

## Training, Education, Awareness and Competence

### Short description

This section details the means for the development, implementation, evaluation and continuous improvement of the Centennial HSEQ training and education program.

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## 1 Objective and area of application

The objective of the Centennial HSEQ training, education, awareness and competence section is to ensure that HSEQ training assists Centennial employees in becoming more effective and efficient in their duties while also meeting all regulatory obligations and requirements.

Each business unit of Centennial shall introduce an HSEQ training system to ensure that managers, employees and subcontractors are adequately trained in accordance with statutory requirements and HSEQ issues that are relevant to their work:

- Each employee must receive workplace and occupation-specific orientation depending on HSEQ hazards/ risks determined from the business operating area, legal and other contractual qualification requirements
- Any required refresher courses including repeat examination deadlines must be apparent from the system and must be systematically followed up
- Records of workplace and occupation-specific qualification requirements, personal education, training, skills and experience shall be maintained and regularly updated
- The contents from training or briefings and instructions as well as the results of tests shall be documented
- The effectiveness of actions taken (e.g. instruction and training) are verified through appropriate and timely audit procedures
- All Centennial employees and subcontractors shall hold and document weekly safety “toolbox” meetings. The records of these meetings on project sites shall be maintained in the superintendent’s jobsite binder. Recording weekly safety meetings in Centennial office locations may be maintained electronically

All Centennial employees and business partners will be adequately instructed and trained on HSEQ issues that affect them, as well as safe working procedures that are applicable to the work activity. An HSEQ training needs assessment will be completed and instructional design will be developed as follows:

- Determine desired outcomes derived from training
- Develop HSEQ training program components
- Deliver HSEQ training
- Evaluate areas of potential improvement
- Implement improvements

## 2 Superior and additional applicable documents

1000\_GP\_11\_01\_en\_5.0 Global Policy on Health, Safety, Environment/Sustainability and Quality (HSEQ)

1000\_GS\_11\_05\_en\_1.0 Global HSEQ Standard on HSEQ Consequence Management

1000\_GS\_11\_12\_en\_1.0 Global HSEQ Standard on New Employees Induction

ANSI/ASSE Z490.1 2009 - American National Standard: Criteria for Accepted Practices in Safety, Health and Environmental Training

This section of the HSEQ Manual applies to all Centennial employees and subcontractors who are performing work in Centennial facilities and project sites. There may be more

stringent requirements than this section as defined by specific State, local or contact specific requirements. If there is a conflict between this section and other applicable regulations, the more stringent will apply.

### 3 Definitions

The following definitions of terms are important for an understanding of this section.

Term	Definition
Centennial	All Centennial employees, joint venture employees, subcontractors and business partners
HSEQ	Health, Safety, Environment and Quality
Training Needs Assessment	A tool used to determine whether training is an appropriate response to an organizational need.
PDCA	Plan, do, check, act process of continuous improvement.
ANSI Z490.1	American National Standard Institute- Criteria for Accepted Practices in Safety, Health and Environmental Training.
LMS	The Learning Management System is a software application for the administration, documentation, tracking, reporting and delivery of an e-learning education course or training program.
PSO	Project Safety Officer
Training aid	Devices such as charts, video, audio, diagram etc. intended to enhance the participant's retention and achievement of the course learning objectives.
USACE	United States Army Corps of Engineers

### 4 Benefits of HSEQ training and education

Effectively delivered HSEQ training and education can have a significant impact on the overall performance of the organization. Investing in an effectively designed training program will reduce fatalities, injuries, environmental damage and quality defects. This will result in cost savings in a variety of areas, such as lowering workers' compensation costs and medical expenses, avoiding regulatory penalties and fines and reduced quality/warranty issues.

Benefits of effective HSEQ training and education:

- Fewer accidents/incidents/defects
- Reduced costs
- Reinforcement of Centennial HSEQ organizational goals, objectives and procedures
- Improved HSEQ performance
- Customer recognition and satisfaction
- Compliance with regulatory bodies and contract specifications
- Improved morale and increased productivity
- Improved subcontractor HSEQ performance

## 5 Assessing the need for HSEQ training

When designing an HSEQ training and education program to provide skills, knowledge, or abilities related to a job or task, it is essential to know how the job is actually performed versus how the job should be performed. A needs assessment will identify the skills workers need to possess in order to do their jobs effectively, efficiently, and safely while meeting our customers or clients expectations and contractual obligations. It may also identify non-training problem areas that should be addressed in order to improve overall performance. The training needs assessment results will help to determine which skills to include in a training program and who the target audience or training participants will include.

The HSEQ needs assessment should help answer the following questions:

- What are the potential hazards for employees, subcontractors, vendors, customers, the public or the environment?
- How can HSEQ training assist in narrowing the gaps between expectation and actual performance?
- What is the target audience and how will HSEQ training improve job performance?

In the assessment of HSEQ training needs it is important to define what level of training, education or experience is required to carry out specific job functions or tasks. Regulatory HSEQ bodies frequently use specific terms to identify the different categories of workers who must meet specific training, educational and/or experience requirements:

- **Certified person:** has successfully completed specialized training and the training has been certified in writing by a professional organization
- **Designated person:** has received specialized training in a particular task and is assigned by the employer to perform that task in specific operations
- **Authorized person:** is someone permitted by an employer to be in a regulated area or assigned by an employer to perform a specific task or to be in a specific location at a jobsite and has the appropriate training to perform the task and recognize hazards related to the task or surroundings
- **Competent person:** is someone who has broad knowledge of worksite safety and health issues, is capable of identifying existing and predictable worksite hazards, and has the appropriate authorization to eliminate or correct the hazards
- **Qualified person:** is someone who, through training and professional experience, has demonstrated the ability to resolve problems relating to a specific task or process

## 6 HSEQ trainer competencies

According to ANSI Z490.1-2009, trainers shall be "competent" in developing and implementing the various elements of an HSEQ training and education program. Trainers can gain competency by achieving an appropriate level of technical knowledge, skills, and abilities in the subjects they teach. They can gain these skills through training, continuing education and HSEQ training design and delivery experience.

All trainers (whether Centennial or third party) shall be competent in effective HSEQ training delivery techniques and methods that are appropriate to employee learning preferences. They shall be able to apply adult learning principles appropriate to the target audience and the course learning objectives. Centennial will maintain trainer course completion certificates, experience records, licensing, and other documents that demonstrate trainer competency.

HSEQ team members who will design, deliver, manage and evaluate the Centennial HSEQ training and education program will be competent in the following areas:

- Professional foundation
  - Communicate effectively (visual, oral and written form)
  - Update and improve professional knowledge and skill
  - Establish and maintain professional credibility
  - Apply current research and best practices of instructional design
- Planning and preparation
  - Conduct HSEQ training needs assessments
  - Plan and prepare instructional methods and materials for delivery to training participants
  - Evaluate target populations of training participants
  - Determine training course content
- Instructional methods and strategies
  - Stimulate participant involvement and learning
  - Promote retention of knowledge and skills in accordance with established learning objectives
  - Assess the achievement of learning objectives
  - Revise HSEQ training on a periodic basis to promote continuous improvement

Centennial HSEQ instructors will be required to maintain professional competency by participating in continuing education, professional development programs or through successful completion of refresher courses and having periodic review by HSEQ peer group. The review by the HSEQ peer group should include observation of the instructor's delivery, a review of those observations with the trainer, review of course curriculum and materials and an analysis of evaluations completed by the students during the previous review period.

## **7 Delivery of HSEQ training and education**

The Centennial HSEQ trainer or third party HSEQ trainer will use delivery methods and training aids as specified in the course development in a manner that supports the student achievement of course learning objectives.

HSEQ training and delivery of training will include:

- Trainer planning and preparation prior to delivery
- Management of the learning environment
- Effective use of training aids and learning techniques
- Application of adult learning principles appropriate for the target audience
- Feedback and communication for continuous improvement

### **7.1 Learning management system (LMS)**

Centennial utilizes a learning management system as a supplement to classroom HSEQ training. The LMS includes assistance in HSEQ training administration, documentation, tracking and delivery of some HSEQ training and education courses.

The Centennial LMS is the framework that delivers and manages the instructional content and includes processes for:

- Student Registration and Administration

- Training Event Management (i.e., scheduling, tracking, and Web Based Training delivery)
- Curriculum and Certification Management
- Skills and Competencies Management
- Skill Gap Analysis
- Individual Development Plan
- Training Record Management

## **8 HSEQ training evaluation process**

The Centennial HSEQ training and education program will have an effective means to evaluate the program to ensure it is meeting the required objective of improving job performance and meeting regulatory requirements.

When evaluating the training process, some of the elements to review include but are not limited to the:

- Training program management
- Criteria for course completion
- Achievement of learning objectives
- Training processes
- Effectiveness of training delivery
- Training results

## **9 Documentation and recordkeeping**

An important element of the Centennial HSEQ training and education program is proper record keeping and documentation procedures. Certain regulatory bodies require that records be maintained and kept as evidence of completion of required training.

The Centennial HSEQ training and education recordkeeping system will include the following:

- Records will be retrievable, readily identifiable, and maintained in an orderly manner
- Records will be current, accurate, legible, and dated
- Records will be retained for the duration of employment or as required by regulatory bodies
- Records will meet all applicable regulatory requirements
- Records will indicate dates for required refresher or renewal training

## **10 HSEQ certifications**

Centennial and many of our customers and clients rely on the certification process to verify competency and/or qualification to serve in HSEQ roles on projects or contracts. Accredited HSEQ certification programs set standards and evaluate employees against those standards. For specific HSEQ training needs and requirements, see the HSEQ Master Training Register. The HSEQ Master Training Register shall be maintained by the HSEQ staff or their designee.

## 10.1 Mandatory HSEQ certifications

The mandatory HSEQ requirements for all field employees include current certifications in the following:

- Cardio pulmonary resuscitation and first aid (CPR/FA)\*
  - Renewed every two years
- Occupational Safety and Health Administration 30 hour construction (OSHA 30)
  - Renewed every two years
- USACE Construction Quality Management for Contractors (CQM)
  - Renewed every five years (USACE or in-house refresher)
- Hazardous Materials (Asbestos, Lead, Mold and Silica)
  - Renewed every two years

\*Note: CPR/FA training is mandatory for all Centennial employees and shall be offered using the conventional “classroom” style which includes training such as lecture, demonstration, practical exercise and examination. Acceptable organizations and certifications for CPR/FA include the Red Cross, American Heart Association, Medic First Aid, ASHI or any other organization that adheres to the training standards of the International Liaison Committee on Resuscitation. Online CPR/FA certifications do not meet these standards.

## 10.2 HSEQ professional certifications

Centennial and our customers recognize several advanced HSEQ certifications from outside certifying bodies. Certifying bodies that offer advanced HSEQ certifications requirements often include an education component, professional HSEQ experience, demonstrating knowledge of professional HSEQ practice, and passing examination(s). Professional HSEQ credential holders must maintain their credential(s) through continuing education.

Examples of agencies offering professional HSEQ certifications include but are not limited to:

- The Board of Certified Safety Professionals (BCSP)
- American Board of Industrial Hygiene (ABIH)
- International Risk Management Institute (IRMI)
- U.S. Green Building Council (USGBC)
- American Hospital Association (AHA)
- National Registry of Environmental Professionals (NREP)

Examples of professional HSEQ certifications include but are not limited to:

- Certified Safety Professional (CSP)
- Certified Industrial Hygienist (CIH)
- Associate Safety Professional (ASP)
- Safety Management Specialist (SMS)
- Construction Health and Safety Technician (CHST)
- Safety Trained Supervisor (STS)
- Certified Healthcare Safety Professional (CHSP)
- Construction Risk and Insurance Specialist (CRIS)
- Certified Environmental, Safety and Health Trainer (CET)
- Leadership in Energy and Environmental Design (LEED)
  - LEED AP
  - LEED Green Associate
- Certified Healthcare Constructor (CHC)
- Certified Environmental and Safety Compliance Officer (CESCO)

## 11 New employee HSEQ orientation

All Centennial employees shall complete the New Employee HSEQ Orientation within one week of employment. The New Employee HSEQ Orientation consists of the following components:

- Introduction to HSEQ
- HSEQ organizational structure
- HSEQ program goals and objectives
- HSEQ policy at Centennial
- HSEQ Manual and intranet
- Employee participation
- Incidents and near misses
- Incident and near miss reporting
- Incident investigation and root cause analysis
- HSEQ training
- Risk assessment and operations
- Activity Hazard Analysis
- Safety meetings
- Personal protective equipment requirements
- Subcontractor safety requirements
- Worksite inspections
- Fall hazards
- Struck by hazards
- Caught-in or between hazards
- Electrical hazards
- Fire prevention and protection
- Global Harmonization System

## 12 Project Safety Officer training

Each office will have a Project Safety Officer (PSO) designated by management in consultation with the HSEQ Department. The PSO plays an important role ensuring project compliance and interacting with the HSEQ Department on procedures and incidents. The PSO will be enrolled into the PSO Learning Academy, which entails a safety influenced curriculum to continually support the PSO role and emphasizes on the Focus Four workplace hazards (Falls, Electrical, Struck by and Caught in or between).

## 13 Amendment history

Date	Version	Revised content
01.02.2014	1.0	Initial Preparation
01.08.2015	1.1	Addition of "new employee HSEQ orientation" - paragraph 11
01.01.2016	1.2	Update on CPR/FA training requirements - paragraph 10.1
04.01.2016	1.3	Updated OSHA 30 "renewed every two years" - paragraph 10.1
05.24.2016	1.4	Updated paragraph 11, "one week" after employment
10.20.2017	1.5	Update on new SMS (Safety Management Specialist) paragraph 10.2
01.01.2018	2.0	Update to Paragraph 2 Superior Documents (add the Group Policy and Global Standards), Paragraph 3 Definitions (Centennial), Paragraph 6 (directive) and Paragraph 10.2 HSEQ professional certifications (addition of AHA, NREP, CHC and CESCO)
11.01.2018	2.1	Paragraph 12 Project Safety Officer training (new paragraph)
07.01.2019	2.2	Update to Paragraph 10.1 Mandatory HSEQ Certifications

## 14 Appendix

There are no appendices to this section.