Safety Management System (SMS) Guidance Document

2017

Safety Resources

University of Saskatchewan

Contents

1. Leadership

Active leadership and commitment on the part of the unit head is required to ensure the success of the Safety Management System (SMS) processes. The unit head must establish, promote and maintain the SMS processes within their unit and must provide appropriate financial, human and organizational resources to ensure the successful implementation and operation of the system.

Unit heads must ensure that Health, Safety and Environmental (HSE) roles, responsibilities and accountabilities are communicated to everyone within the unit and they must encourage and expect active participation in the SMS process by everyone within the unit. Participation by all parties is required for the effective and efficient implementation and operation of the SMS and appropriate time and resources must be supplied to people within the unit to allow them to participate in the development, implementation and operation of the SMS.

The corner stone of all health, safety and environmental management at the University of Saskatchewan is the University's policy on health, safety and environmental protection. Unit heads must ensure that the operations of the unit meet the expectations of the policy by ensuring that people within the unit understand the policy and ensure their operations meet the intent of the policy.

One of the pillars of the SMS is that it provides for continual improvement in HSE performance. In order to ensure continual improvement, units must set measureable HSE objectives and targets that will allow them to gauge their performance against a predetermined level of performance. The unit head should set goals in consultation with people from the within the unit.

The key to effective management of HSE issues in the workplace is the communication of the SMS processes. Unit heads must establish a clear and effective process to ensure that all issues related to the management of health and safety or environmental issues in the workplace are appropriately communicated to everyone working within the unit.

Unit heads can ensure effective and efficient implementation and operation of the SMS within their unit by establishing a SMS liaison or liaisons within their unit. The role of the liaison is to act as a coordinator within the unit for issues related to the implementation and operation of the SMS and to act as a conduit for information between the unit and the Safety Resources. The liaison(s) should be chosen based on their ability to motivate their colleagues and must be given the resources, authority and responsibility to ensure the implementation and operation of the SMS on behalf of the unit head.

The unit head shall:

- Provide overall leadership and commitment to the SMS processes
- Provide appropriate financial, operational and human resources to ensure effective implementation and operation of the SMS
- Define SMS roles, responsibilities and accountabilities for people within their unit
- Ensure all people within the unit actively participate in the SMS processes
- Ensure people within the unit understand and operate under the University's health, safety and environmental protection policy
- Set measureable objectives and targets to ensure continual improvement in HSE performance
- Ensure that processes are established to communicate all issues related to SMS implementation and operation to everyone within the unit
- Designate SMS liaison (s)
- Communicate liaison (s) role to the rest of the unit

2. Hazard Assessment and Management

Introduction

Identifying, assessing, and managing Health, Safety and Environmental (HSE) hazards and risks in the workplace is the cornerstone of a safe and environmentally responsible University. Each unit must actively participate in the hazard assessment and management process to ensure that people are safe in their work place and liabilities are managed.

Processes and Procedures

2.1 Review

2.1.1 Inventory activities

An inventory of activities that occur in each workplace should be compiled as the starting point in the process of hazard and risk identification, assessment, and management. Include all activities that occur in the workplace so that Job Safety Analyses (JSAs) can be conducted on each activity.

2.2 Hazard and Risk Identification and Assessment

2.2.1 Conduct a Job Safety Analysis

Once all activities have been identified, a Job Safety Analysis (JSA) should be conducted on each activity to identify all hazards and risks associated with an activity. Job Safety Analysis is a process of breaking down an activity into all the tasks (the sequence of steps) that are undertaken as part of the activity to identify and HSE hazards and risks associated with each task. Once all hazards and risks are identified for each task, preventive and protective measures can be developed to address HSE issues related to each task that make up an activity.

2.2.2 Conduct regular workplace inspections

Regular workplace inspections must be conducted on all workplaces on a regular basis as appropriate for the hazards and risks present in the workplace. The inspection process should include both formal inspections, as well as regular informal workplace inspections throughout the workday. Formal inspections should use a checklist process that identifies the expected situation in the workplace. Formal inspections should follow a regular, documented schedule (daily, weekly, monthly etc.) according to the level of hazard and risk in the workplace (more hazardous conditions require more frequent inspections). Formal inspections should be conducted by people working in the work area as well as the person in charge of the work area (Supervisor or Principal Investigator). Informal inspections (workplace walk-through) should be conducted throughout the day by people working in the area, so that hazards and risks are continually identified.

Results of workplace inspections should be documented and the records retained as evidence of completing regular workplace inspections. Inspection results should be used to assist with managing HSE hazards and risks.

2.2.3 Conduct regular safety meetings

Safety meetings should be conducted for every workplace on a frequency that is appropriate to the hazards and risks that are present in the workplace. Meetings should include all persons working in the workplace and should be chaired by the Supervisor or Principal Investigator in charge of the workplace.

Meetings should cover topics related to HSE issues in the workplace, with the intent of educating people n the workplace about hazards and risk associated with activities in the workplace. Input received during safety meetings should be used to improve the HSE performance. Minutes of safety meetings should be maintained in the unit's records management system.

2.2.4 Crime Prevention through Environmental Design

Crime Prevention through Environmental Design (CPTED) is a multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts by affecting the built, social and administrative environment.

An assessment of the buildings and surroundings for each workplace should be conducted to reduce potential for crime and identify hazards that may affect the units operations. CPTED's will be conducted on a risk level basis and prioritized accordingly.

2.3 Preventive and Protective Measures

Whenever hazards are identified in the workplace or in work procedures, steps must be taken to ensure that preventive and protective measures are established to manage the hazard(s). Preventive and protective measures must be appropriate to the nature of the hazard and should be developed and implemented according to a hierarchical process that will result in the least risk to workers and the environment.

Once hazards are identified in the workplace, a prioritization process should be used to assign a priority to managing each hazard so that hazards with the highest relative severity and the highest relative probability or occurrence are managed as soon as possible and other hazards are managed in a timely manner.

2.3.1 Conduct a risk priority analysis

Once hazards have been identified, hazards and risks should be managed according to a risk priority process. This process should take into account the relative severity of the hazard occurring, as well as the relative probability of the hazard occurring. Highest risk activities must be appropriately managed immediately, and other activities should be managed according to the risk they present on a priority basis.

2.3.2 Manage hazards according to priority

The following priority should be used when deciding on the appropriate preventive and protective measures for each hazard:

- Eliminate the hazard
- Substitute with other materials, processes or equipment
- Use engineering controls
- Use safer work systems that increase awareness of hazards
- Use administrative controls
- Use personal protective equipment

Whenever possible, the hazard should be managed at the highest level possible on the priority list. For example, if the hazard cannot be eliminated entirely (priority 1), then substitution with other materials, processes or equipment should be considered. If substitution is not effective at managing the hazard, then engineering controls should be established if possible, etc. This priority approach to instituting preventive and protective measures should continue until a suitable solution is achieved. In most cases, a combination of measures will be necessary to effectively manage the hazard.

When conducting preventive and protective measures, all applicable legal requirements must be met and any standards, codes or best practices should be used to guide the process.

Eliminate the Hazard
Outright elimination of the hazard should be the primary goal whenever possible. If the hazard can be eliminated without having to conduct any other mitigation, it will provide the safest alternative. Hazard elimination will often be accomplished by changing work priorities or practices to avoid the hazard.

Substitute with other Materials, Processes or Equipment
Whenever possible, hazardous materials, processes or equipment should be substituted with less hazardous materials, processes or equipment.

Use Engineering Controls
Engineering controls are the mechanical and technological tools that can be used to assist with managing hazards. These include equipment such as monitoring and measuring equipment, fume hoods, safety shields, isolation, etc. Engineering controls must be properly maintained and serviced to ensure that they are operating according to expectations.

Use Safer Work Systems that Increase Awareness of Hazards
Lights, signage, beepers, etc. placed in strategic locations can be used to increase awareness of potential hazards. These must be placed in locations where they will be effective (seen or heard) and must be designed so that they stay effective and do not become mundane and ignored.

Use Administrative Controls
Administrative controls include such controls as written work procedures and training. Procedures such as Standard Operating Procedures (SOPs) dictate the safe methods of conducting work and can be very effective at managing hazards if written and implemented correctly.

Training increases awareness of hazards in the workplace and ensures that all workers understand how to conduct work procedures safely.

Use Personal Protective Equipment
Personal protective equipment (PPE) should be considered the last line of defense against workplace hazards. PPE should always be used in addition to and complimentary to any other preventive and protective measures. Workers and supervisors must ensure that all PPE is appropriate to the hazard and that all PPE equipment has been properly certified, by a certification authority (such as Canadian Standards Association), and to ensure that it will operate appropriately according to each hazard. PPE must be regularly inspected and maintained to ensure proper function.

2.3.3 Review preventive and protective measures

Once preventive and protective measures have been established for each hazard, they must be assessed to ensure that they effectively mange the hazard. Preventive and protective measures must also be reviewed to ensure that they do not create other hazards that were not previously identified.

2.4 Competence and Training

People at all levels of the organization must be competent and properly trained to conduct their work in a safe and environmentally sound manner. General competence of workers will be achieved through a combination of formal education, professional experience, and on the job training. Formal education and professional experience will provide the fundamental skills required for a job, and on the job, site-specific training under the direction of an experienced supervisor is important to ensure that all safety aspects are understood before commencing any work.

2.4.1 Define competence and training requirements for each activity

All supervisors must ensure that workers are appropriately competent and properly trained for all aspects of their job. Units must develop procedures to ensure that competency and training requirements are defined for each activity in their unit. Each activity for which a Job Safety Analysis is conducted should have a list of required education; experience and training that must be met in order for a worker to be considered competent to perform an activity.

2.4.2 Provide Training

Training activities must be provided to all workers, based on their duties and responsibilities, according to acceptable competencies identified and defined through Job Safety Analyses of activities. Training must be conducted by competent persons, and each supervisor is responsible for ensuring that persons conducting any training are competent to provide the training, whether the training is conducted by experienced persons from within the unit or by outside training professionals. Trainers must ensure that once workers are trained they give a practical demonstration of their competency to ensure that the worker understood information given in the training.
Training, including any site specific job training must be conducted regularly, including regular refresher sessions (frequency will be dependent on the nature of the training), and training programs must be evaluated and modified on a regular basis to ensure that information is current and accurate.

2.4.3 Ensure workers are aware of Safety Management System and other requirements

Supervisors are responsible to ensure that all workers that report to them understand the SMS requirements that apply to them. Workers must be trained to understand their HSE rights and responsibilities under the SMS, The Saskatchewan Employment Act, University policy, licenses, permits and any other requirements.

2.4.4 Document training provided

Whenever workers receive training, either in-house or through an external agency, the supervisor should keep records of the completion of the training and those records should be maintained in the records management system of the unit (see Section 3.4). If possible, records should include an indication of the information covered during the training session.

2.5 Management of Changing Activities

A process must be developed to ensure that all new activities or any change to existing activities are evaluated to ensure that hazards are identified, assessed and managed appropriately.

2.5.1 Identify and manage hazards of changing activities

When new activities are being proposed, evaluation of HSE issues should be considered at the planning and design stage. If possible, Job Safety Analysis (JSA) should be conducted on proposed activities during the planning and design stage. All changes to existing activities including changes to work procedures, equipment, materials staffing etc., must be evaluated to assess HSE hazards, and the changes must be incorporated into the JSA for the activity. All processes identified in Section 2 must then be applied to the new activity or the changes to an existing activity, including training of workers about any new changing hazards.

2.5.2 Identify an assess the HSE hazards associated with new products, supplies, equipment, raw materials and other goods

Prior to purchasing, renting, borrowing or accepting as a gift, any new items or products in work processes, the items or products must be assessed in order to understand any HSE hazards associated with them. Information sources may include any literature supplied by the manufacturer or supplier, (such as operating

instructions or Safety Data Sheet (SDS)), or documents of external origin (such as product reviews by testing organizations). Manufacturers and suppliers are obligated to provide information regarding hazards associated with their products, so if supplied documentation is insufficient to properly assess the hazards, the manufacture or supplier should be contacted for further information.
Hazards may be very obvious, such as potential for injury from mechanical contact or chemical exposure, or they may be less obvious such as ergonomic stress, noise, eye strain, etc. Assessments must be very rigorous to ensure that all hazards are accounted for. The JSA should also be reviewed after the item has been in use and workers are familiar with the item so that any hazards that were not obvious during the initial assessment may be determined.

2.5.3 Control or eliminate HSE hazards associated with new products, supplies, equipment, raw materials and other goods

Once all potential hazards have been identified, preventive and protective measures must be implemented to manage the hazards. In cases where the hazards cannot be appropriately managed, the item or material must not be used. In such cases, substitution of the item or alteration of work processes to eliminate the need for the item must occur.

2.5.4 Use only approved items

All purchased or procured items must meet all appropriate safety and environmental standards. In cases where a CSA (Canadian Standards Association) standard exits for the item or product, the CSA standards shall be followed. In cases where CSA standards do not exist for an item or product, other appropriate approved standards (like ANSI) shall be followed which are appropriate to the nature of the item.

2.5.5 Contracted Services

All contracted services must be evaluated to assess HSE risks associated with the service. Assessments must evaluate any hazards to University workers, students or the environment that will result from activities of the contractor. Assessments must also evaluate any hazards to contracted workers that may result from the activities of the University or its staff or students. Procedures must be developed to ensure that all hazards associated with contracted services are appropriately managed. All contractors must receive site-specific orientation and training, and the training must be documented.
In the case of building contractors that are working on University infrastructure, all procedures associated with the University's Contractor Safety Program must be followed. In the case of contractors providing services that are outside the scope of the Contractor Safety Program, the person in charge of the contract must ensure that all hazards are assessed and appropriately managed.
Evaluation and selection of contractors must be based in part on appropriate HSE criteria. Issuance of contracts should be made in part based on past and continued excellence in HSE management of the chosen contractor.

2.6 Incident Investigation and Analysis

HSE incidents may occur whenever there is a breakdown in a safety protocol or procedure or in cases where HSE processes and procedures are lacking. An incident may cause injury to a worker or may cause damage to the environment; however the term incident refers to any situation where there was potential for injury or damage, irrespective of whether injury or damage occurred and includes all "near misses."
Effective and timely investigation of HSE incidents is critical to the reduction of the frequency and effect of incidents. Thorough incident investigation and causal analysis will ensure that the cause of incidents is well understood so that preventive and protective measures can be implemented to ensure that the incident is not repeated.

An important aspect of incident investigations is that they must have a prevention focus and must be fact-finding, not faultfinding in nature. It is imperative that all affected parties cooperate to conduct incident investigations and resolve any issues identified during an incident investigation.

2.6.1 Incident Reporting

All worker or student incidents must be reported to their supervisor as soon as possible after an incident occurs. Supervisors will work collaboratively with the person(s) involved in the incident to ensure that incident investigation procedures are followed and supervisors are responsible to report all incidents to Safety Resources.

In cases where acceptable alternative incident reporting methods are not in place, all incidents must be reported to Safety Resources on an online Incident Report Form within 24 hours of the occurrence of the incident. Instructions for online Incident Report Forms are available on the Safety Resources website.

In cases where spills or releases of hazardous or environmentally toxic materials occur, the person in charge of the spilled material must contact Safety Resources immediately (or Protective Services).

In cases where employees require medical attention or are away from work due to a workplace injury, employees, supervisors and the University are required to report the incident to the Worker's Compensation Board (WCB) within five days of the incident. WCB claims are administered by Wellness Resources. All inquiries into the WCB reporting process should be directed to Wellness Resources.

Certain incidents require the University to report the incident to Sask. Labour. These include dangerous occurrences as outlined in the Saskatchewan Occupational Health and Safety Act and Regulations, any incident that causes the death of a worker, or any incident that leads to a worker being hospitalized for more than 72 hours. Safety Resources will notify MLRWS as appropriate, so supervisors and workers must ensure timely incident notification to Safety Resources so that appropriate reporting can occur.

2.6.2 Incident Investigation

2.6.2.1 General

The incident investigation process begins once basic emergency response measures have taken place to ensure that hazards are controlled and affected parties have been taken care of, including medical attention if appropriate. Initial incident investigations will be conducted by the supervisor in charge of the affected work area, but in complex situations, investigations may also include assistance from incident investigators from Safety Resources or external agencies as appropriate.

2.6.2.2 Secure the scene

Securing the scene of an incident (if necessary) and identifying witnesses are the first steps of an incident investigation. If possible, ensure that the scene is not disturbed until after the initial incident investigation is completed so that incident investigators will be able to see the scene as it was at the time of the incident. If the scene cannot be secured or must be returned to working order immediately, steps should be taken to document the conditions at the scene with photos or video footage if the scale of the incident dictates. Sketches, maps, notes etc. will also be valuable and should be collected as appropriate. Ensure that names and contact information of witnesses are collected as appropriate so they can be contacted and interviewed if necessary.

2.6.2.3 Collect information

The intent of the information collection phase is to gain information that will assist with understanding the cause(s) of the incident. Information about an incident should be collected as soon as possible after the emergency response is completed and the scene is secured. Initial information gathering should include interviews with witnesses and review of physical conditions at the scene of the incident, including collection of photo or video images of the scene. All information must be recorded in a permanent format so that information will be readily available for review at a later date if necessary. In addition to physical or witness

information, workplace procedures and processes must be reviewed to better understand the normal operating procedures within the workplace.

2.6.3 Root Cause Analysis

Root cause analysis refers to a generic process of determining the factors that led to the incident. An important clarification is that root cause analysis goes beyond identifying the proximate causes (what and how) of an incident, to help understand the "big picture" reasons of why an incident happened.
Root causes are the underlying factors that lead to an incident, and there may be several root causes that compound to result in an incident. Analysis must focus on identifying specific factors (rather than generic categorical descriptions) and must focus on those that can be reasonably controlled. At the end of a root cause analysis, all factors that contributed to an incident will be identified so that recommendations to prevent recurrence can be established.

2.6.4 Remedial Actions

All HSE incidents are predictable and preventable. As such, remedial actions must be identified and implemented to prevent the recurrence of similar incidents. Remedial action recommendations must account for all root causes that led to an incident, and must be explicit and reasonably achievable. Care must be taken to ensure that recommendations for remedial actions do not create unforeseen hazards.
All remedial actions that are identified must be accounted for by changes in workplace processes or procedures and all changes to work practices must be clearly communicated to everyone involved in carrying out the procedures. All remedial actions must have explicit, achievable timelines for implementation, and must dictate staff accountabilities for implementation.

2.6.5 Reassessment of Remedial Actions

Recommendations for remedial actions must be reassessed soon after implementation to ensure that the recommendations are practical and effective. If deficiencies are identified, they must be corrected immediately by further changing work practices to address the deficiencies. All changes to work practices resulting from any reassessment must be communicated to everyone involved in carrying out the procedure.

2.6.6 Documentation

All incident investigation information and recommendations for remedial action must be documented and permanently retained on file, including photos, video, notes etc. All records of re-training in work procedures that occur as a result of a causal analysis and implementation of remedial actions must also be documented. Information regarding remedial recommendations must be forwarded to Safety Resources on the Incident Report Form.

2.6.7 Amend Work Procedures

Once incident investigations and root cause analyses are completed, work procedures must be amended to incorporate issues identified through the process, and all amendments to the procedures must be communicated to all employees that conduct those activities.

3. Liability Management

Introduction

Managing HSE issues includes the management of associated liabilities. Liabilities will be better managed by ensuring that workers are aware of HSE issues in their workplace and by appropriately documenting the management of HSE issues and maintaining records that appropriately management has been conducted.

Processes and Procedures

3.1 Legal and Other Requirements

Legal and other requirements refer to all items of provincial and federal HSE legislation as well as any University policy or best practices that the University subscribes to. Units must ensure that they meet all legal and other requirements that apply to HSE issues in their workplaces. Legal requirements refer to the requirements dictated by various items of provincial and federal legislation (such as the Saskatchewan Employment Act and Occupational Health and Safety Regulations). Other requirements refer to University of Saskatchewan policy (such as the University's Health, Safety and Environment Protection Policy), or any government guideline, industry standard or best practice.

3.1.1 Identify activities that have legal and other requirements

Unit heads must ensure that all legal and other requirements are identified for all work areas and activities within their unit, including any off-campus sites such as field study sites. An inventory of activities that occur within the unit or by members of the unit should be compiled as the starting point of assessing compliance. Once an inventory of activities is generated, a process should be developed to ensure that the inventory is updated every time a new activity is undertaken within the unit.

3.1.2 Identify the legal and other requirements of activities

The inventory of activities should be compared to all known legal and other requirements to ascertain which requirements apply to the activities of the unit. A list of activities that have legal and other requirements associated with them has been developed to use as the starting point to use in identifying legal and other requirements. Due to the complex nature of activities that occur at the University, line management must be diligent in establishing a complete list of legal and other requirements that apply to their work areas, using any provided tools as a starting point. All tools will be updated on a regular basis as new information becomes available.

Care must be taken to ensure that all clauses within items of legislation that apply to the operations of the unit are identified. A process should be developed to periodically review the legislation and University policies to ensure that any new information is identified and incorporated into the unit's processes.

3.1.3 Evaluate compliance with requirements

Once the legal and other requirements are identified, and the existing operations of the unit are evaluated to assess the current condition, a process must be developed within the unit to ensure that the activities of the unit meet the stated legal and other requirements. Line management within the unit, to ensure on-going compliance with all legal and other requirements, must conduct regular compliance assessments of unit activities. Any conditions of non-compliance must be rectified as soon as possible.

3.2 Emergency Prevention, Preparedness and Response

Planning for emergencies is an important process that will help ensure appropriate actions are taken in the event of an emergency. The University of Saskatchewan has a plan that covers emergencies that affect the University's operations. All buildings have a local Emergency Response Plan (see section 3.2.2). The plan will be developed by Protective Services, Safety Resources and unit(s) representation from the building.

3.2.1 Institutional Emergency Management Plan

The University of Saskatchewan has an Emergency Management Plan (EMP) that contains the processes and plans to be activated in the case of an emergency on campus. Emergency response personnel that first arrive on the scene of an emergency situation will activate and follow the procedures and framework with the Emergency Management Plan.

3.2.2 Local Emergency Response Plans

Certain local situations require the development of Emergency Response Plans (ERP) that deal with potential emergency situations that may occur at a localized scale. All work areas that are permitted through the University's Biosafety, Radiation Safety, or Chemical Safety program, and all laboratories (research and teaching) must have a documented ERP. Also, all other work areas where there is potential for emergency situations to arise should have emergency response plans in place specific to their activities. A template for an ERP development is available.

Emergency response plans must be reviewed and updated on a regular basis, at least once per year. At minimum, ERPs should include fire evacuation procedures, power outage procedures, procedures to deal with spills of hazardous materials, and procedures to deal with medical emergencies. In addition to these issues, ERPs should address any other potential emergency situation that may occur in the work area, based on knowledge of the activities that occur in the work area, and a hazard and risk assessment.

3.2.3 Fire Safety Plan

All areas on campus are required to develop a Fire Safety Plan. Each building must have a Chief Building Warden and Deputy Building Warden, Door Guards, and each floor of each building must have Floor Wardens that report evacuation details to the Chief and Deputy Wardens. Each unit must test fire evacuation plans at regular intervals. Fire drills are conducted in all buildings once per year.

3.2.4 Emergency Response Training

Supervisors and local administration are responsible to provide training (or facilitate training) to all workers regarding all aspects of emergency prevention, preparedness and response. All individuals that have a direct role to play in emergency response must be trained to be proficient in their role, and the training must be conducted regularly and the training documented.

Details of emergency prevention, preparedness and response, including details of the EMP, local ERP and Fire Plan must be communicated to all persons in every work area. Supervisors must ensure that everyone that reports to them understand the emergency plans that pertain to their work area and understand their specific role in emergency prevention, preparedness and response.

3.2.5 Emergency Management Exercises

University first responders and building occupants work together in exercises that simulate potential incidents on campus such as, evacuation, lockdown, chemical release and other potential hazards, to validate plans, training and identify areas for improvement. Regular training and exercises contribute to strengthening the University's capacity to respond to all types of incidents.

3.3 Control of Documents

Certain documents contain information that is important to protecting workers and the environment, and these documents must be maintained current and accurate so that workers have access to the best information to conduct their job safely. Any document that contains information that, if used incorrectly may result in worker injury or environmental damage is important and should be maintained accurate and current and be made available to workers to use as appropriate. These documents should be managed within a document control procedure to ensure that only the most accurate information is available for use.

A document control procedure is a series of controls placed on certain critical documents to ensure that only the most current information is available to workers at points of use. Documents should be controlled within a document control process if they are revision-sensitive. Documents are revision-sensitive if changes to the content of the document change how work is conducted, which may affect safety of workers or the environment. Document control procedures include a process to ensure that content of the document is referenced prior to issue, and that revisions are managed so that only the most current version of documents are available at points of use.

3.3.1 Determine whether control is necessary

Not all documents need to be controlled. Because document control requires that someone manage the system, the number of controlled documents should be kept to a minimum to ensure that the system does not become administratively difficult. Only documents that contain information that is critical to the safe and environmentally sound operation of the University of Saskatchewan should be controlled.

Examples of the types of documents that should be controlled:

- All documents related to the SMS
- University and Unit policies
- Statements of authority, roles and responsibilities
- Operational procedures and Standard Operating Procedures
- Emergency Response Plan
- Equipment operating instructions
- Material Safety Data Sheets
- Other documents as appropriate to the unit

3.3.2 Procedure for document approval

A system must be developed to ensure that all controlled documents are approved prior to issue. The approval process must include a review of any technical aspects that affect work practices as well as a process to ensure that a person in a position of authority within the unit approve controlled documents prior to issue.
In the case of documents that are generated within the unit (SOPs for example), technical aspects should be reviewed by the persons that are most familiar with the content of the document (such as the worker that typically operates the equipment in question) to ensure that all technical information is correct. Once all technical issues are evaluated, someone at a level of authority appropriate to the content of the document must review the document and approve its issue. In the case of a technical document (such as an SOP), the supervisor of the work may be the appropriate person to authorize the document, whereas in the case of documents that are less technical in nature (such as a department policy), the director or department head might be the final authority to approve the document. The parties that approve the document prior to issue should be chosen based on the content of the document and their position of authority within the unit to ensure that the content is correct and that the proper authorization occurs within the unit.
Review of controlled documents that originate from within a unit must be documented and the record of the documentation must be maintained in some form. Some units may choose to have the approving authorities sign the original copy of the document, or may institute a log procedure where reviews are maintained in a logbook. Whatever method is chosen to record the document review, it must be easily maintained and kept current and accurate.

3.3.3 Procedure for document review

Once a document is generated and approved, a process must be established to ensure that the content in controlled documents remain current and accurate. This will require a procedure to ensure that controlled documents are periodically reviewed and updated (or removed from circulation) as appropriate. Many controlled documents will be of a nature that does not require regular revisions and these documents need only be reviewed and verified that the content is still accurate. Other types of documents (such as work procedures) may change regularly, so the procedures must ensure that these documents are reviewed more frequently so that only the most current information is available at the points of use of the document. The review schedule for each controlled document should be documented and procedures must ensure that all documents are reviewed according to this schedule. Many units will institute a bring-forward system to ensure this occurs.

In addition to ensuring that documents are regularly reviewed, a procedure must be established to ensure that all changes to documents and the current revision status is documented and identified and easily visible to users. This will ensure that users of the document are aware of any new information contained in the document and will also know whether they are using the current version of the document.

Documents of external origin that are deemed to be important enough to be controlled (MSDS for example) should fit into the same review procedures as for documents that are of internal origin. In the case of externally developed documents, the review process may be less complex, and may only go so far as to ensure that the version of the document that is currently being controlled is still the most current version of the document.

3.3.4 Document distribution

A process must be developed to ensure that all controlled documents are available for use by all parties that require the information contained in the document. This distribution process may be electronic or hard copy, or a combination of both, but whatever method is used it must be easily maintained so that the process does not become logistically challenging.

Perhaps the easiest logistical method of document distribution is to maintain one master copy of the document electronically on a central server and develop a procedure to ensure that users of the document refer to the document on the server prior to conducting work that is affected by the controlled document. If users must print a copy of the document, a process must be established to ensure that old copies of the document are not used.

3.3.5 Document removal

Removal of obsolete documents is important to the proper functioning of a document control process. Since the purpose of the document control process is to ensure that only the most current and accurate information is available at points of use, it is important that old versions are removed from the system so that users do not conduct work using obsolete information. Old versions of controlled documents should be archived and stored as records (see 3.4 below). This archival should be conducted by a central administrator in each unit so that only one copy of each version is kept as a record. Any archived copies of controlled documents must be identified as such to prevent unintentional use of an obsolete version.

3.4 Control of Records

Control of records is a necessary component of the SMS to ensure that records are available for use when evaluating the performance of the system. Certain records will also be valuable to maintain for liability management purposes, to provide evidence of due diligence in the event that University practices are questioned.

Records must be managed and maintained to provide evidence of conformity to the SMS standard as well as University Policy and any legal requirements. All records must remain legible, easily identifiable and must be retrievable when needed. Units will have to develop procedures and controls necessary to identify which records should be managed, and then provide for appropriate storage, protection, and retention of records.

3.4.1 Identify records that should be managed

The following types of records must be maintained under the SMS:

- Records arising from implementation of the SMS (see all other SMS guidance documents for specifics)
- Original copies of Incident Report Forms and any follow up documentation associated with incidents (including records of exposures or injuries)
- Any records that provide evidence of compliance with legal requirements
- Employee training records
- Any records of monitoring of the working environment (air sampling, noise assessments, inspection checklists etc.)
- Records of steps taken to mitigate hazards in the workplace
- Any record that will show steps taken to make the workplace safer or more environmentally sound.
- SMS Assessment Reports

3.4.2 Number records

Every record within the system must have a unique identifier to allow for effective and efficient filing, storage, identification and accessibility of the record. This can be done through an internal numbering system that lists all SMS records by number, title, date entered as a record, and expected disposition date (as applicable).

3.4.3 Store records so they are secure and retrievable

Records must be stored in a location where access is limited to persons with authority to view the records (secure location). All records must be stored and filed so that they are readily identifiable and accessible when needed (such as during SMS assessments).

3.4.4 Retention of records

Since records are maintained to establish evidence of due diligence surrounding HSE issues, all records required by Safety Resources must be maintained at a minimum until the next scheduled assessment and certain records should be maintained indefinitely.
Any records that are current or active should be stored within the unit to ensure easy access, and the storage location of all records must be maintained.

3.4.5 Review records on a scheduled basis

Records should be reviewed on a scheduled basis to ensure that the records master list is appropriately maintained as well as to review. The records master list should be verified against the records in storage to ensure that the appropriate records are included in the appropriate location.

4. Evaluation

Introduction

An effective Safety Management System (SMS) requires regular evaluation to ensure that processes are meeting the needs of the unit and that the performance of the unit is meeting the expectations of the SMS. Regular, data-based reviews of how the SMS is functioning will identify successes and challenges with the processes within the unit and will assist line managers and the University in making appropriate decisions to facilitate continual improvement in HSE performance.

Processes and Procedures

4.1 Monitoring and Measurement

In order to ensure that SMS processes are functioning appropriately, line managers need to monitor and measure HSE performance within the unit on a regular basis. Regular monitoring of the SMS processes will ensure that HSE policies and procedures are being followed and that objectives and targets are being met. Regular monitoring will also ensure that all processes intended to assist with hazard assessment and management and liability management are functioning effectively.
Monitoring can be as simple as comparing the expectations of the SMS to the actual situation within the unit and may include review of the results of technological monitoring of the workplace (surveys, inspections, measurements, etc.) as appropriate. Results of monitoring should be used in regular decision making within the unit to ensure that continual improvement in HSE performance is occurring.

4.2 Internal Assessments

Once all SMS processes have been implemented within the unit, regular assessments will be conducted by the SMS assessment team to ensure that all SMS functions are working and effectively assisting units with managing HSE issues in their workplaces. The initial assessment timing will be determined through discussions with the unit leaders. Following the initial assessment, ongoing assessments will occur on a frequency in consultation with the unit depending on the degree of hazards present.

4.2.1 Pre-Assessment

Prior to the assessment, the SMS team will lead a pre-assessment meeting within the unit to discuss the assessment process and protocols. During the meeting, the SMS team will highlight the supporting documentation required during the assessment, provide details of the assessment format, and in consultation with the unit head, propose a time frame in which the assessment will occur. In addition, the SMS team will address all questions and concerns regarding the assessment process.

4.2.2 Supporting Documentation

Key elements to be assessed for:

- An activity list or inventory of activities
- All Job Safety Analyses (JSAs), Standard Operating Procedures (SOPs), or equivalents
- All workplace inspection records
- All safety meeting records
- Competency and training requirements for all activities
- All training records
- All contracted services risk assessments (if applicable)
- All incident investigation documentation (if applicable)
- All documentation identifying legal and other requirements
- A Local Emergency Response Plan (ERP)

- An Evacuation Plan
- A functioning document control process
- A functioning records management process

4.2.3 Assessment

The SMS assessment team will conduct the assessment consisting of a series of predetermined questions and analysis of provided documentation. At least one member of the unit will be required to be present and participate during the assessment process. The unit member(s) should be familiar with the implemented SMS processes and the corresponding supporting documentation.

4.2.4 Post-Assessment

Once the assessment is complete, each individual unit will receive an assessment report highlighting any findings and recommendations for improvements to the overall function of SMS processes. While the reports will focus on specific improvements, it is important that the entire SMS be maintained and continually improved to ensure all HSE issues are proactively managed. A summary report of all assessed units will be made available to the Dean/Department Head for review against their set implementation goals and objectives and to ensure continuous improvement in proactive management of health, safety and environmental issues.
The SMS team will be available following the assessment for discussion and clarification of any findings, to answer questions, and to help facilitate the continuous improvement processes to ensure effective management of HSE issues within the workplace.

4.3 Preventive and Corrective Action

Once results from monitoring and measurement and internal assessments are reviewed, line managers must ensure that information and knowledge gained from the review are incorporated into the operations of the unit. All sub-standard issues that are identified in the reviews must be expeditiously managed and SMS processes improved as appropriate.

5. Ongoing Review

Once the SMS has been implemented and has been operating for a period of time, unit leaders will review the effectiveness of the management of HSE issues, based on data collected in Section 4.0. Results of the review will be used to update or modify processes to ensure that all HSE issues are managed. The review process will lead to a cycle of continual improvement in the management of HSE issues in individual units, as well as add to development of a proactive safety culture across campus.