of an on-going process of daily safety precautions. Perceptions from Campus 5 indicated that safety audits are a part of everyday compliance and informal visual observations. One respondent from Campus 5 also verified that formal audits are conducted periodically from Bureau of Worker’s Compensation (BWC) for self-insured purposes. Campus 6 acknowledged the receipt of a successful formal safety
audit from BWC and the verification of recommendations for improvements necessary for a safer atmosphere.

4.5.3 Audit Prevention

If perceptions were established in which safety audits were not completed, respondents were asked to identify the reasons in which completion was forfeited. Various responses were received; however, staffing constraints proved to be at the top of the list on reasons why audits were not completed at the regional campuses. Regional campuses identified direction and assistance for what should be audited and by whom as a constraint for audit completion. Regional campuses also acknowledged the lack of all necessary resources, which included a combination of cost constraints, staffing constraints and time constraints. Table 5: Required Adjustments – Audit Prevention provides a detailed description per campus.

<table>
<thead>
<tr>
<th>Campus</th>
<th>Number of Respondents</th>
<th>Cost</th>
<th>Staffing</th>
<th>Time</th>
<th>Other</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>25%</td>
<td>50%</td>
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<td>Campus 2</td>
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<td>Campus 3</td>
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<tr>
<td>Campus 4</td>
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<td>17%</td>
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<td>Campus 5</td>
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<td>Campus 6</td>
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<td>67%</td>
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</tbody>
</table>
4.5.4 Communication: Injury or Illness on the Job

The next component for required adjustments is the issue of communication and whether or not faculty/staff know who to contact with if they acquire an injury or illness on the job. Both regional campuses and EHS were asked to rate their perception based on a 5-point Likert scale for the following statement: all employees know what to do and who to contact if they acquire an injury or illness on the job. Table 6: Required Adjustments – Communication: Injury or Illness on the Job displays the perceptions from all campus respondents. Most participants either agreed or strongly agreed to this statement, with one outlier from Campus 5 who strongly disagreed.

Table 6: Required Adjustments – Communication: Injury or Illness on the Job

<table>
<thead>
<tr>
<th>Communication: Injury or Illness on the Job</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>75%</td>
<td>25%</td>
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<td>Campus 2</td>
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</table>

4.5.5 Communication: Safety Issues

The basic premise for the distribution of the surveys was to establish management perceptions across the regional campuses and at EHS. Because of this generalization, all participants had managerial duties with specific obligations to their employees for safety. It is imperative that all respondents
know who to contact when safety issues arise. Respondents were asked to rate the following statement on a 5-point Likert scale: I know who to contact when safety issues arise. Table 7: Required Adjustments – Communication: Safety Issues provides a graphical interpretation of their ratings. Relatively all management perceptions either agreed or strongly agreed to this statement, with one individual from Campus 5 who strongly disagreed.

<table>
<thead>
<tr>
<th>Communication: Safety Issues</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

4.5.6 Communication: Difficulty with Regionals/EHS

Communication is a valuable resource for any successful safety and health program. Excellent communicative strengths are essential to proper program implementation and an important component of this research. Regional campuses and EHS were asked about the communication with each other and whether or not the process was difficult. Respondents were asked to rate the following statement on a 5-point Likert scale: it is not difficult to communicate safety concerns or issues with the regional campuses (EHS). Table 8: Required Adjustments – Communication: Difficulty with Regionals/EHS recognizes a variety of responses ranging from strongly agree to neither agree nor disagree.
For those campuses who specified that they neither agreed nor disagreed, they indicated never having any previous correspondence with EHS.

Table 8: Required Adjustments – Communication: Difficulty with Regionals/EHS

<table>
<thead>
<tr>
<th>Communication: Difficulty with Regionals/EHS</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
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</table>

4.5.7 Assistance: Difficulty with Regionals/EHS

One of the main goals of this study is to identify the gaps between regionals and EHS perceptions for training and assistance. To interpret these differences, the regional campuses and EHS were asked to rate the following statement on a 5-point Likert scale: it is relatively is easy to receive (provide) assistance to the regional campuses (from EHS). See Table 9: Required Adjustments – Assistance: Difficulty with Regionals/EHS for a detailed analysis of the resulted perceptions. The responses were varied between strongly agree and disagree for all respondents with most participants in the neither agree nor disagree range. It is noteworthy to identify that EHS perceived that it is not easy to provide assistance to the regional campuses.
4.5.8 Training: Completed in a Timely Manner

Timely completion of training is dependent upon trust and communication between the regional campuses and EHS. To assist in the identification of the completion of training in a timely manner, the regional campuses and EHS were asked to rate the following statement based on a 5-point Likert scale: any training that must be provided by EHS (to the regional campuses) is completed in a timely manner. Table 10: Required Adjustments – Training: Completed in a Timely Manner represents the results.

Table 9: Required Adjustments – Assistance: Difficulty with Regionals/EHS

<table>
<thead>
<tr>
<th>Assistance: Difficulty with Regionals/EHS</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>Campus 1</td>
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Table 10: Required Adjustments – Training: Completed in a Timely Manner

<table>
<thead>
<tr>
<th>Training: Completed in a Timely Manner</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tbody>
<tr>
<td>Campus 1</td>
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</table>
The majority response was that they neither agreed nor disagreed. Regional campus representatives acknowledged that they do not typically receive training from EHS because they are unaware of what EHS provides. One respondent from Campus 3 mentioned that it is their assumption that EHS is too busy to worry about the regional campuses; therefore, their campus does not contact EHS for training purposes.

4.5.9 Coordination: Scheduling with Regionals/EHS

Along with the concept of the completion of training in a timely manner is the idea of the coordination of schedules with the regional campuses and EHS. In the event that it is too difficult to schedule training sessions, it is likely that the training experience will suffer and EHS will deplete their trust. The regional campuses and EHS were asked to rate the following statement on a 5-point Likert scale: it is relatively easy to coordinate schedules with the regional campuses (EHS). Table 11: Required Adjustments – Coordination: Scheduling with Regionals/EHS identifies the perceptions from all campuses. Regional representatives and EHS personnel acknowledged that it is relatively easy to coordinate schedules with each other as most participants agreed or neither agreed nor disagreed with the statement.
Table 11: Required Adjustments – Coordination: Scheduling with Regionals/EHS

<table>
<thead>
<tr>
<th>Coordination: Scheduling with Regionals/EHS</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
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<td>Campus 1</td>
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</table>

4.5.10 Correspondence: Emergency Situations

EHS availability during emergency situations is critical but is dependent upon the specific issue. Regional campuses and EHS personnel were asked about their perceptions about EHS correspondence during emergency situations. Survey participants were asked to rate the following statement based on a 5-point Likert scale: EHS personnel are available during emergency situations. The majority of respondents specified that they neither agreed nor disagreed with this statement indicating issues with location. See Table 12: Required Adjustments – Correspondence: Emergency Situations for a full review of responses.

Table 12: Required Adjustments – Correspondence: Emergency Situations

<table>
<thead>
<tr>
<th>Correspondence: Emergency Situations</th>
<th>Number of Respondents</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
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<td>Campus 6</td>
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</table>
The identification of required adjustments to current safety and health practices instituted at the regional campuses will assist in the determination of an appropriate safety and health program. This determination will enable the justification of safety and health program design and implementation. The ability of EHS to determine between centralized and decentralized services might be able to contribute to greater coverage for safety programs.

4.6 Centralized Safety Practices

Questions related to centralized safety practices at the regional campuses help to identify which practices would benefit from centralization versus decentralization. To determine best practices for the regional campuses it was important to understand managerial perceptions about their current safety practices. Survey content in the establishment of centralized safety practices provided insight into which practices are performed at the regional campuses and which are performed at EHS.

4.6.1 Summary of Incident Occurrences

Incident prevention is reliant upon investigations and acquisition of ideologies in best practices for future preventative strategies. The submissions of summarized incident occurrences enable management and safety personnel to identify and distinguish previous incidents and ways in which incidents can potentially reoccur. The survey distributed to the regional campuses asked the following question: does this campus report a summary of all incident
occurrences. The survey distributed to EHS stated: does this campus compile incident reports from the regional campuses. Table 13: Summary of Incident Occurrences provides a summary of the answers provided by the regional campuses and EHS.

Table 13: Summary of Incident Occurrences

<table>
<thead>
<tr>
<th>Summary of Incident Occurrences</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
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</table>

Based on the analysis, various answers were given. Most managerial perceptions identified that they do not know whether or not their campus summarizes their incident occurrences, others specified the completion of incident reports and investigations but did not know if there was a compilation or summary. Other campuses acknowledged that they have so few incidents that a summary was not a necessity.

4.6.2 On-Site Safety Training

Another useful analysis in the determination for centralized verses decentralized processes is the identification of which services the regional campuses provide for their employees without assistance from EHS. The question asked was: which services does this campus currently provide training
to all (relevant) employees. Appendix M provides visualization for all campus perspectives in the areas in which they provide training. The following bullets list managerial perceptions for training to their respective employees:

- Campus 1 had a total of four participants. All four of them agreed that they provide training to their own employees in Biosafety, Infectious Waste, and Laboratory and Radiation Safety. Three out of four agreed that they provide training to their employees in Environmental Safety, Ergonomics, Fire Safety, Hazardous Materials, Industrial Hygiene, Occupational Safety, Sanitation and Pest Control, and General Safety Concerns.

- Campus 2 had a total of three respondents. For Biosafety, Infectious Waste, and General Safety Concerns all three acknowledged providing training to their employees in these respective concentrations.

- Campus 3 had two participants, one of them acknowledged providing training in all areas and one of them perceived not providing training in any of the categories.

- Campus 4 had a total of six participants and their individual perceptions varied from one another. Four out of six representatives agreed that their campus provides training to their employees in Fire Safety and General Safety Concerns. Three out of six agreed that they offer training in Environmental Safety and Occupational Safety. Two out of six acknowledged Infectious Waste and Sanitation and Pest Control as
specific areas in which they provide training in. One individual identified providing training in Hazardous Materials.

- Campus 5 had a total of four respondents. All of them agreed to the provision of Fire Safety. Three out of four agreed that they provide training in Occupational Safety. Half of the respondents acknowledged offering training in Biosafety, Hazardous Materials, Sanitation and Pest Control, Laboratory and Radiation Safety, and General Safety Concerns. One out of four identified training in Environmental Safety, Ergonomics, Industrial Hygiene, and Infectious Waste.

- Campus 6 had three participants. All three of them agreed to training in Fire Safety, Infectious Waste, Occupational Safety, Sanitation and Pest Control, Laboratory and Radiation Safety, and General Safety Concerns. Two out of three identified Biosafety and one out of three recognized providing training in Environmental Safety, Ergonomics, Hazardous Materials, and Industrial Hygiene.

Campus perceptions about what they offer to their employees are not identical and indicate that all regional campuses are different. Campus size, student enrollment, faculty/staff levels and atmosphere all have substantial roles in the determination for best practices for individual campus performance and capabilities. There are certain aspects in which all campuses should be held accountable for with respect to occupational safety and safety expectations.
4.6.3 Proper Procedures and Posting Guidelines

Safety precautions are dependent upon preventive measures and awareness. Established rules and regulations require proper techniques and procedures for posting pertinent information for safety. The regional campuses were asked the following question: does this campus incorporate proper procedures and posting guidelines with respect to emergency evacuations? EHS was asked a similar question: does this campus enforce proper procedures and posting guidelines with respect to emergency evacuations at the regional campuses? Table 14: Proper Procedures and Posting Guidelines reflect their answers.

<table>
<thead>
<tr>
<th>Proper Procedures and Posting Guidelines</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
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<td>Campus 1</td>
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Most participants specified compliance with respect to appropriate procedures for regulatory measures. Every campus specified posting emergency evacuation information inside of every classroom. One individual from Campus 3 posed the following questions and concerns: “Yes, but what are the proper procedures? Does EHS provide guidelines for this? Who checks procedures to
make sure that they are proper? How does EHS know that regional campuses are doing things correctly?"

4.6.4 Reporting Emergencies

For the safety of faculty/staff and students it is important to have a plan in place for reporting emergencies. This is one specific component in which compliance is necessary. The following questions were provided in the survey: Regionals - does this campus currently have a procedure for reporting emergencies? EHS - does this campus currently have a procedure for reporting emergencies to the regional campuses? Table 15: Reporting Emergencies exemplifies specific compliance results.

<table>
<thead>
<tr>
<th>Reporting Emergencies</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
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<tbody>
<tr>
<td>Campus 1</td>
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<tr>
<td>Campus 4</td>
<td>6</td>
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<tr>
<td>Campus 5</td>
<td>4</td>
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<tr>
<td>Campus 6</td>
<td>3</td>
<td>100%</td>
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</tbody>
</table>

Almost every participant acknowledged compliance and the identification of a plan for reporting emergencies. Several regional campuses recognized the utilization of an accessible Quick Reference Guide in which individuals involved in an emergency could acquire knowledge and remove them from the situation at hand.
4.6.5 Emergency Exits Reviewed for Compliance

Based on the concept of emergency evacuations and specific plans, it is important to review emergency exits for compliance. Without compliance, emergency evacuations and associated plans may not be quite as successful. Both regional campuses and EHS were asked whether or not their emergency exits are reviewed for compliance. Table 16: Emergency Exits Reviewed for Compliance specifies the acknowledgement of associated reviews. Managerial perceptions acknowledged compliance for emergency exit evaluations and every campus recognized completion of these reviews are done through local fire departments.

<table>
<thead>
<tr>
<th>Emergency Exits Reviewed for Compliance</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>75%</td>
<td>25%</td>
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<tr>
<td>Campus 2</td>
<td>3</td>
<td>100%</td>
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<tr>
<td>Campus 3</td>
<td>2</td>
<td>100%</td>
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<tr>
<td>Campus 4</td>
<td>6</td>
<td>83%</td>
<td>17%</td>
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<tr>
<td>Campus 5</td>
<td>4</td>
<td>75%</td>
<td>25%</td>
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<tr>
<td>Campus 6</td>
<td>3</td>
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</tbody>
</table>

4.6.6 Employees Routinely Checked for Safety

As part of an on-going process for safety, it is important to routinely verify that all employees are performing their jobs safely. This process does not have to be in the form of a formal audit, simple observations are sufficient; however, this step is crucial to overall safety in the workplace. Both regional campuses and EHS were asked the following question: are employees checked on a routine
basis for verification that they are performing their job(s) safely? Table 17: Employees Routinely Checked for Safety indicates the results of campus perceptions.

<table>
<thead>
<tr>
<th>Employees Routinely Checked for Safety</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>25%</td>
<td>75%</td>
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<tr>
<td>Campus 2</td>
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<td>Campus 3</td>
<td>2</td>
<td>50%</td>
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<tr>
<td>Campus 4</td>
<td>6</td>
<td>83%</td>
<td>17%</td>
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<tr>
<td>Campus 5</td>
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<td>50%</td>
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<tr>
<td>Campus 6</td>
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<td>100%</td>
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</tbody>
</table>

Survey participants elaborated on this question and general comments were provided. One individual from Campus 1 stated that these jobs are ultimately the responsibility of the immediate supervisor. Two individuals from Campus 2 stated that only their facilities department faculty/staff are checked and these informal audits are completed by facilities management. Campus 3 had two respondents with different opinions. One participant stated that their employees are checked as part of employee evaluations but that their campus struggles with this due to lack of resources. The other respondent from Campus 3 stated that employees are not checked because it is assumed that workers are being safe because they rarely experience injuries on the job. One representative of Campus 4 agreed that safety checks are a part of annual employee evaluations. Two individual from Campus 5 expressed their opinions;
however, they were slightly different from one another. The first representative stated that there are protocols in place for these types of audits but was unaware of the specifics. The second representative stated that these types of audits are completed through informal observations. All three participants from Campus 6 expressed their opinions and they all agreed that these types of audits are conducted through informal observations.

Interpretations based on centralized safety practices reveal potential disconnects within each regional campus. Examination of specific protocols, resource leverage and communicative strategies is imperative to establish reasons why these separations appear. As resource leverage and communication are two components to a successful safety and health program, survey content was developed to acquire a representative understanding of these opportunities within the regional campuses and EHS.

4.7 Resource Leverage and Communication

Resource leverage and communication are both essential to the implementation of improvement strategies and the introductory process of a new safety and health program. Location distribution of the regional campuses and various levels of awareness generate an increased need for knowledge leverage and communication. EHS and the regional campuses are reliant upon appropriate communication efforts for sustainability and a balanced leverage approach for resources and knowledge.
4.7.1 Communication: Safety and Health Information to Employees/Regionals

Communicative strategies are an important characteristic in any successful workplace or organization. It is necessary to identify these strategies within the regional campuses to enable program capabilities. Regional campuses and EHS were asked this question: how is safety and health information communication to employees (at the regional campuses)? Table 18: Communication – Safety and Health Information to Employees/Regionals describes the ways in which communication is transmitted through (and to) the regional campuses.

<table>
<thead>
<tr>
<th>Communication – Safety and Health Information</th>
<th>Number of Respondents</th>
<th>Meetings</th>
<th>Memos</th>
<th>Emails</th>
<th>Bulletins</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>50%</td>
<td>25%</td>
<td>75%</td>
<td>50%</td>
<td>25%</td>
</tr>
<tr>
<td>Campus 2</td>
<td>3</td>
<td>100%</td>
<td>33%</td>
<td>100%</td>
<td></td>
<td>33%</td>
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<tr>
<td>Campus 3</td>
<td>2</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>50%</td>
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</tr>
<tr>
<td>Campus 4</td>
<td>6</td>
<td>67%</td>
<td>33%</td>
<td>83%</td>
<td>50%</td>
<td>17%</td>
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<tr>
<td>Campus 5</td>
<td>4</td>
<td>50%</td>
<td></td>
<td>75%</td>
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<tr>
<td>Campus 6</td>
<td>3</td>
<td>100%</td>
<td>33%</td>
<td>100%</td>
<td>100%</td>
<td>33%</td>
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</tbody>
</table>

Based on the information provided in Table 18, the regional campuses and EHS perceive that most safety and health information is transmitted through meetings, memos and emails. Other ways in which communication is conveyed is through safety and health committees and training sessions. Campus 6 hosts
an Annual Safety Day in which they provide safety training sessions and awareness campaigns to the campus and the community.

4.7.2 Communication: Safety Issues to Regionals/EHS

Not only is communication important within the campuses, it is also important through the campuses and to (from) EHS. It is imperative that EHS communicates to the regional campuses any safety concerns or issues that affect them. On the other hand, it is important for the regional campuses to contact EHS with any safety concerns or issues in which EHS can assist them.

In the survey, regional campuses were asked: does this campus currently transmit safety issues to Main Campus EHS? Similarly, EHS was asked: does this campus currently communicate safety issues to the regional campuses?

Table 19: Communication: Safety Issues to Regionals/EHS summarizes all campus perceptions.

<table>
<thead>
<tr>
<th>Communication – Safety Issues to Regionals/EHS</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>75%</td>
<td></td>
<td>25%</td>
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<tr>
<td>Campus 2</td>
<td>3</td>
<td>100%</td>
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<td>Campus 3</td>
<td>2</td>
<td>100%</td>
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<tr>
<td>Campus 4</td>
<td>6</td>
<td>66%</td>
<td>17%</td>
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<tr>
<td>Campus 5</td>
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<td>75%</td>
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<td>Campus 6</td>
<td>3</td>
<td>67%</td>
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</table>

It can be generalized, based on all campus perceptions, that communication to (from) the regionals (EHS) is fairly sufficient. Most
respondents expressed that they have never experienced an issue with communication to (from) EHS. Others conveyed that they would only contact EHS if an issue were to arise.

4.7.3 Communication: Safety Issues to Whom

After the regionals and EHS identified that they generally communicate with one another, they were asked to specify who they contact at these respective locations. Table 20: Communication: Safety Issues to Whom displays the variety of respondents’ perceptions of established lines of communication.

### Table 20: Communication: Safety Issues to Whom

<table>
<thead>
<tr>
<th>Communication to whom</th>
<th>Number of Respondents</th>
<th>OU Safety Director</th>
<th>EHS</th>
<th>Facilities</th>
<th>Other</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
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<td>25%</td>
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<tr>
<td>Campus 2</td>
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<td>67%</td>
<td>33%</td>
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<tr>
<td>Campus 3</td>
<td>2</td>
<td></td>
<td>50%</td>
<td></td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Campus 4</td>
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<td>16%</td>
<td>50%</td>
<td>17%</td>
<td>17%</td>
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</tr>
<tr>
<td>Campus 5</td>
<td>4</td>
<td></td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
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<tr>
<td>Campus 6</td>
<td>3</td>
<td>67%</td>
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<td>33%</td>
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</tbody>
</table>

Various perceptions indicate miscommunication and lack of understanding of who an appropriate safety contact should be. A few campuses identified that communication is dependent upon the specific issue. Other campuses acknowledged communication within their own campus, not with EHS. This type of communication recognizes that managerial perceptions typically do not consider what EHS provides to the regional campuses.
4.7.4 Information Leverage: Campus Safety Responsibility

Upon recognition that most communication stays within the regional campuses, it is important to identify persons responsible for campus safety. When regional campuses do not communicate to EHS, it is of importance that campus safety concerns are recognized and established as a part of safety protocols and regulatory compliance. Even when communication to EHS is not recognized, it is essential to establish whether or not resources and knowledge from EHS is leveraged out to the regional campuses.

A series of three questions were developed to assist in the identification of whether or not the regional campuses currently have on-site safety person responsible for the development of fire emergencies, drills and evacuations, incident investigations, and serves as the main safety contact for the campus.

- The first question for the regionals was: does this campus have an individual who is responsible for the development of fire emergencies, drills and evacuations? The question given to EHS was: does this campus have an individual who is responsible for the development of fire emergencies, drills and evacuations for the regional campuses? Table 21: Information Leverage: Responsibility – Fire Emergencies, Drills and Evacuations summarizes EHS and campus perceptions.
- The second question for the regionals was: does this campus have an individual who is responsible for the completion of incident investigations? Similarly, EHS was asked: does this campus have an individual who is
responsible for the completion of incident investigations for the regional campuses? Table 22: Information Leverage: Responsibility – Incident Investigations provide a detailed summary for EHS and campus responses.

- The third question for the regionals was: does this campus have a main safety contact that is primarily responsible for all aspects of safety? EHS was asked: does this campus have a main safety contact on campus that is primarily responsible for all aspects of safety and communication to regional campuses? Table 23: Information Leverage: Main Safety Contact identifies EHS and campus perceptions.

### Table 21: Information Leverage: Responsibility – Fire Emergencies, Drills and Evacuations

<table>
<thead>
<tr>
<th>Responsibility – Fire Emergencies, Drills and Evacuations</th>
<th>Number of Respondents</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus 1</td>
<td>4</td>
<td>50%</td>
<td>25%</td>
<td>25%</td>
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<tr>
<td>Campus 2</td>
<td>3</td>
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<td>Campus 3</td>
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<tr>
<td>Campus 4</td>
<td>6</td>
<td>83%</td>
<td>17%</td>
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<tr>
<td>Campus 5</td>
<td>4</td>
<td>100%</td>
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<tr>
<td>Campus 6</td>
<td>3</td>
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</table>
EHS and campus perceptions provide evidence that, in most cases, there is somebody on-site for safety purposes especially for the development of fire emergencies, drills and evacuations, incident investigations and to serve as a liaison for all safety inquiries.

Survey content assisted in the identification of management perceptions for what types of assistance the regional campuses have received, services that they perceive that they need, and the training that they have received. Survey content also established specific adjustments necessary for safety and health program implementation. Through the identification of centralized safety practices, communication and information leverage a baseline could be established for where the campuses stand with respect to a current safety and
To further assist in this process, it is essential to obtain management perceptions about current safety climate and culture.

4.8 Safety Climate and the Work Safety Scale

Respondents were asked a series of questions based on management objectives and current safety practices within their campuses. The questions were based on individual perceptions constructed through a validated 5-point Likert scale. Upon completion of this section of the survey, the summations of their answers were calculated and their overall perceptions of current management practices and safety programs were identified.

The following statements were rated by the survey participants:

Management Safety Practices

- Provides enough safety training programs
- Conducts frequent safety inspections
- Investigates safety programs quickly
- Rewards safe workers
- Provides safe equipment
- Provides safe working conditions
- Responds quickly to safety concerns
- Helps maintain clean work areas
- Provides safety information
- Keeps workers informed of hazards

Safety Program (Policies)
• Worthwhile
• Helps prevent accidents
• Useful
• Good
• First-rate
• Unclear
• Important
• Effective in reducing injuries
• Does not apply to my workplace
• Does not work

The sum of safety climate perceptions for management safety practices ranged from 32 to 48, out of a total of 50. This range on a 5-point Likert scale identifies safety climate perceptions from neither agree nor disagree to (almost) strongly agree. This scale provides valuable information on how respondents perceive campus safety practices and managerial duties to campus safety practices.

Results indicated that sum safety climate scores for safety program (policies) ranged from 0 to 46, out of a total of 50. Based on the 5-point Likert scale, this range specifies the difference between no recognition of a safety program and agree. Half of the survey participants neither agree nor disagree which indicates that managerial perceptions at the regional campuses and representative EHS personnel identify that their campus does not have a safety
and health program established. See Appendix N for detailed graphs for each campus and Table 24: Sum Safety Climate Perceptions for an analysis of all campus ranges, means and standard deviations.

Table 24: Sum Safety Climate Perceptions

<table>
<thead>
<tr>
<th>Sum Safety Climate Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Safety Practices</td>
</tr>
<tr>
<td>All Campuses</td>
</tr>
<tr>
<td>Campus 1</td>
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<td>Campus 2</td>
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<td>Campus 3</td>
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<td>Campus 4</td>
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<td>Campus 5</td>
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<tr>
<td>Campus 6</td>
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<tr>
<td>Safety Program (Policies)</td>
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<tr>
<td>All Campuses</td>
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<td>Campus 6</td>
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Analysis for both sections indicated that many respondents neither agreed nor disagreed. In most cases, the perceptions were relatively similar to one another, which indicate consistency within the regional campuses; however, it does not indicate overall awareness and general sense of current system capabilities.

4.9 Representative Opinions

In addition to specific questions provided in the questionnaire, participants were encouraged to offer their own opinions, comments or concerns about the
survey content. Most participants were eager to voice their own opinions and demonstrated enthusiasm and support for this research. One particular individual expressed their appreciation for the recognition that this study provided for the regional campuses. The opinions given by campus representatives are confidential and will remain private throughout this analysis.

4.9.1 Services Needed

Several campus representatives provided suggestions for improvement in training strategies and overall enhancement for program success. A number of respondents acknowledged a lack of awareness in specific services provided by EHS. One of these individuals recommended the inclusion of training videos on the EHS website and specified that “that would be spectacular!” Another individual recognized a need for training sessions on available resources on the EHS website.

The concept of standardization was consistently repeated among campus representatives. One respondent identified a necessity for a standardized checklist from EHS with specifications on what each campus should be doing for safety. Other suggestions for standardization included the initiation of quarterly meetings and newsletters with incorporation of all campuses and in consideration for all campus needs. Another recommendation examined the potential for EHS to provide training resources to management and suggested implementation of train the trainer programs. Train the trainer programs would enable EHS to indirectly provide training to all regional campuses.
Several participants praised EHS and valued their expertise. One individual stated, “They are the experts, we shoot in the dark.” This statement correlated with effective training resources and a need for assistance from EHS. Other representatives emphasized that they will gladly accept any training that would enable them to provide a safer atmosphere for their faculty/staff, students and community; however, one of these particular individuals stated that “we don’t know what we don’t know.” In other words, regional campuses feel that they can only provide what they know and would appreciate the acquisition of increased knowledge and education.

Along with these suggestions, a few campus representatives acknowledged that they are aware that they need to contact EHS when they need or desire training in any specific area. EHS also identified with this and stated that regional campuses typically facilitate and schedule meetings with them and EHS will provide any necessary training to them. Mixed managerial perceptions and different opinions establish a greater need for a defined safety and health program.

4.9.2 Existing Safety and Health Programs

One campus representative acknowledged that their campus is currently working on improvements to their existing safety and health programs, policies and procedures. They specified a need for assistance from EHS in the provision of specific guidelines and necessary interpretations for overall success of the program. Another participant agreed in that a standardized program would
effectively improve the safety efforts across the university and would assist in the establishment of consistent safety protocols, centralized safety practices, resource leverage and communication.

4.9.3 Resource Leverage and Communication

Staffing constraints were a consistent concern throughout the regional campus participants. Staffing constraints lead to inefficient utilization of resources, knowledge leverage and communication. In some campuses, it was acknowledged that current safety personnel are typically responsible for various activities and cannot primarily focus on safety. One participant stated that location is a constraint and that there is a “physical separation from EHS” which leads to the generalization that EHS does not provide enough attention to the regional campuses. Other participants suggested that disconnects between the regional campuses and EHS may be reduced through annual visitations and periodic audits from EHS.

Strengths and weaknesses in communication were represented through all campus perceptions with various opinions and experiences. The acknowledged strengths specified that communication is rare with EHS; however, they perceived that EHS is always extremely helpful when needed. Another individual stated that they contact EHS without hesitation and that they share an excellent line of communication with them in the recognition that EHS is a valuable resource. Identified weaknesses specified that “contact with the
“mother ship” is non-existent” and “bolts need tightened, no doubt”. All perceived recommendations lead to definitive interpretations in safety climate analyzes.

4.9.4 Safety Climate and the Work Safety Scale

Responses in the completion of the work safety scale identified various perceptions of program outputs. Participants from the regional campuses provided the following statements:

- Volume justification in the replacement of “dated” equipment (equipment not out of compliance and in safe working conditions);
- Housekeeping concerns and storage issues with respect to clutter;
- Organization of SDS (Safety Data Sheets);
- Employee turnover in safety-related position(s);
- Intimidation for overall implementation and maintenance of a safety and health program due to size constraints and efficient resources.

The overall variability in responses from campus representatives suggests a need for standardization of programs, policies and procedures for safety.
CHAPTER 5: DISCUSSION AND CONCLUSIONS

This study examined current occupational safety practices across regional campuses at Ohio University through the distribution of two similar surveys. One survey was given to the regional campuses and the other was provided to EHS. Survey content included categories in participant demographics, current safety practices in programmatic activities, staffing, training, interventions and safety climate. The main objectives for both surveys were to collect and analyze managerial perceptions and identify current trends in safety protocols. Survey respondents were not paid for their involvement and their participation was completely voluntary on an informed consent basis. Survey participants consisted of Deans and Administration (32%), Safety Personnel (27%), Facilities Management (27%), and Other managerial positions (14%). Campus representatives (82% of them) were interviewed to gain insight into their perspectives and to acquire individual opinions.

The establishment of existing gaps within the standardized process was an important goal of this study. Proper identification of all services received, services needed and training received assisted in the establishment of a baseline. Initial interpretations were made from EHS perceptions with regard to what services they had provided to the regional campuses within the past year.

5.1 Services Received

EHS perceived that they had extended service, within the past year, to at least one regional campus and in all eleven areas in which they have expertise.
Analysis showed that assistance in Ergonomics and General Safety Concerns were not acknowledged by any of the campuses. EHS personnel recognized that they specifically assisted three different campuses in their respective areas; however, only two of those campuses acknowledged the assistance. These results suggest disconnects between managerial perceptions within the regional campuses and between the regionals and EHS. When management does not perceive assistance that EHS perceives providing, this may also suggest that management is not completely aware of all safety-related constituents on campus.

5.2 Services Needed

The examination of services needed acknowledged desires for assistance and recognized needs for training. Initial analysis focused on EHS perceptions and their validation for requests received from the regional campuses. EHS acknowledged requests for training in five specific areas; however, the regional campuses acknowledged a need for training in all areas. Also, EHS identified definitive requests from three specific campuses but they did not accurately identify in which areas training was desired. Interpretive analysis recognizes the potential implications that this may have on safety performance within the regional campuses. When the regional campuses have specific needs for training in various areas that are not being met, it may be assumed that their needs may not be held in high regard by EHS. In fact, representative opinions
from regional campus respondents recognized that EHS does not provide enough attention to them and that they perceive that they are typically forgotten.

In consideration for and inclusion of all campuses, which included EHS, analysis identified specific areas in which assistance was desired. All regional campuses identified with desires for assistance in all eleven categories. EHS representatives acknowledged that they desire assistance in all respective areas in order to provide better assistance to the regional campuses. EHS personnel also identified with a need to employ a regional safety coordinator. All campus needs are indicative of a momentous need for safety and health program implementation and formalized standardization processes. A successful safety and health program will ensure that all campuses are provided with the necessary components and required tools for a safe atmosphere for faculty/staff, students and their respective communities.

5.3 Training Received

After establishing what the regional campuses receive in assistance and desire in assistance and training it was necessary to examine the relationship between EHS perceptions and regional campus recognition of provided (received) training. EHS perceived that they had provided training to the regional campuses in all respective areas of knowledge; however, the regional campuses did not agree to the receipt of training in Ergonomics and Industrial Hygiene. It is also unexpected that EHS personnel specified the provision of training to three specific campuses in which all but one of them acknowledged this and that
various opinions existed in managerial perceptions for training received. Only
two campuses were in complete agreement upon what type of training they had
received and all other regional campuses were not in complete agreement about
what they had received.

Overall, regional campuses appeared to have certain expectations for
safety and health training that would be provided by EHS as a general part of
EHS’s responsibilities and obligations to the regional campuses.
Representatives from EHS identified that they generally provide training to the
regional campuses on an as needed basis and when regionals contact them with
specific concerns. The results suggest that EHS desires more assistance to
improve their capabilities in the provision and improvement of their
responsibilities to the regional campuses. This revelation is pertinent to this
study in that substantial miscommunications exist within the regional campuses
and between the regionals and EHS. These miscommunications then seem to
generate barriers for the implementation of successful safety and health
programs.

5.4 Existing Safety and Health Programs

Mixed perceptions about existing safety and health programs are
indicative of the continuous trend for miscommunication and misinterpretations of
current safety protocols and practices. A mere sixty-eight percent of respondents
identified with existing safety and health programs, which identifies that thirty-two
percent of campus representatives acknowledged a lack of formalized safety and
health program. For substantial improvements and innovative strategies, it is imperative for all campus representatives to be compliant and in complete agreement to specific standards in place for safety programs, policies and procedures.

5.5 General Conclusions

5.5.1 Noteworthy Implications

It is relevant for this research to specify that the regional campuses and EHS recognized that it is not relatively easy to receive and provide assistance to one another. A few of the campuses, which included EHS, identified location as a deterrent for ease of operative strategies and resource leverage. It is imperative to determine the root cause for this perception and to eliminate all factors that contribute to this constraint for substantial improvement strategies.

Another noteworthy implication that was presented within the results suggests that the regional campuses are not currently summarizing their incident reports. This may suggest that they are not actively investigating their incidents and not appropriately completing the proper documentation. It is important to track incidents for the prevention of future occurrences and to eliminate potential risks. If it is appropriately documented, it is likely that applicable measures have been taken to prevent the same incident from occurring. If a summarization of incidents is not provided, it is difficult to analyze whether or not these applicable measures have been completed.
5.5.2 Communication

Misinterpretations and miscommunication were acknowledged through various opinions of campus representatives in specific areas in services received, services needed and training received. The results indicate that EHS continuously perceives providing services to the regional campuses that the regional campuses are not acknowledging. Also, the regional campuses are specifying needs for training and assistance in specific areas that EHS are not acknowledging. This is indicative of a lack of formality and process documentation for what EHS provides and what the regional campuses need. To reiterate representative opinions, it is important to provide evidence that the regional campuses are in agreement to the lack of communication with EHS. The following statements were made by a representative sample of survey participants:

- There is a “physical separation from EHS”;
- “Contact with the “mother ship” is non-existent”, and;
- “Bolts need tightened, no doubt”.

5.6 Limitations and Future Recommendations

5.6.1 Limitations

The first limitation represented within this data is the smaller representative sample sizes within the regional campuses and EHS. The next limitation was that not all survey participants were interviewed due to time constraints and scheduling conflicts.
5.6.2 Future Recommendations

The first step that must be taken to reduce constraints and improve communication is to identify and establish a regional coordinator. This individual would primarily communicate between EHS and the regional campuses to avoid the stigma that is not easy to coordinate with one another. The regional coordinator would establish a formalized safety and health program and an efficient strategy for documentation processes in services and training provided by EHS and requested from the regional campuses.

The next step is for EHS to provide specific training to designated trainers at the regional campuses in a “Train the Trainer Program”. This would eliminate the need for EHS to travel to all regional locations while still providing their own training and expertise. This program should be utilized for efficiency and effectiveness in a professional manner to incorporate all pertinent information to the regional campuses. This program would enable regional campuses to operate independently from EHS and keep safety as a first priority for campus faculty, staff and students.

Another step would include the development of an OU Safety Web and intranet for utilization for EHS and the regional campuses. This intranet would enable EHS and the regional campuses to leverage their resources and knowledge in a centralized location. EHS may provide training videos, forms and relevant information to the regional campuses that can be easily accessed. The
regional campuses may also share their best practices and generate a sense of community and awareness for all Ohio University campuses.

Currently the regional campuses and EHS do not completely agree with best practices for safety. It is imperative to determine best practices for safety and to develop sufficient ways in which this can be accomplished. Through substantial efforts and appropriate use of this research material, EHS and the regional campuses would be able to improve their safety programs and communication.
REFERENCES


https://www.osha.gov/SLTC/etools/safetyhealth/helpfulstatistics.html


https://www.osha.org/SLTC/etools/safetyhealth/mod2_culture.html


APPENDIX A: MANAGEMENT PERCEPTIONS OF OCCUPATIONAL SAFETY PRACTICES ACROSS REGIONAL CAMPUSES AT OHIO UNIVERSITY

Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Tiffany Reynolds
MS Student Industrial and Systems Engineering

2014

Tiffany Reynolds
Ohio University
Russ College of Engineering and Technology
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Informed Consent

ORGANIZATION
Safety Practices Questionnaire
Please read the following letter completely before starting the survey

Dear Employee:
You have been selected to participate in a survey designed to learn what employees at this organization believe about safety practices on their campus. The information obtained from this survey will enable management to improve the delivery of safety information/training to regional campuses.

This is not a test. There are no right answers. The only right answers are your honest and thoughtful replies. The information obtained will be used to better understand safety practices at regional campuses. We have tested the survey and expect it to take approximately one hour.

PROTECTION OF PRIVACY
The following is furnished to explain why the information is requested and the general uses that the information may be used for:

The purpose of this survey is to better understand employees’ views about safety practices on their campus. The survey data will be used for research purposes only. Your individual responses are COMPLETELY CONFIDENTIAL. Summarized data (e.g., averages, percentages), which do not contain individual identifiers, may be provided to management for uses related to improving policies and practices. Participation in the survey is voluntary. No penalty will be imposed for failure to respond to the survey or any particular question. However, in order to obtain an accurate picture of the working environment, your participation in this survey is important, encouraged, and greatly appreciated.

Your cooperation is sincerely appreciated. If you have any questions or concerns about this survey, please contact Diana Schwerha at Ohio University (Schwerha@ohio.edu).

Sincerely yours,

Tiffany Reynolds
MS student, Industrial and Systems Engineering

Safety Perceptions Questionnaire
Ohio University

I understand that the completion of this form has been done voluntarily and is evidence of my consent. I understand that this information may be used in future publications.

(these must be read to the person being interviewed and they must agree before the start of the interview).
Part I: Demographics

(Wu, Liu, & Lu, 2007)

Question 1 of 36
What is your job title? __________________________

Question 2 of 36
What is your gender? __________________________

Question 3 of 36
What is your age? __________________________

Question 4 of 36
How long have you been employed at this campus? ________

Question 5 of 36
Have you experienced an injury? __________________________
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 6 of 30

What is the number of employees on this campus?

Question 7 of 30

What is the number of students on this campus?

Question 8 of 30

What is the injury rate on this campus?

Question 9 of 30

Does this campus have a designated individual who is responsible for occupational safety? FT or PT?

Question 10 of 30

How often does this campus utilize safety services provided by Main Campus EHS?
Part II: Safety Practices on this Campus

Section I: Programmatic Activities

Question 11 of 36
Does this campus currently have an established safety and health program? (aside from Main Campus EHS Workplace Safety Initiative)

- Yes
- No
- Don't know

Comments: ____________________________________________

Question 12 of 36
Are safety audits completed periodically and on an annual basis? (Relative to campus-wide job responsibilities)

- Yes
- No
- Don't know

Comments: ____________________________________________

Question 13 of 36
If safety audits are not performed, what prevents completion?

- Cost
- Staffing Constraints
- Time Constraints
- Other: ______________

Comments: ____________________________________________
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 14 of 36
Does this campus incorporate proper procedures and posting guidelines with respect to emergency evacuations?

☐ Yes
☐ No
☐ Don’t know
Comments: ____________________________________

Question 15 of 36
Does this campus currently have a procedure for reporting emergencies?

☐ Yes
☐ No
☐ Don’t know
Comments: ____________________________________

Question 16 of 36
Are emergency exits reviewed for compliance? (OSHA 1910.37)

☐ Yes
☐ No
☐ Don’t know
Comments: ____________________________________
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 17 of 36
Does this campus report a summary of all incident occurrences?
☐ Yes
☐ No
☐ Don’t know
Comments: _________________________________

Question 18 of 36
How is safety and health information communicated to employees?
☐ Meetings
☐ Memos
☐ Emails
☐ Bulletins
☐ Other: ___________
Comments: _________________________________

Question 19 of 36
Does this campus currently transmit safety issues to Main Campus EHS?
☐ Yes
☐ No
☐ Don’t know
Comments: _________________________________

Page 7 of 19
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 20 of 36
Who does this campus currently transmit safety issues to?
Comments: 

Section II: Staffing

Question 21 of 36
Does this campus have an individual who is responsible for the development of fire emergencies, drills and evacuations?
☐ Yes
☐ No
☐ Don't know
Comments: 

Question 22 of 36
Does this campus have an individual who is responsible for the completion of incident investigations?
☐ Yes
☐ No
☐ Don't know
Comments: 
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 23 of 36

Does this campus have a main safety contact on campus that is primarily responsible for all aspects of safety?

☐ Yes
☐ No
☐ Don’t know
Comments: ________________________________

Question 24 of 36

All employees know what to do and who to contact if they acquire an injury or illness on the job.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ________________________________

Question 25 of 36

I know who I should contact when safety issues arise.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ________________________________
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 26 of 36
It is not difficult to communicate safety concerns or issues with Main Campus EHS.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: __________________________________________

Question 27 of 36
It is relatively easy to receive assistance from Main Campus EHS.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: __________________________________________

Question 28 of 36
Any training that must be provided by Main Campus EHS is completed in a timely manner.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: __________________________________________
Management Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 29 of 36
It is relatively easy to coordinate schedules with Main Campus EHS.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ________________________________

Question 30 of 36
Main Campus EHS personnel are available during emergency situations.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ________________________________
Section III: Training

Campus Responsibility

Question 31 of 36

Which of the following areas does this campus provide safety training to all employees without assistance from Main Campus EHS?

- [ ] Biosafety
- [ ] Environmental Safety
- [ ] Ergonomics
- [ ] Fire Safety
- [ ] Hazardous Materials
- [ ] Industrial Hygiene
- [ ] Infectious Waste
- [ ] Occupational Safety
- [ ] Sanitation and Pest Control
- [ ] Laboratory and Radiation Safety
- [ ] General Safety Concerns
- [ ] Other: ____________________________

Comments: ____________________________________________
Question 32 of 36

In the past year, this campus has received training in one or more of the following areas. (Services provided by Main Campus EHS)

- [ ] Biosafety
- [ ] Environmental Safety
- [ ] Ergonomics
- [ ] Fire Safety
- [ ] Hazardous Materials
- [ ] Industrial Hygiene
- [ ] Infectious Waste
- [ ] Occupational Safety
- [ ] Sanitation and Pest Control
- [ ] Laboratory and Radiation Safety
- [ ] General Safety Concerns
- [ ] Other: ___________________________

Comments: ____________________________________________
Campus Needs

Question 33 of 36

In the past year, this campus has had a need or a desire for training in one or more of the following areas. (Services provided by Main Campus EHS)

- [ ] Biosafety
- [ ] Environmental Safety
- [ ] Ergonomics
- [ ] Fire Safety
- [ ] Hazardous Materials
- [ ] Industrial Hygiene
- [ ] Infectious Waste
- [ ] Occupational Safety
- [ ] Sanitation and Pest Control
- [ ] Laboratory and Radiation Safety
- [ ] General Safety Concerns
- [ ] Other: ______________________

Comments: __________________________________________

Page 14 of 19
Section IV: Interventions

Campus Responsibility

Question 34 of 36
Are employees checked on a routine basis for verification that they are performing their job(s) safely?
☐ Yes
☐ No
☐ Don’t know
Comments: ____________________________________________

Main Campus EHS Responsibility

Question 35 of 36
In the past year, this campus has received assistance in one or more of the following areas. (Services provided by Main Campus EHS)
☐ Biosafety
☐ Environmental Safety
☐ Ergonomics
☐ Fire Safety
☐ Hazardous Materials
☐ Industrial Hygiene
☐ Infectious Waste
☐ Occupational Safety
☐ Sanitation and Pest Control
☐ Laboratory and Radiation Safety
☐ General Safety Concerns
☐ Other: ____________________________
Comments: ____________________________________________
Campus Needs

In the past year, this campus has had a need or desire for assistance in one or more of the following areas. (Services provided by Main Campus EHS)

- [ ] Biosafety
- [ ] Environmental Safety
- [ ] Ergonomics
- [ ] Fire Safety
- [ ] Hazardous Materials
- [ ] Industrial Hygiene
- [ ] Infectious Waste
- [ ] Occupational Safety
- [ ] Sanitation and Pest Control
- [ ] Laboratory and Radiation Safety
- [ ] General Safety Concerns
- [ ] Other: ______________________

Comments: ______________________

Question 36 of 36
Section V: Safety Climate

Work Safety Scale
(Hayes, Perander, Smecko, & Trask, 1998)

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<tr>
<th>1. Provides enough training programs</th>
<th>6. Provides safe working conditions</th>
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</thead>
<tbody>
<tr>
<td>2. Conducts frequent safety inspections</td>
<td>7. Responds quickly to safety concerns</td>
</tr>
<tr>
<td>3. Investigates safety problems quickly</td>
<td>8. Help maintain clean work area</td>
</tr>
<tr>
<td>4. Rewards safe workers</td>
<td>9. Provides safety information</td>
</tr>
<tr>
<td>5. Provides safe equipment</td>
<td>10. Keeps workers informed of hazards</td>
</tr>
</tbody>
</table>

Does your company have a formal safety program (policies)? (circle answer) Yes No Don't know

If you answered "Yes," please answer the following questions about the safety program (policies):

II. Safety Program (Policies)

Think about your safety program at work. Do you agree or disagree that each of the following words or phrases describes this safety program? Circle one answer for each statement using the scale at the top of the page.

<table>
<thead>
<tr>
<th>1. Workable</th>
<th>6. Unusual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Helps prevent accidents</td>
<td>7. Important</td>
</tr>
<tr>
<td>3. Useful</td>
<td>8. Effective in reducing injuries</td>
</tr>
<tr>
<td>4. Good</td>
<td>9. Doesn't apply to my workplace</td>
</tr>
<tr>
<td>5. Fast rate</td>
<td>10. Doesn't just work</td>
</tr>
</tbody>
</table>

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APPENDIX B: EHS DEPARTMENT PERCEPTIONS OF OCCUPATIONAL SAFETY PRACTICES ACROSS REGIONAL CAMPUSES AT OHIO UNIVERSITY

2014

EHS Department Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University
Tiffany Reynolds
MS Student Industrial and Systems Engineering

TIFFANY REYNOLDS
Ohio University
Russ College of Engineering and Technology
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EHS Department Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Informed Consent

ORGANIZATION
Safety Practices Questionnaire

Please read the following letter completely before starting the survey

Dear Employee:
You have been selected to participate in a survey designed to learn what employees at this organization believe about safety practices on their campus. The information obtained from this survey will enable management to improve the delivery of safety information/training to regional campuses.

This is not a test. There are no right answers. The only right answers are your honest and thoughtful replies. The information obtained will be used to better understand safety practices at regional campuses. We have tested the survey and expect it to take approximately one hour.

PROTECTION OF PRIVACY
The following is furnished to explain why the information is requested and the general uses that the information may be used for:

The purpose of this survey is to better understand employees' views about safety practices on their campus. The survey data will be used for research purposes only. Your individual responses are COMPLETELY CONFIDENTIAL. Summarized data (e.g., averages, percentages), which do not contain individual identifiers, may be provided to management for uses related to improving policies and practices. Participation in the survey is voluntary. No penalty will be imposed for failure to respond to the survey or any particular question. However, in order to obtain an accurate picture of the working environment, your participation in this survey is important, encouraged, and greatly appreciated.

Your cooperation is sincerely appreciated. If you have any questions or concerns about this survey, please contact Diana Schwerha at Ohio University (Schwerha@ohio.edu).

Sincerely yours,

[Signature]

Tiffany Reynolds
MS student, Industrial and Systems Engineering

Safety Perceptions Questionnaire
Ohio University

I understand that the completion of this form has been done voluntarily and is evidence of my consent. I understand that this information may be used in future publications.

(These must be read to the person being interviewed and they must agree before the start of the interview.)
What is the number of employees on this campus? ____________

What is the number of students on this campus? ____________

What is the injury rate on this campus? ____________

Does this campus have a designated individual who is responsible for occupational safety? FT or PT? ____________

How often does this department provide safety services to the regional campuses? ____________
Part II: Safety Practices on this Campus

Section I: Programmatic Activities

Question 11 of 36

Does this campus currently have an established safety and health program?

☐ Yes
☐ No
☐ Don't know

Comments: ____________________________

Question 12 of 36

Are safety audits completed (for the regional campuses) periodically and on an annual basis? (Relative to campus-wide job responsibilities)

☐ Yes
☐ No
☐ Don't know

Comments: ____________________________

Question 13 of 36

If safety audits are not performed, what prevents completion?

☐ Cost
☐ Staffing Constraints
☐ Time Constraints
☐ Other: __________

Comments: ____________________________
EHS Department Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 14 of 36
Does this campus enforce proper procedures and posting guidelines with respect to emergency evacuations at the regional campuses?

☐ Yes
☐ No
☐ Don’t know
Comments: ________________________________

Question 15 of 36
Does this campus currently have a procedure for reporting emergencies to the regional campuses?

☐ Yes
☐ No
☐ Don’t know
Comments: ________________________________

Question 16 of 36
Are emergency exits reviewed for compliance at the regional campuses? (OSHA 1910.37)

☐ Yes
☐ No
☐ Don’t know
Comments: ________________________________
Question 17 of 36
Does this campus compile incident reports from the regional campuses?
☐ Yes
☐ No
☐ Don’t know
Comments: ____________________________

Question 18 of 36
How is safety and health information communicated to employees at the regional campuses?
☐ Meetings
☐ Memos
☐ Emails
☐ Bulletins
☐ Other: ________________
Comments: ____________________________

Question 19 of 36
Does this campus currently communicate safety issues to the regional campuses?
☐ Yes
☐ No
☐ Don’t know
Comments: ____________________________
Section II: Staffing

Question 21 of 36
Does this campus have an individual who is responsible for the development of fire emergencies, drills and evacuations for the regional campuses?

☐ Yes
☐ No
☐ Don’t know
Comments: __________________________

Question 22 of 36
Does this campus have an individual who is responsible for the completion of incident investigations for the regional campuses?

☐ Yes
☐ No
☐ Don’t know
Comments: __________________________
EHS Department Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 23 of 36
Does this campus have a main safety contact on campus that is primarily responsible for all aspects of safety and communication to regional campuses?

☐ Yes
☐ No
☐ Don't know
Comments: ______________________________________

Question 24 of 36
All employees know what to do and who to contact if they acquire an injury or illness on the job.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ______________________________________

Question 25 of 36
I know who I should contact when safety issues arise.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ______________________________________
Question 26 of 36

It is not difficult to communicate safety concerns or issues with the regional campuses.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
Comments: ________________________________

Question 27 of 36

It is relatively easy to provide assistance to the regional campuses.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
Comments: ________________________________

Question 28 of 36

Any training that must be provided by to the regional campuses is completed in a timely manner.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
Comments: ________________________________
EHS Department Perceptions of Occupational Safety Practices across Regional Campuses at Ohio University

Question 29 of 36
It is relatively easy to coordinate schedules with the regional campuses.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ____________________________

Question 30 of 36
EHS Department personnel are available during emergency situations.

☐ Strongly Agree
☐ Agree
☐ Neither Agree nor Disagree
☐ Disagree
☐ Strongly Disagree
Comments: ____________________________
Section III: Training

Campus Responsibility

Which of the following areas does this campus provide safety training to all (relevant) employees?

- [ ] Biosafety
- [ ] Environmental Safety
- [ ] Ergonomics
- [ ] Fire Safety
- [ ] Hazardous Materials
- [ ] Industrial Hygiene
- [ ] Infectious Waste
- [ ] Occupational Safety
- [ ] Sanitation and Pest Control
- [ ] Laboratory and Radiation Safety
- [ ] General Safety Concerns
- [x] Other: ________

Comments: __________________________________________
Main Campus EHS Responsibility

In the past year, this campus has provided training in one or more of the following areas to the regional campuses:

- Biosafety
- Environmental Safety
- Ergonomics
- Fire Safety
- Hazardous Materials
- Industrial Hygiene
- Infectious Waste
- Occupational Safety
- Sanitation and Pest Control
- Laboratory and Radiation Safety
- General Safety Concerns
- Other:

Campus:
- Chillicothe
- Eastern
- Lancaster
- Southern
- Zanesville

Comments: ____________________________
Campus Needs

In the past year, this campus has received a request (from the regional campuses) for training in one or more of the following areas.

- Biosafety
- Environmental Safety
- Ergonomics
- Fire Safety
- Hazardous Materials
- Industrial Hygiene
- Infectious Waste
- Occupational Safety
- Sanitation and Pest Control
- Laboratory and Radiation Safety
- General Safety Concerns

Other: ________________________________

Comments: ________________________________

Question 33 of 36
Section IV: Interventions

Campus Responsibility

Are employees checked on a routine basis for verification that they are performing their job(s) safely?

- Yes
- No
- Don't know

Comments: ________________________________

Main Campus EHS Responsibility

In the past year, this campus has provided assistance to the regional campuses in one or more of the following areas.

- Biosafety
- Environmental Safety
- Ergonomics
- Fire Safety
- Hazardous Materials
- Industrial Hygiene
- Infectious Waste
- Occupational Safety
- Sanitation and Pest Control
- Laboratory and Radiation Safety
- General Safety Concerns
- Other:

Comments: ________________________________
In the past year, this campus has had a need or desire for assistance in one or more of the following areas. (To better assist the regional campus needs)

- □ Biosafety
- □ Environmental Safety
- □ Ergonomics
- □ Fire Safety
- □ Hazardous Materials
- □ Industrial Hygiene
- □ Infectious Waste
- □ Occupational Safety
- □ Sanitation and Pest Control
- □ Laboratory and Radiation Safety
- □ General Safety Concerns
- □ Other: __________________________

Comments: ____________________________________________
Section V: Safety Climate

Work Safety Scale
(Hayes, Perander, Smecko, & Trask, 1998)

<table>
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<tr>
<th>Strongly</th>
<th>Disagree</th>
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I. Management Safety Practices

Think about your management. Do you agree or disagree that each of the following words or phrases describes your management? Circle one answer for each statement using the scale at the top of the page.

1. Provides safety training programs
2. Conducts frequent safety inspections
3. Investigates safety problems
4. Resolves safety problems
5. Provides safe equipment
6. Provides safe working conditions
7. Responds quickly to safety concerns
8. Helps maintain clean workplaces
9. Provides safety information
10. Keeps workers informed of hazards

II. Safety Program (Facilities)

Think about your safety program at work. Do you agree or disagree that each of the following words or phrases describes this safety program? Circle one answer for each statement using the scale at the top of the page.

1. Worthwhile
2. Helps prevent accidents
3. Offers useful information
4. Good
5. First-rate
6. Unnecessary
7. Important
8. Effective in reducing injuries
9. Doesn't apply to my workplace
10. Does not work

References


Appendix A – License Agreement

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Number of figures/tables/illustrations
All
Actual number of figures/tables/illustrations
12
Format
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Expected completion date
May 2014
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INTRODUCTION

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APPENDIX C: WORK SAFETY SCALE

Work Safety Scale

Think about your current job. Using the scale below, please answer the following questions on the following pages. Please write the job title here: ________________________________

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<tr>
<th>Strongly Disagree</th>
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<td>4</td>
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<tr>
<td>3</td>
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</tbody>
</table>

I. Job Safety

Think about your job you indicated above. Do you agree or disagree that each of the following words or phrases describes your job? Circle one answer for each statement using the scale at the top of the page.

1. Dangerous ........................................ 1 2 3 4 5
2. Safe ........................................ 1 2 3 4 5
3. Hazardous ........................................ 1 2 3 4 5
4. Risky ........................................ 1 2 3 4 5
5. Unhealthy ........................................ 1 2 3 4 5
6. Could get hurt easily .................. 1 2 3 4 5
7. Unsafe ........................................ 1 2 3 4 5
8. Fear for health .......................... 1 2 3 4 5
9. Chance of death ....................... 1 2 3 4 5
10. Scary ........................................ 1 2 3 4 5

II. Coworker Safety

Think about the people you work with. Do you agree or disagree that each of the following words or phrases describes these people? Circle one answer for each statement using the scale at the top of the page.

1. Ignore safety rules ............... 1 2 3 4 5
2. Don’t care about others’ safety .............. 1 2 3 4 5
3. Pay attention to safety rules .... 1 2 3 4 5
4. Follow safety rules ............... 1 2 3 4 5
5. Look out for others’ safety ..... 1 2 3 4 5
6. Encourage others to be safe . 1 2 3 4 5
7. Take chances with safety ..... 1 2 3 4 5
8. Keep work area clean ........ 1 2 3 4 5
9. Safety-oriented .................... 1 2 3 4 5
10. Don’t pay attention .......... 1 2 3 4 5

III. Supervisor Safety

Think about your immediate supervisor. Do you agree or disagree that each of the following words or phrases describes your immediate supervisor? Circle one answer for each statement using the scale at the top of the page.

1. Praises safe work behaviors ... 1 2 3 4 5
2. Encourages safe behaviors ..... 1 2 3 4 5
3. Keeps workers informed of safety rules .................. 1 2 3 4 5
4. Rewards safe behaviors ........ 1 2 3 4 5
5. Involves workers in setting safety goals .................. 1 2 3 4 5
6. Discusses safety issues with others .................. 1 2 3 4 5
7. Updates safety rules ............ 1 2 3 4 5
8. Trains workers to be safe .... 1 2 3 4 5
9. Enforces safety rules ............ 1 2 3 4 5
10. Acts on safety suggestions ... 1 2 3 4 5

IV. Management Safety Practices

Think about your management. Do you agree or disagree that each of the following words or phrases describes your management? Circle one answer for each statement using the scale at the top of the page.

1. Provides enough safety training programs .................. 1 2 3 4 5
2. Conducts frequent safety inspections .................. 1 2 3 4 5
3. Investigates safety problems quickly .................. 1 2 3 4 5
4. Rewards safe workers ............ 1 2 3 4 5
5. Provides safe equipment ............ 1 2 3 4 5
6. Provides safe working conditions .................. 1 2 3 4 5
7. Responds quickly to safety concerns .................. 1 2 3 4 5
8. Helps maintain clean work area .................. 1 2 3 4 5
9. Provides safety information .. 1 2 3 4 5
10. Keeps workers informed of hazards .................. 1 2 3 4 5

Does your company have a formal safety program (policies)? (circle answer)  Yes  No  Don’t know
If you answered "Yes," please answer the following questions about the safety program (policies).

V. Safety Program (Policies)

Think about your safety program at work. Do you agree or disagree that each of the following words or phrases describes this safety program? Circle one answer for each statement using the scale at the top of the page.

1. Worthwhile ........................................ 1 2 3 4 5
2. Helps prevent accidents ........ 1 2 3 4 5
3. Useful ............................................. 1 2 3 4 5
4. Good .................................................. 1 2 3 4 5
5. First-rate ........................................... 1 2 3 4 5
6. Unclear ............................................. 1 2 3 4 5
7. Important .......................................... 1 2 3 4 5
8. Effective in reducing injuries ...................... 1 2 3 4 5
9. Doesn’t apply to my workplace .......................... 1 2 3 4 5
10. Does not work ..................................... 1 2 3 4 5

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(Hayes, Perander, Smecko, & Trask, 1998)
APPENDIX D: DEMOGRAPHICS

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<td>66%</td>
</tr>
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<td>66%</td>
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<tr>
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<tr>
<td>Annually</td>
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<td>Semi-Annually</td>
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<td>Rarely</td>
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<tr>
<td>Other</td>
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APPENDIX E: PROVIDED FOR/RECEIVED ASSISTANCE: CAMPUS PERCEPTIONS

EHS Services

Provided Assistance to the Regional Campuses

Received Assistance from EHS

EHS Services

Campus 2 Perceptions

Received Assistance from EHS

EHS Services

Campus 3 Perceptions

Received Assistance from EHS

EHS Services

Campus 4 Perceptions

Received Assistance from EHS

EHS Services

Campus 5 Perceptions

Received Assistance from EHS

EHS Services

Campus 6 Perceptions

Received Assistance from EHS
APPENDIX F: PROVIDED FOR/RECEIVED ASSISTANCE: A COMPARATIVE ANALYSIS
APPENDIX H: REQUESTS FROM/NEED OR DESIRE FOR TRAINING: A COMPARATIVE ANALYSIS

Requests from/Need or Desire for Training in Biosafety

Requests from/Need or Desire for Training in Environmental Safety

Requests from/Need or Desire for Training in Ergonomics

Requests from/Need or Desire for Training in Fire Safety

Requests from/Need or Desire for Training in Hazardous Materials

Requests from/Need or Desire for Training in Industrial Hygiene
APPENDIX I: NEED OR DESIRE FOR ASSISTANCE: CAMPUS PERCEPTIONS

General Safety Concerns
Laboratory and Radiation Safety
Sanitation and Pest Control
Occupational Safety
Infectious Waste
Industrial Hygiene
Hazardous Materials
Fire Safety
Ergonomics
Environmental Safety
Biosafety

Campus 2 Perceptions
Campus 3 Perceptions
Campus 4 Perceptions
Campus 5 Perceptions
Campus 6 Perceptions

Need or Desire for Assistance from EHS
APPENDIX J: NEED OR DESIRE FOR ASSISTANCE: A COMPARATIVE ANALYSIS

Need or Desire for Assistance in Biosafety

Need or Desire for Assistance in Environmental Safety

Need or Desire for Assistance in Ergonomics

Need or Desire for Assistance in Fire Safety

Need or Desire for Assistance in Hazardous Materials

Need or Desire for Assistance in Industrial Hygiene

Need or Desire for Assistance in Infectious Waste

Need or Desire for Assistance in Occupational Safety
All Campus Perceptions
Need or Desire for Assistance in Sanitation and Pest Control

Need or Desire for Assistance in Laboratory and Radiation Safety

Need or Desire for Assistance in General Safety Concerns
APPENDIX K: PROVIDED FOR/RECEIVED TRAINING: CAMPUS PERCEPTIONS

General Safety Concerns
Laboratory and Radiation Safety
Sanitation and Pest Control
Occupational Safety
Infectious Waste
Industrial Hygiene
Hazardous Materials
Fire Safety
Ergonomics
Environmental Safety
Biosafety

EHS Services
Campus 2 Perceptions
Received Training from EHS

EHS Services
Campus 3 Perceptions
Received Training from EHS

EHS Services
Campus 4 Perceptions
Received Training from EHS

EHS Services
Campus 5 Perceptions
Received Training from EHS

EHS Services
Campus 6 Perceptions
Received Training from EHS
APPENDIX L: PROVIDED FOR/RECEIVED TRAINING: A COMPARATIVE ANALYSIS
Provided for/Received Training in Sanitation and Pest Control

Provided for/Received Training in Laboratory and Radiation Safety

Provided for/Received Training in General Safety Concerns
APPENDIX M: ON-SITE TRAINING
APPENDIX N: SUM SAFETY CLIMATE PERCEPTIONS

<table>
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<tr>
<th>Topic</th>
<th>Rating Distribution</th>
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<tr>
<td>Provides Enough Safety Training Programs</td>
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</tr>
<tr>
<td>Conducts Frequent Safety Inspections</td>
<td>Strongly Agree: 9</td>
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<tr>
<td>Investigates Safety Problems Quickly</td>
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<tr>
<td>Rewards Safe Workers</td>
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<tr>
<td>Provides Safe Working Conditions</td>
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<tr>
<td>Responds Quickly to Safety Concerns</td>
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<tr>
<td>Helps Maintain Clean Work Areas</td>
<td>Strongly Agree: 9</td>
</tr>
<tr>
<td>Provides Safety Information</td>
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