

CHAPTER 6 – TRAINING

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CHAPTER 6 – TRAINING

A. INTRODUCTION

1. Safety information and training must be effectively communicated to staff to ensure that a safe operating environment becomes a regular and essential part of conducting business. The SI objective is to create and sustain positive cultural and behavioral approaches in using safe work practices for the employees' personal safety and that of their coworkers. This is a key element of the SI goal of zero occupational injuries and illnesses.
2. Safety training requirements are comprehensive. Senior management needs to set the culture and climate on ways and means to lead and support their safety program. Staff and supervisors need training on the hazard controls and environmental compliance requirements specific to their job tasks and those under their purview. Safety Coordinators and safety committee members need additional skills in program management and self-assessments.

B. CHAPTER-SPECIFIC ROLES AND RESPONSIBILITIES

1. Directors:
 - a. Ensure Safety Coordinators and safety committee members are provided with the necessary training to assist them in accomplishing their assigned duties and fulfilling their training plan requirements.
 - b. Ensure sufficient resources are available so that assigned staff receive the safety training required by this *Manual*.
 - c. Ensure safety training is conducted as required by this Manual and applicable OSHA standards.
2. Safety Coordinators:
 - a. Assist the unit supervisors to identify employees requiring safety training and developed an individual unit training matrix (see [Attachment 1 Training Matrix Tracker](#) for example) per the requirements of this manual and addresses the specific operational hazard identified through worksite hazard assessments. Ensure that initial and refresher training is provided according to the deadlines established per the requirements of this Manual.

- b. Develop employee safety training programs to fulfill requirements of this Manual and applicable OSHA standards.
 - c. Assess the effectiveness of the training received, as demonstrated by the proficiencies and understanding of the trained employees, at the conclusion of training sessions and during the annual Safety Coordinator facility inspections and/or self-assessments.
 - d. Maintain and track an auditable system of employee training records, to ensure that all staff receive the required training and are current with any required refresher training. Provide supervisors with feedback on unit participation.
 - e. Ensure copies of completed safety training attendance sheets with assigned SHE code(s) are submitted to SI_Safety_Training@si.edu to be documented into PeopleSoft. Maintain a copy of attendance sheets as backup documentation.
3. Supervisors:
- a. Assist the Safety Coordinator in developing a departmental training matrix that includes any safety training required by this *Manual* or otherwise specific to their workplace, to identify the employees requiring applicable training, and to properly evaluate the effectiveness of their training programs.
 - b. Ensure that employees under their purview receive safety training identified in the training matrix developed above and within the established timeframes, including job specific safety orientation and job specific training.
 - c. Provide employees and opportunity to be involved in SI and unit safety program activities such as safety committees, and OSHEM/vendor sponsored training. Solicit employee input on types of additional safety training they would benefit from, and obtain requested training for them through the facility Safety Coordinator.
 - d. Maintain a copy of your unit specific training matrix and documentation of training provided to assigned employees as required by this Manual.
 - e. Ensure Safety Coordinator is aware of any new employees who have not had safety training.
4. Employees and others covered by the scope section of [Chapter 1, "Overview"](#), of this Manual shall attend required safety training and apply the

lessons-learned and safe work practices relevant to their assigned tasks.

5. Office of Safety, Health and Environmental Management (OSHEM):
 - a. Develop SI safety training protocol as required by this Manual and initiate special emphasis programs to address potential hazards of unique and evolving health and safety activities.
 - b. When requested, assists facility Safety Coordinators in the development of their facility training programs, and coordinate the training needs of the SI.
 - c. Assess organizational training program effectiveness during the annual Management Evaluation and Technical Reviews (METRs).

C. IDENTIFICATION OF EMPLOYEES REQUIRING SAFETY TRAINING

1. Supervisors will identify and document the names employees requiring training in their departmental training matrix and provide the information to the Safety Coordinator. General requirements are included in section E of this Chapter and topic-specific requirements are detailed in the operational topic chapters of this Manual and in [Attachment 2, SI Safety, Environmental and Health Training Requirements Guide](#).
 - a. Individuals will be provided training commensurate with their safety responsibilities in the organization (e.g., senior management, new employees, supervisors, safety committee members).
 - b. Individuals will be provided training based on their job assignments and anticipated hazard potential as identified through hazard assessments (such as the Job Hazard Analysis process described in [Chapter 4, "Safety Risk Management Program"](#), of this Manual) which will identify specific safety training requirements.
2. Results of occupational injury, illness and incident (near miss) investigations will be reviewed by supervisors and Safety Coordinators to determine if any additional or revised safety training is needed to help prevent recurrence of a similar event. The OSHEM staff will provide additional expertise for selected incidents or at the request of the facility

D. TRAINING DELIVERY

1. Responsible training providers should not rely solely on generic, "packaged"

training programs in meeting their training requirements. In an effective training program, it is critical that trainees have the opportunity to ask questions of experienced individuals where material is unfamiliar to them. Equally important is the use of hands-on training and exercises to provide trainees with the opportunity to become familiar with equipment and safe practices in a non-hazardous setting.

E. TRAINING REQUIREMENTS

1. Training for Senior Management Staff. (Director and Associate Director level positions)
 - a. Senior managers will attend, within 90 days of appointment, a Safety Management Course with a refresher every 5 years. This Safety Management course is provided by OSHEM through OHR. This may be satisfied by attending Supervisor Safety training and associated refresher.
 - b. This course will detail senior management roles and responsibilities in developing and implementing the elements of a comprehensive safety program within their organization (per [Chapters 2, “Roles and Responsibilities”](#) and [3, “Elements of a Comprehensive Safety, Health and Environmental Management Program”](#), of this *Manual*).
 - c. It is recommended that Senior managers attend new employee safety orientation and any other facility-specific training to help display visible support of the facility safety program.
2. Training for Supervisors. Within 90 days of appointment, with a refresher every 5 years, supervisors will complete “Supervisor Safety Training”, provided by their Safety Coordinator or OSHEM. Occupational safety and health training for supervisors shall include, at minimum, information addressed in OSHEM’s Training Lesson Plans (go to [Link](http://ofeo.si.edu/safety_health/Training/training_packages.asp)).
http://ofeo.si.edu/safety_health/Training/training_packages.asp
3. New Employee Safety Orientation.
 - a. Safety orientation will be provided to all new employees, defined as all individuals covered by section B.4 in this chapter who are:
 - (1) New to the SI,
 - (2) Returning to the SI after a break in service, and
 - (3) Those that have been transferred to a different building within the SI.
 - b. New employee safety orientation will be presented in 3 phases (3.c, 3.d

and 3.e below), the first on the day of hire, the second within 5 days of assignment and the third within 30 days.

- c. Initial SI Safety Orientation to be conveyed during the Office of Human Resources (OHR) New Employee Orientation on the day of hire.
- d. Job Specific Safety Orientation to be conveyed by the supervisor within 5 days of assignment. At a minimum, this information will include:
 - (1) Safety and security points of contact in the facility.
 - (2) Fire, medical and other emergency response procedures, nearest exits, and assembly points.
 - (3) Procedures for reporting hazards, accidents, injuries/illnesses and near misses.
 - (4) Responsibilities under OSHA to follow SI safety regulations.
 - (5) Hazards present or likely to be encountered with materials or equipment used in the performance of their duties.
 - (6) For SI locations with limited access to emergency assistance (e.g., FLWO, Hilo, STRI, Belize) the information needs to include any specific emergency response procedures pertinent to that location (e.g., medical response/evacuation, wildfire response and boating safety).
- e. Site Safety Orientation to be conveyed by the Safety Coordinator within 30 days of assignment to the facility; it should be a thorough safety orientation that reviews the management, programs, and requirements of their assigned facility. At a minimum, this training shall include information addressed in OSHEM's training lesson plans at: http://ofeo.si.edu/safety_health/Training/docs/CORE_Ch6_Site_Safety_Orient.pdf
- f. Short-term authorized personnel (such as interns, researchers etc.) will receive basic safety information pertinent to the location and purpose of their work, prior to or on the day of the start of their business with the SI and prior to actually working. As a practical matter, the degree of detail will depend on the level of direct supervision exercised by the SI staff sponsoring their visit, or the provisions of their contract. At a minimum, this information will include:
 - (1) Fire, medical and other emergency response procedures including the emergency phone number of the facility, nearest exits, and assembly

points.

(2) Immediate hazards present or likely to be encountered from materials or equipment in the work area.

(3) Reporting procedures for hazardous work situations, accidents or other incidents.

4. Job-Specific Safety Training

a. Job-specific safety training based on the organization's training matrix and this *Manual* will be provided by the supervisor, with assistance from the Safety Coordinator to all persons prior to them beginning work activities.

b. Retraining, or refresher training, will occur when:

(1) Required by SI policy, required by regulation and/or detailed in specific operational chapters of this *Manual* and [Attachment 2 SI Safety, Environmental and Health Training Requirements Guide](#).

(2) New process, material or equipment is introduced to the work area.

(3) Changes have occurred in applicable safety standards or workplace procedures that render the original training obsolete.

(4) An employee has demonstrated inadequacies in their understanding, knowledge, or skill in the use of equipment, tools, or recognized safe procedures.

(5) An employee has been reassigned to different duties, requiring different safety skills.

(6) An incident occurs which identifies hazards or work tasks that were not originally identified through hazard analysis or safety training.

5. Construction Safety Training. Construction safety training is required for SI staff (particularly those designated as Contracting Officer's Technical Representatives –COTRs) who are directly responsible for supervision and direction of construction contracts, regardless of their size. This training is also strongly recommended for Exhibit Fabricators, Building Managers, and those staff working in construction-related trades. Training topics will include:

a. Hazard recognition and identification.

b. OSHA Construction Safety Standards.

(Classes taught by SI will also include):

- c. Overview of SI construction safety practices.
 - d. Zero injury techniques.
 - e. Protection of the public during construction.
 - f. Staff safety during construction.
6. Safety Awareness. Each supervisor will ensure that safety awareness information is provided, or emphasized whenever necessary or appropriate, and on a regular basis, at least monthly.
- a. The sessions or information should be appropriate in nature to the operation and identified hazards. Examples would range from a monthly newsletter safety article for an office environment to a review of safety glove selection and care for a laboratory environment.
 - b. Employees should be encouraged to provide topics for these safety awareness sessions, and provided opportunities to research topics and lead discussions on safety topics they feel are pertinent to their job.
 - c. The Safety discussions are to include (when applicable) a review of the causes and lessons-learned from any accidents or near-misses that have recently occurred (this is with the affected employees permission).
 - d. General fire prevention and life safety as it pertains to their work area is to be discussed periodically.
7. Training for Safety Coordinators. Full-time and collateral-duty Safety Coordinators should strive to fulfill professional development plans described in Attachment 3. OSHEM will provide each coordinator, within 90 days of appointment, an overview of SI safety policy and procedures, and training on this *Manual*.
8. Training for Safety Committees. Safety Committee training is critical to the effectiveness of the organization's safety program. Safety committee members will receive training from the Safety Coordinator to enable them to fulfill their responsibilities as described in Chapter 2, "Roles and Responsibilities", of this *Manual*. Training is to be provided prior to the safety committee member's first inspection, as described in Chapter 5, "Safety Assessment, Log of Deficiencies and Corrective Action Plan", of this *Manual*. Training topics shall include, as a minimum, information addressed in OSHEM's training lesson plans at http://ofeo.si.edu/safety_health/Training/docs/CORE_Ch6_Safe_Comm.pdf

Senior Management (Directors and Associate Director's) should also attend this training to enable them to understand how their Safety Committee should

function.

9. Training for Office of Protection Services (OPS) security personnel. In addition to the OPS safety and security training matrix. OPS security personnel shall be trained by OPS in the detection and reporting of fire hazard conditions in accordance with OPS-31, "Fire Prevention and Awareness".

F. VERIFICATION AND EVALUATION

1. Formal hazard-specific training courses required by this *Manual* will include a means of verifying that the course material was completed. The trainer is to establish the criteria for passing the course (such as written or verbal quizzes, or successful completion of hands-on exercises). The trainer shall also solicit course evaluation feedback from the participants in an effort to improve the quality of the training.
2. Proper application of training concepts learned will be verified by the supervisor through practical observations in the workplace, and by the Safety Coordinator during workplace inspections and program assessments, by observation and interviews, and through analysis of accident and incident reports. Additional training may be recommended by the supervisor and/or Safety Coordinator based on results of this evaluation.

G. RECORDKEEPING

1. Documentation of all occupational safety and health training will be maintained by the supervisor and Safety Coordinator and will include: name and signature of participant(s), date, the title and basic objectives of the training program and the name (and signature if feasible) of the trainer. The Safety Coordinator shall verify all training as part of the facility program safety program self-assessment process.
2. Copies of completed safety training attendance sheets shall be submitted to SSafetyTraining@si.edu to be documented into PeopleSoft. Safety Coordinators and supervisors can run training reports via PeopleSoft to assist in managing their training programs.
3. Safety, health and environmental training records shall be maintained by the supervisor and/or Safety Coordinator for a minimum of five years unless superseded by a more stringent regulatory requirement. Training retention requirements are detailed in individual operational chapters of this *Manual*, as well as summarized in [Chapter 8, "Program Reporting and Recordkeeping Procedures"](#).

Training Matrix Tracking and Performance

Attachment 1

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Department Name:	Job Specific Safety Orientation (Initial) (Supervisor)	Site Safety Orientation (Initial) (Safety Coordinator)	Supervisor Safety Training (Every 5 Years)	Fire Protection & Life Safety (Annual) Supervisor	Hazard Communication (Annual) (Safety Coordinator/Supervisor)	Personal Protective equipment (PPE) (Initial & As Needed) (Supervisor)	Back Injury Prevention (Initial Risk) (Safety Coordinator/Supervisor)	Machinery /Machine Guarding (Every 3 Years) (Safety Coordinator/Supervisor)	Respiratory Protection (Annual) (OSHEM)	Forklift Training (Every 3 Years) (Certified Instructor)
Employee Name	Date	Date		Date	Date	Date	Date	Date	Date	Date
James Ashton	3/2/2008	4/12/2008	N/A	5/17/2009	7/7/2009	3/10/2008	3/10/2008	4/2/2008	4/18/2009	6/16/2008
Nancy Craig	5/13/2006	5/31/2006	N/A	5/17/2009	7/7/2009	9/23/2007	8/17/2007	N/A	N/A	N/A
Joe Whataguy	3/2/2008	4/12/2008	N/A	5/17/2009	7/7/2009	3/10/2008	3/10/2008	4/2/2008	4/18/2009	6/16/2008
Marty Fischer	7/26/2004	8/1/2004	5/10/2012	5/17/2009		9/23/2007	6/23/2006	9/23/2007	4/18/2009	8/15/2007
John King	5/13/2006	5/31/2006	N/A	5/17/2009	7/7/2009	9/23/2007	6/23/2006	9/27/2010	9/8/2009	
Susan Miller	7/12/2004	8/1/2004	10/8/2011	5/17/2009	7/7/2009	9/23/2009	8/3/2009	N/A	N/A	N/A
Keith Pope	9/3/2005	9/17/2009	N/A	5/17/2009	7/7/2009	9/23/2009	10/16/2009	N/A	N/A	N/A
Dave Smith	9/17/2009	10/5/2007	N/A	5/17/2009	9/23/2007	9/23/2007	10/16/2008	9/27/2010	9/18/2009	11/9/2007
Ronny Lott	1/2/2011	1/2/2011	N/A	1/2/2011	1/2/2011	1/2/2011	1/2/2011	2/13/2011	2/19/2011	N/A
Mister Bigg	1/4/2011	1/4/2011	N/A	1/4/2011	1/4/2011	1/4/2011	1/4/2011	2/13/2011	2/19/2011	N/A
Jimmy Johnson	5/7/2012	5/7/2012	N/A	5/7/2012	6/7/2012	6/10/2012	5/7/2012	5/7/2012	5/7/2012	N/A
Tiger Boods	5/7/2012	5/7/2012	N/A	5/7/2012	6/7/2012	6/10/2012	5/7/2012	N/A	N/A	N/A
Phil Pickleson		8/19/2013	N/A					N/A	N/A	N/A
Bobby Bonder			N/A					N/A	N/A	N/A
# of Staff Required	14	14	2	14	14	14	14	5	5	4
# of Staff Completed	11	13	2	12	11	12	12	5	5	4
Percentage Completed	78.6%	92.9%	100.0%	85.7%	78.6%	85.7%	85.7%	100.0%	100.0%	100.0%

SI Safety, Environmental and Health Training Requirements Guide

**Attachment 2
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SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 1	Overview	Senior Management (Directors & Associate Directors), Safety Coordinator & Supervisor	W/in 90 days of appointment, Refresher every 5 years Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE207
Chapter 2	Roles and Responsibilities	Senior Management, Safety Coordinator & Supervisor	W/in 90 days of appointment, Refresher every 5 years Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE207
Chapter 3	Elements of a Comprehensive Safety, Health and Environmental Management Program	Senior Management, Safety Coordinator & Supervisor	W/in 90 days of appointment, Refresher every 5 years Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE207
Chapter 4	Safety Risk Management Prog	Senior Management, Safety Coordinator & Supervisor	W/in 90 days of appointment, Refresher every 5 years Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE207
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code

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Chapter 5	Safety Assessments, Log of Deficiencies and Corrective Action Plans	Senior Management, Safety Coordinator & Supervisor	W/in 90 days of appointment, Refresher every 5 years Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE220	
Chapter 6	Supervisor Safety Training	All Managers and Supervisors	Once, within 90 days of appointment, then every 5 years	Safety Coordinator; initial assistance from OSHEM	SHE207	
	Initial SI Safety Orientation	All New Employees	Once, day of hire	OSHEM; all Depts at OHR Orientation	SHE200	
	Job Specific Safety Orientation	All New Employees	Once, within 5 days of appointment	Organization, Supervisors	SHE205	
	Site Safety Orientation	Senior Management, All Staff and New Employees	Once, within 30 days of appointment	Organization, Safety Coordinator	SHE201	
	Safety Awareness Training	All Staff and Supervisors	At least monthly	Organization; Supervisors	N/A	
	Safety Committee Training		Safety Committee Members	Prior to member's first facility inspection	Organization; Safety Coordinator	SHE206
			Senior Management	Prior to member's first facility inspection	Organization; Safety Coordinator	SHE206
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code	

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Chapter 6	Safety Coordinator Orientation (Review of SI Safety Manual & Chapter Checklist)	Safety Coordinator	Once, within 90 days of appointment	OSHEM; all Depts	SHE220
	Safety Coordinator Professional Development Training - See Chapter 6, Table 1	Safety Coordinator	See Chapter 6, Table 1	Outside Sources; OSHA, college, vendors	Table 1
	Senior Management Course (Review of Chapters 1-8)	Senior Management	Once, within 90 days of appointment, then every 5 years, or conducted in conjunction w/ Supervisor Safety Training or DOL Report Briefings	OSHEM, OHR TO COORDINATE	SHE203 SHE207
	OSHA 30HR Construction	COTR's	Once, prior to assignment	OSHEM or Vendor	SHE204
	OHS 10HR Construction	Recommended for Exhibit Fabricators and related construction trades	Upon Request	OSHEM or Vendor	SHE202
Chapter 7	Injury/Incident Reporting and Investigation	Safety Coordinator & Supervisor	Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training, Resher as needed	OSHEM or Organization Safety Coordinator	SHE207 SHE223
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 7	Automated Incident Reporting System (AIRS)	Safety Coordinator and Supervisors	Once, within 90 days, Refresher as needed	OCIO; OSHEM	SHE209

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Chapter 8	Program Reporting and Recordkeeping Procedures	Senior Management, Safety Coordinator & Supervisor	Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training, Resher as needed	OSHEM	SHE207
Chapter 9	General Workplace Safety	All Staff and Contractors	Once within 30 days of appointment	Organization; Safety Coordinator, Supervisor	SHE210
Chapter 10	Fall Protection	Authorized Fall Protection Equip Users	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization, " Fall Protection Competent Person" *	SHE211
	Fall Protection Competent Person	Designated Fall Protection Competent Persons	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization, " Fall Protection Competent Person" *	SHE233
Chapter 11	Machinery, Machine Guarding, and Hand and Portable Powered Tools	Affected Employee & Supervisor	Before machine, tool or equipment use. Remedial as needed. Refresher at least every 3 years.	Organization; Safety Coordinator or Supervisors	SHE212
	Portable Hand and Power Tools	Affected Employee & Supervisor	Before machine, tool or equipment use. Remedial as needed. Refresher at least every 3 years.	Organization; Safety Coordinator or Supervisors	SHE228
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 12	Lock-out / Tag-out Program	"Authorized Employee", "Affected Employee" and their Supervisor *	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization; Safety Coordinator or Supervisor	SHE213

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Chapter 13	Materials Handling and Equipment				
	Back Injury Prevention	All Employees conducting Manual Materials Handling & Equip Operations	Before Initial Risk (Incl in Site Safety NEO), Refresher as Needed	Organization; Safety Coordinator or Supervisor	SHE214
	Forklift Operation (Powered Industrial Trucks)	Operator & Supervisor	Before initial use, Operator Evaluation Every 3 years	Qualified Trainer	SHE230
	All other equipment operation (Aerial Lifts)	Affected Employee	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Qualified Trainer/ Competent Person	SHE236
Chapter 14	Hot Work Management and Permit System	Safety Coordinators, Permit Authorizing Individuals (PAI's), Assoc. Director of Construction Management, Resident Engineers, Affected OFMR Supervisors	Once, within 90 days of appointment	OSHEM/Fire	SHE151
		COTR's (related to maintenance & construction)	Once, within 90 days of appointment, then refresher as needed	Associate Director of Construction Management or Immediate Supervisors	SHE152
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 14	Hot Work Management and Permit System	Fire Watch, Affected Employees (i.e. Exhibit Fabricators, Plumbers) & Supervisor	Once, within 90 days of appointment, then refresher as needed	Organization; Safety Coordinator	SHE153

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Chapter 15	Confined Space Entry	Authorized Entrants, Attendants, Entry Team Supervisor; Safety Coordinators and COTR	Before initial risk, then annually	OSHEM/EMD/Safety Coordinator	SHE551
	Confined Space Entry Refresher	Authorized Entrants, Attendants, Entry Team Supervisor; Safety Coordinators and COTR	Annually	OSHEM/EMD/Safety Coordinator	SHE550
Chapter 16 TBD	Electrical Safety	Qualified Workers	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Qualified Person	SHE235
Chapter 17	Personal Protective Equipment	Affected Employee & Supervisor	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization; Supervisors	SHE217
Chapter 18	Respiratory Protection	Affected Employee & Supervisor exposed to inhalation hazards Authorized to wear Respirator Equip	Before initial risk, then annually	OSHEM/EMD	SHE240
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 19	Chemical Handling, Storage & Shipment	Affected Employee & Supervisor	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization; Safety Coordinator; Supervisor	SHE533

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Chapter 20	Compressed, Liquefied and Cryogenic Gases	Affected Employee & Supervisor	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization; Safety Coordinator, Supervisor	SHE218
Chapter 21	Paint and Spray Finish Operations	Affected Employee & Supervisor	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization, Safety Coordinator, Supervisor	SHE219
Chapter 22	Asbestos	Zone & Building Managers, Safety Coordinator, Affected Employee & Supervisor	Before initial risk, then annually	OSHEM/EMD	SHE500
Chapter 23	Lead-Containing Materials	Zone & Building Managers, Safety Coordinator, Affected Employee & Supervisor	Before initial risk, then annually	OSHEM/EMD	SHE515
Chapter 24	Collections-Based Hazards	Affected Employee & Supervisor	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization, Safety Coordinator, Supervisor	SHE530
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 25	Chemical Hazard Communication	Affected Employee & Supervisor	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization, Safety Coordinator, Supervisor	SHE531 SHE536

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Chapter 26	Laboratory Safety	Employees/supervisors working in chemical laboratories	Before Initial Risk, Refresher when: Changes in Conditions, Processes, Equip or Diminished skills, Knowledge, Performance	Organization, Supervisor	SHE532
Chapter 27	Ventilation for Health-Hazard Control	Affected Supervisor/Employees using local exhaust ventilation for the control of chemical contaminants	Before initial risk (as part of HazCom or Lab Training)	OSHEM/EMD; Organization; Safety Coordinator	SHE534
Chapter 28	Environmental Management Systems	Senior Management, Qualified Responsible Person (Environmental)	Before initial risk	OSHEM/EMD	SHE400
Chapter 29	Hazardous Waste Management	Qualified Responsible Person (Environmental) & Affected Employee	Annually	OSHEM/EMD; Organization; Safety Coordinator	SHE402 SHE403
Chapter 30	Underground Storage Tanks (UST) Management Program	Affected Employee (UST operators & others)	See State regulations for specific requirements	OSHEM/EMD; Organization; Safety Coordinator	SHE407
Chapter 31	Pesticides Management	Affected Employee (Pesticide Applicator) & Supervisor	See State regulations for specific requirements	Organization: Safety Coordinator; Supervisor	SHE409
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 32	Ionizing Radiation Awareness	Affected Employee & Supervisors working in areas where ionizing radiation is used or stored	Before initial risk, then refresher annually	OSHEM/EMD; Organization; Safety Coordinator, Supervisor	SHE604

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Chapter 32	Ionizing Radiation for Laboratory Staff	Affected Laboratory Employees & Supervisors	Before initial risk, then refresher annually	OSHEM/EMD; Organization; Safety Coordinator, Supervisor	SHE600
	Ionizing Radiation for X-Ray Operators	Affected Employees & Supervisors working with X-Ray Machines	Before initial risk, then refresher annually	OSHEM/EMD; Organization; Safety Coordinator, Supervisor	SHE603
Chapter 33	Non-Ionizing Radiation	Affected Employee & Supervisor	Before initial risk, then refresher as needed	OSHEM/EMD; Organization; Safety Coordinator, Supervisor	SHE601
Chapter 34	Laser Safety	Affected Employee & Supervisor	Before initial risk, then refresher annually	OSHEM/EMD; Organization; Safety Coordinator, Supervisor	SHE602
Chapter 35	Fire Systems Inspection Testing and Maintenance (ITM) - Process and Record Keeping	Zone & Building Managers, Safety Coordinators, Affected OFMR, OPS & Smithsonian Enterprises(SE) Supervisors	Once, within 90 days of appointment	OSHEM/Fire	SHE141
	Fire Systems Inspection, Testing and Maintenance (ITM) - Certification/Technical Training	Fire/Life Safety Technicians and others performing ITM tasks	As needed to achieve and maintain recommended certifications	Certifying Organization (i.e. NICET), Equip. Manuf., Trade Organizations, Safety Coordinator or	SHE141
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 36	Fire Protection - General Requirements	Senior Management	Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE101

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		Zone & Building Managers, Safety Coordinator	Once, within 90 days of appointment	OSHEM/Fire	SHE102
		Supervisor	Once, within 30 days of appointment, then refresher as needed	Organization; Safety Coordinator	SHE102
		Employee	Once, within 5 days of appointment, then annually	Organization Safety Coordinator Supervisor	SHE105 SHE205
	Fire Protection - Property Loss Design Criteria	Design & Project Managers, Exhibit Design Manager	Once, within 90 days of appointment, then refresher as needed	OSHEM/Fire	SHE121
		Affected Employee & Supervisor	Once, within 30 days of appointment, then annually	Design & Project Managers, Exhibit Design Manager	SHE121
	Fire Protection - Security Control Room Fire Procedures	OPS Control Room Operator and Supervisor	Once, within 30 days of appointment, then refresher as needed	OSHEM/Fire; OPS (to be conducted as part of the OPS Control Rm Operator Training)	SHE131
Chapter 37	Life Safety Program	Senior Management	Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE102
		Zone & Building Managers, Safety Coordinator	Once, within 90 days of appointment	OSHEM/Fire	SHE102
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 37	Life Safety Program	Supervisor, OPS Manager, Special Events Coordinator	Once, within 90 days of appointment, then refresher as needed	Organization; Safety Coordinator	SHE102

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		Special event employees, fire wardens, Safety Committee, OPS Officers	Annually	Organization; Safety Coordinator	SHE103
		Employee	Once, within 5 days of appointment, then annually	Organization Safety Coordinator Supervisor	SHE105 SHE205
Chapter 38	Fire Prevention	Senior Management	Included in Senior Mgt Seminar, Safety Coordinator Training and Supervisor Safety Training	OSHEM	SHE101
		Zone & Building Managers, Safety Coordinator, Associate Director of Construction Management	Once, within 90 days of appointment	OSHEM/Fire	SHE103
		Supervisor, OPS Manager, Special Events Coordinator	Once, within 90 days of appointment, then refresher as needed	Organization; Safety Coordinator	SHE103
		COTR's (related to maintenance & construction)	Once, within 90 days of appointment, then refresher as needed	Supervisor	SHE103
		Special event employees, fire wardens, Safety Committee, OPS Officers	Annually	Organization; Safety Coordinator	SHE103
Chapter 40	Bloodborne Pathogen Training (Initial)	OPS, First Responders, OHS Staff, & Supervisors of Above Staff	Before initial risk	OHS	SHE301
SI Safety Manual	Type of Training	Target Audience	Required Frequency	Training Provider	Course Code
Chapter 40	Bloodborne Pathogen Training (Refresher)	OPS, First Responders, OHS Staff, & Supervisors of Above Staff	Annually	OHS	SHE302

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	Universal Precautions	Facilities Maint Workers	As Needed, Upon request	OHS; Organization Safety Coordinator	SHE303
Chapter 42	Temperature Extremes (Heat)	Employees working outdoors	Before Initial Risk, Annually	OHS	SHE304
Chapter 43	Temperature Extremes (Cold)	Employees working outdoors	Before Initial Risk, Annually	OHS	SHE305
Chapter 44	Zoonosis Control	Zoo staff and OFMR staff working at NZP or CRC	Annually	OHS	SHE306

SI STANDARDS FOR SAFETY COORDINATOR QUALIFICATIONS AND SKILLS

Scope: These Standards apply to both full-time and collateral duty Safety Coordinators.

Standards: These professional development standards are intended as a guide to assist SI Safety Coordinators in attaining or maintaining the range of professional competencies necessary to managing Safety, Health, and Environmental Programs at SI facilities. They are based on training and career development tracks described by organizations such as the American Society of Safety Engineers (ASSE) and the Board of Certified Safety Professionals (BCSP), and include these essential topics:

Accident and Incident Investigations: determining the facts related to an accident or incident based on witness interviews, site inspections and collection of other evidence.

Advising Management: helping managers establish safety objectives, plan programs to achieve those objectives and integrate safety into the culture of an organization.

Environmental Protection: controlling hazards that can lead to undesirable releases of harmful materials into the air, water or soil.

Fire Protection and Life Safety: reducing fire and life safety hazards by inspection; layout of facilities, exit/egress, and processes; and design of fire detection and suppression systems.

Ergonomics: improving the workplace based on an understanding of human physiological and psychological characteristics, abilities and limitations.

Health Hazard Control: controlling physical, chemical, radiological or biological hazards that can create harm.

Hazardous Materials Management: ensuring that hazardous chemicals and other products are procured, stored, used, managed and disposed of in ways that prevent fires, exposure to or harm from these substances.

Hazard Recognition: identifying conditions or actions that may cause injury, illness or property damage

Health Promotion: promoting health-enhancing behavior and lifestyles to ensure fitness for duty.

Inspections/Audits: assessing safety, health risks from equipment, materials, processes, facilities or abilities.

Hazard Control and Prevention Technologies: applying engineering, behavioral, and work practice control technologies to reduce, eliminate, and prevent injury, illness, and property damage.

Record Keeping: maintaining safety and health information to meet government requirements, as well as to provide data for problem solving and decision making.

Regulatory Compliance: ensuring that mandatory safety and health standards are satisfied.

Training: providing employees and managers with the knowledge and skills necessary to recognize hazards and perform their jobs safely and effectively.

Summary of Tables

- Table 1 lists knowledge and skill (training) subjects which are pertinent to managing SI safety operations, including the recommended time frames for completion of formal training.
- Table 2 lists suggestions for additional skill-building courses to evaluate overall Safety Coordinator technical, managerial and leadership competencies.
- Table 3 lists contact information for the courses and vendors listed in Table 1.

Questions or concerns about the applicability of any instructions or training courses proposed instead of those recommended in the tables should be referred to the appropriate OSHM liaison staff.

Implementation

Traditionally the team of SI Safety Coordinators comprises a range of professional backgrounds, from those with formal education in the safety sciences and/or professional certifications, to those with mostly on-the-job training and experience in safety program management.

It is expectation that Safety Coordinators will already meet the majority of the proficiencies listed in Table 1, and that their further professional development plans will include formal training for the remainder of recommended applicable operational topics. In these cases, the recommended timeline goals of 3, 6, and 12-months can reasonably be attained with their professional development plans and collaboration with OSHM liaisons.

In an effort to save time and travel costs, the utilization of localized training resources is highly recommended.

Safety Coordinators and their supervisors should plan a reasonable training schedule in order to balance the safety coordinator's professional development goals commensurate with their actual safety duties and within available budget.

To maximize effectiveness, the courses could be taken in priority order of their highest facility hazards and risks.

Table 1 - Safety Coordinator Training Plan

COURSE	CORE TOPICS	OPERATIONAL TOPICS			SUGGESTED TRAINING COURSES (see Resource Key for vendor information) NOTE: Contact vendor to see if material applies to federal agencies or just local/ state requirements which may not provide you with complete information.
	Recommend for ALL Coordinators within 3 mos of appointment	PRIORITY: Recommend within 6 mos for ALL Coordinators	Recommend within 6 mos if applicable to operations	ADDITIONAL: Recommend within 12 mos. if applicable to operations	
SI Safety Policies: Understanding and application of SI safety policies, <i>Safety Manual</i> requirements, and SI injury/illness/Near Miss reporting requirements, including SI-2120 process/investigations.	X				<i>Scheduled with OSHEM: one-on-one orientation to SI Safety Policy and Program, AIRS review.</i>
Supervisor Safety Course					Attend an OSHEM-taught supervisor safety course.
<p>Basic Safety Program Management, including the following topics:</p> <p>(1) Understanding of applicable state, local and federal, incl. 29 CFR 1910 and 1960. (2) Development & implementation of safety programs (3) Hazard identification, evaluation of effectiveness (4) Development of program goals and objectives. (5) Inspections & investigations (6) Training (7) Recordkeeping</p>	X				<p><i>OSHA Course 6010 Occupational Safety & Health for Other Federal Agencies, at (local OTI)</i> <i>Course 6000 Occupational Safety & Health Collateral Duty for Other Federal Agencies (local OTI)</i></p> <p><i>NSC Principles of Occupational Safety and Health</i> <i>OSHA Course 7500 Intro to Safety & health Management</i> <i>OSHA Course 7505 Intro to Accident Investigations</i></p> <p><u>Vendors:</u> OSHA OTI(local); NSC OR EQUIVALENT: <i>Other possible vendors:</i> ABS, ASSE, MFRI, on line training.</p>

					<i>Additional Highly Recommended</i> OSHA Course #511: Occ. H&S Standards for General Industry (local sources: OSHA-NRC, Mid Atlantic OTI, WVU)
Conduct Training: Ability to develop and present training programs and to communicate effectively with staff at all levels.		X			<i>Suggested train-the-trainer vendors:</i> NSC <i>Safety Training Methods</i> ; NESHT courses; OSHA 501 Trainer Course for Gen Ind., <i>Teaching Techniques</i> Course thru local OSHA OTI. Note OSHA 511 is a prerequisite for OSHA 501
Life Safety: Fundamental principles of life safety applicable to all facilities Fire Protection: Fundamentals of systems (sprinklers, etc) and impairment controls; course should address NFPA 25 (ITM), 13 (Sprinklers), 51B (Hot work)		X			NFPA 101 (2-day, minimum course) <i>Suggested Vendors:</i> NFPA, MFRI For fire impairment overview and fire protection requirements, contact OSHEM Fire Protection Liaison
Welding, Cutting, Brazing (including Hot Work Permitting)	X, if Coordinator is a Hot Work Permit Authorizing Individual		X, if Coordinator is NOT a Hot Work Permit Authorizing Individual		For Hot Work Permitting, contact OSHEM Fire Protection Liaison for SI training
<p>FOR FOLLOWING: OSHA-Equivalent courses https://www.osha.gov/dte/ecd/course_otiec_search_public.html might also be offered by: Local OSHA- OTI, MFRI, NSC, NFPA, ICC, AMA, MOSH, VDLI, LSI, ACS, See attached "Resource Key"</p>					
Electrical Safety, including Lock-Out/Tag-Out		X			OSHA 3090 or equivalent Recommend OSHA 3095 Electrical Standards @ Local OTIs' <i>OSHA 7115, LO/TO local OTI</i>
Personal Protective Equipment		X			MOSH, several courses; or as part of general industry regulations courses, such as OSHA

					Course #511: Occ. H&S Standards for General Industry (best source: OSHA-EC local)
Chemical Spill Response: OSHA-required "First Responder Awareness Level"		X			Taught by OSHEM/EMD, call 202-633-2530
Asbestos and Lead Hazard Awareness		X			Taught by OSHEM/EMD, call 202-633-2530
Working at Heights / Fall Protection			X		OSHA 3110 or equivalent, Fall Arrest Systems or equivalent, contact OSHEM/SD for current SI training
Machinery and Machine Guarding			X		OSHA 2040 or equivalent, Machine Guarding Standards (OTI) or OSHA 2045 Machine Guarding (Local OTI) or equivalent NSC industry
Material Handling (powered and trucks, etc)			X		Any above vendors or as part of general industry regulations courses, such as OSHA Course #511: Occ. H&S Standards for General Industry (best source: OSHA-EC local); OSHA 7005 Warehousing & Storage, local OTI.
Cranes			X		OSHA 2080 or equivalent, (OTI) course crane, hoist, powered industrial truck inspections.
Confined Space Entry			X		OSHA 2260 or equivalent or OSHA 2264 PRCS Entry (Local OTI)
Laboratory Safety			X		Consider OSHA 521 Guide to Industrial Hygiene (Local OTI) LSI seminars Contact OSHEM/EMD liaison
Hazardous Materials, including flammable & combustible liquids Code (NFPA 35) and Compressed Gases (NFPA 55)			X		OSHA 2010 or OSHA 2015 Hazardous Materials (Local OTI) or equivalent
Boating, Diving, Maritime Safety			X		USCG certifications
Spray Finishing				X	OSHA 3100 or local equivalent

Ergonomics				X	OSHA 2250 (local OTI) or equivalent. Contact OSHEM/SD for SI Ergonomics training
Introduction to Industrial Hygiene				X	OSHA 521 (local OTI) or equivalent
Radiation Safety				X	Courses taught by OSHEM; call 202-633-2530 to schedule.
RCRA Orientation to Hazardous Waste Mgmt				X	
Bloodborne Pathogen Control				X	
Construction Safety				X	
Fire Extinguisher Hands-on Training				X	

Table 2 - Additional Recommended Skill-Building Courses

Topic	Recommended Sources See Resource Key, last page of document
Respiratory Protection	OSHA Course 2220 (OSHA OTI or EC) or OSHA EC OSHA 2225 Respiratory Protection (Local OTI)
Local exhaust ventilation / HVAC Systems: design, maintenance, inspection	ACGIH Industrial ventilation course ICC MERHC OSHA 2210 (OSHA TI or EC)
OSHA 1910.120 emergency responder classes: * 24-hour First Responder Operations Level (Haz Mat Operator) * Hazardous Materials Technician * HAZWOPER, 40-hour	OSHA-EC, MFRI Contact OSHEM/EMD
Environmental Compliance	ABS ERC Contact OSHEM/EMD
Asbestos and Lead-Based Paint Abatement courses (supervisor, inspector, project designer)	Consult OSHEM for state certified trainer list
CPR-First Aid-AED Wilderness First Aid First Responder (EMS)	MFRI NSC – look up local training sites at http://train.nsc.org/ntc/newtcal01.aspx American Heart Association, http://www.americanheart.org/presenter.jhtml?identifier=3012360 American Red Cross http://www.redcross.org/services/hss/courses/
IAQ / Mold identification & remediation	ACGIH AMA AIHA OSHA 2330 (OSHA TI or EC) Contact OSHEM/EMD

Table 3 - Resource Key

ABS	ABS Consulting www.absconsulting.com
ACGIH	American Conference of Governmental Industrial Hygienists www.acgih.org 1330 Kemper Meadow Drive, Suite 600; Cincinnati, OH 45250 513-742-2020
ACS	American Chemical Society http://www.acs.org/content/acs/en/education.html 1155 Sixteenth Street, NW; Washington DC, 20036 202-872-4600
AF	Armed Forces (various) websites: http://www.public.navy.mil/navsafecen/Pages/Home.aspx http://www.army.mil/info/organization/usacr/ http://www.afsec.af.mil/index.asp
AIHA	American Industrial Hygiene Association www.aiha.org 2700 Prosperity Avenue, Suite 250; Fairfax, VA 22031 703-849-8888
AMA	Aerosol Monitoring and Analysis, http://www.amatraining.com/default.asp?ID=37 1331 Ashton Road; Hanover, MD 21076 410- 684-3327
AM&A	American Management Association, http://www.amanet.org 1-877-566-9441
ASSE	The American Society of Safety Engineers www.asse.org 1800 E Oakton St; Des Plaines, IL 60018 847-699-2929
ERC	Environmental Resource Center www.ercweb.com 101 Center Pointe Drive; Cary, North Carolina 27513 919-469-1585
FEMA	Federal Emergency Management Agency http://www.fema.gov/training
ICC	International Code Council www.iccsafe.org 4051 Flossmoor Road, Country Club Hills, CA 60478-5795.
LSI	The Laboratory Safety Institute www.labsafety.org 192 Worcester Road; Natick, MA 01760 508-647-1900
MERHC	Mid-Atlantic Environmental Hygiene Resource Center 866-871-1984 http://www.ercweb.com/home/
MFRI	Maryland Fire and Rescue Institute; University of Maryland www.mfri.org 4500 Paint Branch Parkway; College Park, MD 20742 301- 226-9900
MOSH	http://www.dlir.state.md.us/labor/mosh/comp.shtml Maryland Occupational Safety and Health (MOSH) - Training and Education 312 Marshall Avenue Suite 600 Laurel, Maryland; 410-880-4970 or 301-483-8406
NESHT	National Environmental, Safety and Health Training Association http://www.neha.org/index.shtml

NFPA	National Fire Protection Association (NFPA) Seminars www.nfpa.org 1 Batterymarch Park; Quincy, Massachusetts; USA 02169-7471 617-770-3000
NSC	National Safety Council http://www.nsc.org/train/osh/ 1121 Spring Lake Drive; Itasca, IL 60143-3201 630-285-1121 <u>Local NSC Chapter</u> Chesapeake Safety Council http://www.chesapeakesc.org/ 17 Governor's Court, Suite 185; Baltimore, MD 21244 Toll Free: 800-875-4770
OSHA TI	Occupational Safety and Health Administration Training Institute http://www.osha.gov/web/dcsp/ote/coursecatalog/CourseList.asp?CourseID=
OSHA EC	OSHA Education Centers, local sites across the country http://www.osha.gov/fso/ote/training/edcenters/index.html
USCG	U.S. Coast Guard Office of Boating Safety http://www.uscgboating.org/ Toll free Infoline at 1-800-368-5647
VDLI	Virginia Department of Labor and Industry – Consultative Services http://www.doli.virginia.gov/vosh_coop/vosh_coop_programs.html