

INTEGRATED RISK MANAGEMENT

For Wallerich Company, Inc.

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## EXECUTIVE SUMMARY

Sunflower Integrated Risk Management (SIRM) appreciates the opportunity to provide a comprehensive integrated risk management solution that incorporates current and successful Wallerich safety practices and moves your company to a pinnacle of safe working environments. The use of an integrated risk management process:

- Transforms how your employees view risk
- Incorporates risk into daily operations
- Mitigates risk to acceptable levels
- Is cost-effective
- Increases ALL employees' capacity to recognize and mitigate risk.
- Is a flexible process that works well with decentralized and diverse work environments
- Is designed to be trained and implemented within your time, location and cost parameters.

This proposal outlines the process of integrated risk management and highlights the techniques our firm will use to begin your company transformation. We would be pleased to present to you and your board members the tools and techniques that each Wallerich employee will use in the training process. Our estimated time factor for training your teams and implementing the process is ninety days. Attached to this presentation is a timeline for implementation and training with links to web-based training samples. SIRM will also provide schematics for our training centers and free access to our web-based training courses upon request for demonstration purposes.

## SIRM ISSUE ANALYSIS

### Opportunity Assessment

Wallerich Company, Inc. operations are vertically-oriented: product development begins at the raw materials point with the company's logging operation; paper is produced at another facility, and packaging materials are manufactured in two facilities. A corporate office centralizes operations. Wallerich Company's critical incidence rate exposure is high. In 2005, the Occupational and Safety Health Association (OSHA) reported the logging industry's second highest rate of fatality per 100,000 workers, at 92.9 (80 persons were fatally injured.) OSHA also reported 11 industry-wide deaths resulting from injuries occurring in paper manufacturing facilities. Additionally, 551 lost time accidents occurred within both industries (Department of Labor, 2007). Wallerich Company currently operates in compliance with all OSHA policies and experiences accident rates at industry average, but wishes to improve safety at its operations, both out of concern for its employees and as a financial consideration. Critical incident concerns are especially prevalent in the logging operations, due to the high rate of employee risk, as documented by OSHA. Wallerich's stated goal is that of "becoming the world's safest logging and production facility" (Pacifcorp, 2007). Current operating procedures and safety training does not achieve this goal. To do so, Wallerich seeks an instructional safety training package for deployment to its personnel.

### Training Design Challenges

Because Wallerich operations are diverse with regard to production types, level of employee education, and available training facilities at each, a unique package of training has been developed which recognizes:

- Wallerich employees' education levels vary from completion of the ninth grade through the baccalaureate level.

- Job functions and risk levels vary greatly among the company's corporate office, plant, and logging positions.
- Training facilities do not exist at the logging operation, due to its mobile nature.
- Sites are dispersed geographically in the United States.
- Logging facilities are mobile, remote, and subject to adverse weather conditions.

#### Training Design Opportunities

Wallerich facilities exist in communities where jobs at the company are considered “excellent career options” (Pacifcorp, 2007).

- The company enjoys a stable work force that is generational in its demographics.
- Wallerich is respected and has an excellent reputation in the communities where it operates.
- Wallerich employees are loyal to the company.
- The company currently operates within OSHA training guidelines.

#### TRAINING OBJECTIVES

Taking the above factors into account, and knowing effective training must be provided for all, regardless of plant, task, or office affiliation, SIRM recommends delivering the training using:

- a blended approach that combines web delivery to individuals and teams F
- Face-to-face training when appropriate
- Case-studies for leaders
- Job aids for all employees
- Coach/mentor training
- Peer-to-peer assessment.

SIRM recommends packaging all instruction under a two-track approach to train all Wallerich employees.

### Track I. Integrated Risk Management (IRM) Training

Integrated risk management training is a five-step process that is geared to change employee paradigms regarding risk mitigation. It will:

- Develop a corporate-wide culture which understands and implements the integrated risk management (IRM) process into all operations, at all locations, with all employees.
- Enable all employees to make correct risk decisions and implement controls at appropriate levels.
- Ensure employees accept no unnecessary risk, while reinforcing the unavoidable fact that some risk is a part of doing business.
- Require that employees apply the process on a continuous and regular schedule to minimize daily risk.
- Ensure employees do not become risk averse, which could affect productivity and effective production.

### Track Two: Safety Gap Analysis and Skills-Based Training

SIRM professional trainers will provide an analysis of operations and procedures for individuals, teams and systems. This analysis will identify safety gaps that require individual and/or team training on specific topics, skills or equipment procedures. SIRM trainers are available to develop and upgrade your safety operations manuals, procedures and techniques. A safety gap analysis will identify specific safety and skills-based training required for your employees to ensure safe operations and reduction in severity of any potential accidents. Skills-based training is currently in place within the company.

The integrated risk management process requires compliance and endorsement from *all* levels of Wallerich's management structure. Zero tolerance for improper risk taking on the job will be a requirement to ensure employees do not receive mixed signals with regard to

which employees “need to be safe” and which employees are exempt from such safety requirements.

### DEFINING INTEGRATED RISK MANAGEMENT

Integrated risk management (IRM) is an effective process used by the United States government, the military, and higher-risk employment fields to identify, mitigate, and reduce the hazards of day to day operations (US Army, 2006). IRM philosophies and models have been adopted by other municipalities, allied government entities, and the insurance industry, among others. This concept teaches employees “‘how to think’ rather than telling them ‘what to think’” when dealing with the concept of risk in the workplace (US Army 2006, p.iv). Although risk factors vary among job tasks, all employee safety development will focus on training the thought processes and actions behind integration to “allow it to be executed intuitively in situations that require immediate action” (2006, p.iv).

#### Integrated Risk Management within a Design Model

SIRM has adapted this process to Wallerich’s specific industry needs by combining the integration system with the Kemp Model of instructional development to train employees and organizations on the process for risk reduction (Morrison, Ross, and Kemp, 2004). Additionally, we use the Attention, Relevance, Confidence, and Satisfaction (ARCS) model as a support for the development of materials (Keller, 1987).

#### *The Kemp Model*

The Kemp model uses a circular design approach developed around the central objective of providing instruction that satisfies learner needs with relation to training goals, priorities, and constraints (Kemp, 1977). Formative and summative evaluations are used as feedback; coupled with constant revision, this allows for continuous improvement in the training materials. This model “is most useful for large-scale programs involving groups of people and multiple resources” (McGriff, 1991).

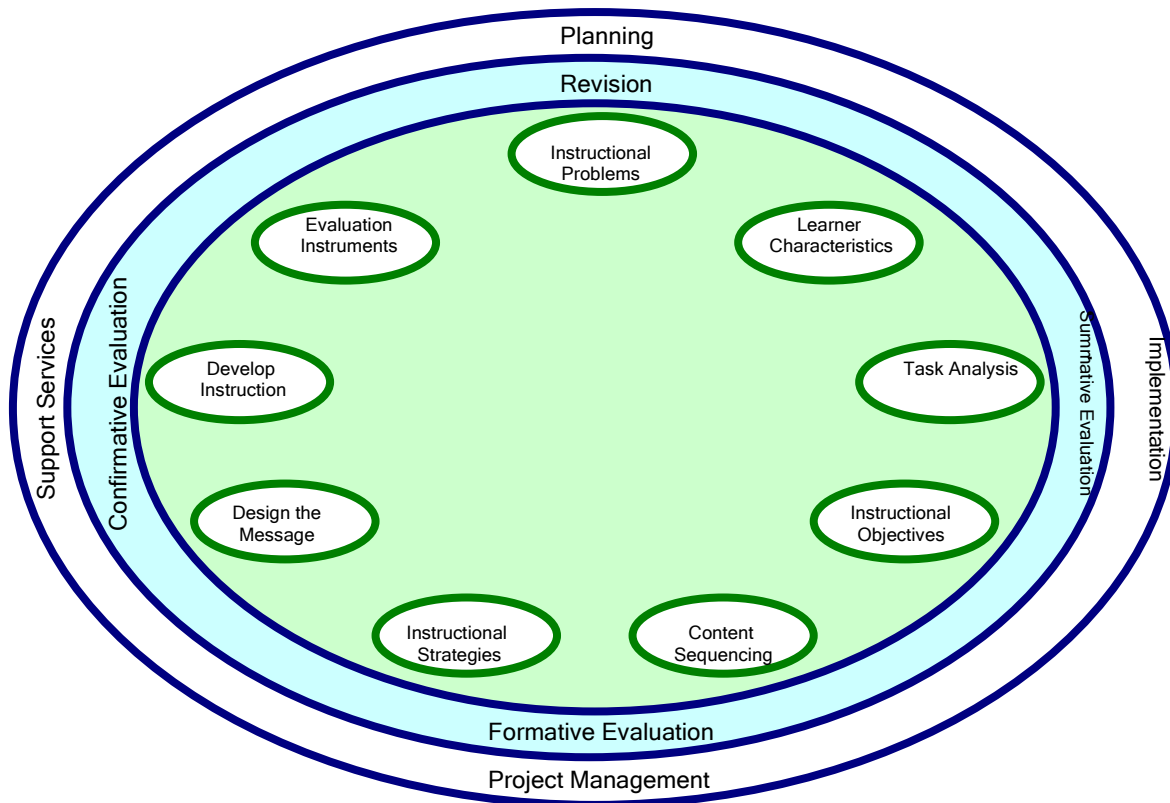


Figure 1: The Kemp Model

*Kemp model with Inclusion of the ARCS Model*

Kemp-style development will be supported by using Keller's Attention, Relevance, Confidence, and Satisfaction (ARCS) model for motivation. The ARCS model:

- helps the individual understand the construct of motivation in terms of four distinct categories,
- provides the systematic motivational design process,
- provides motivational strategies (Song & Keller, 2001).

Wallerich employee training will be constructed so that the overarching model of integrated risk management is delivered using the Kemp model, with support from ARCS.

Doing so will provide:

- Training that is integrated into all facets of employees' work experiences,
- Training that takes into account the need for constant rework and renewal,
- Training that is developed to motivate employees to learn, embrace, and share what they have learned with their peers.

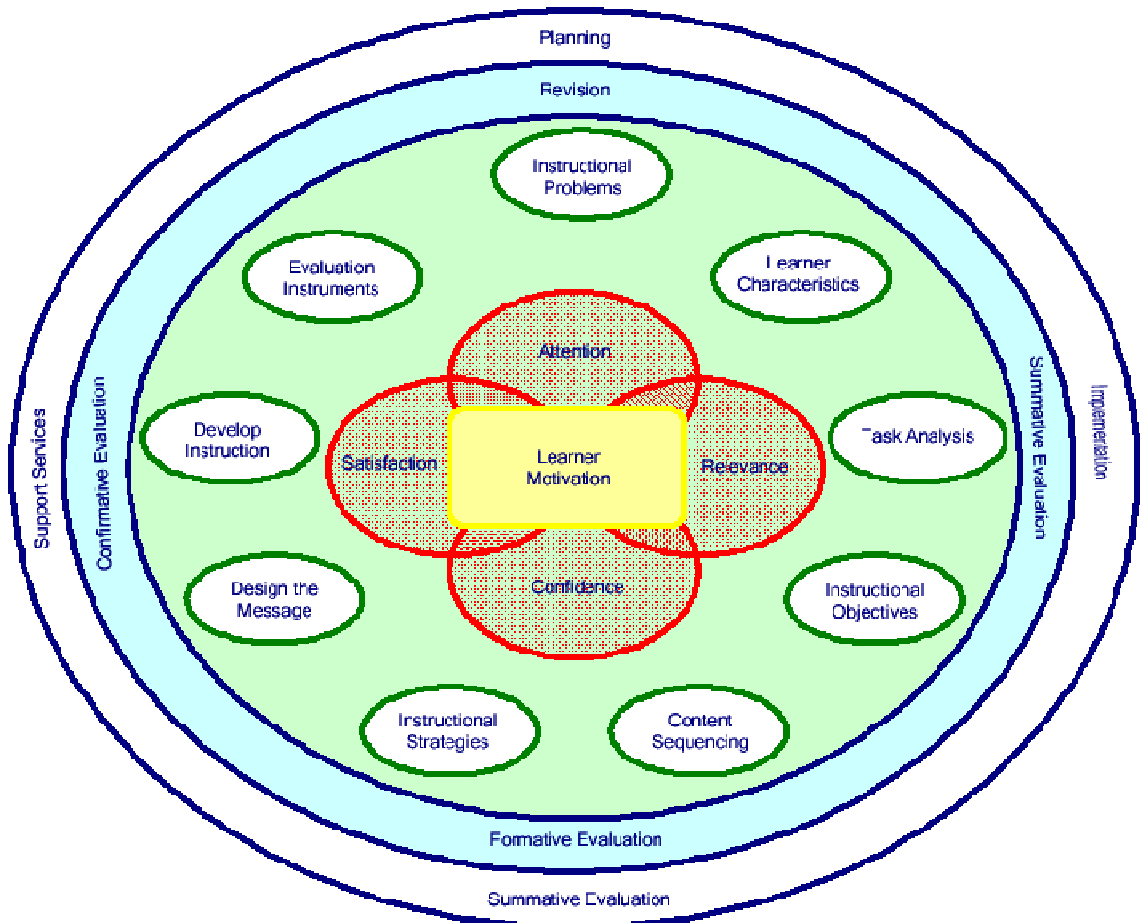


Figure 2: The Kemp model integrating the ARCS process (center of process)

### *The Integrated Risk Management Process*

Wallerich culture is ready for the paradigm shift that will enable all employees to be involved in the risk mitigation process. This is completed through a five-step training model (US Army, 2006).

- a) *Teaching employees to identify hazards:* Hazards exist in all environments and are viewed differently by different people. We will work with your teams and team members to develop the tools needed by each person to accurately identify hazards.

- b) *Teaching employees how to assess each hazard, using charts, matrices, and coding:* Teams will be able to assess the probability and severity of each potential risk as it exists in each sector of the company.
- c) *Developing controls and training to reduce risk:* Individual employees and team leaders will develop the required controls to bring each risk to an acceptable level.
- d) *Implementing controls at all levels and with all personnel:* ALL EMPLOYEES will learn how to effectively implement the controls.
- e) *Supervising and evaluating:* Each person in the company must be able to evaluate risk while working for Wallerich . Periodic assessments of an employee’s ability to assess and mitigate risk using case studies (online web-modules) will verify that proper risk management takes place and that the employee retains and implements the risk management process.

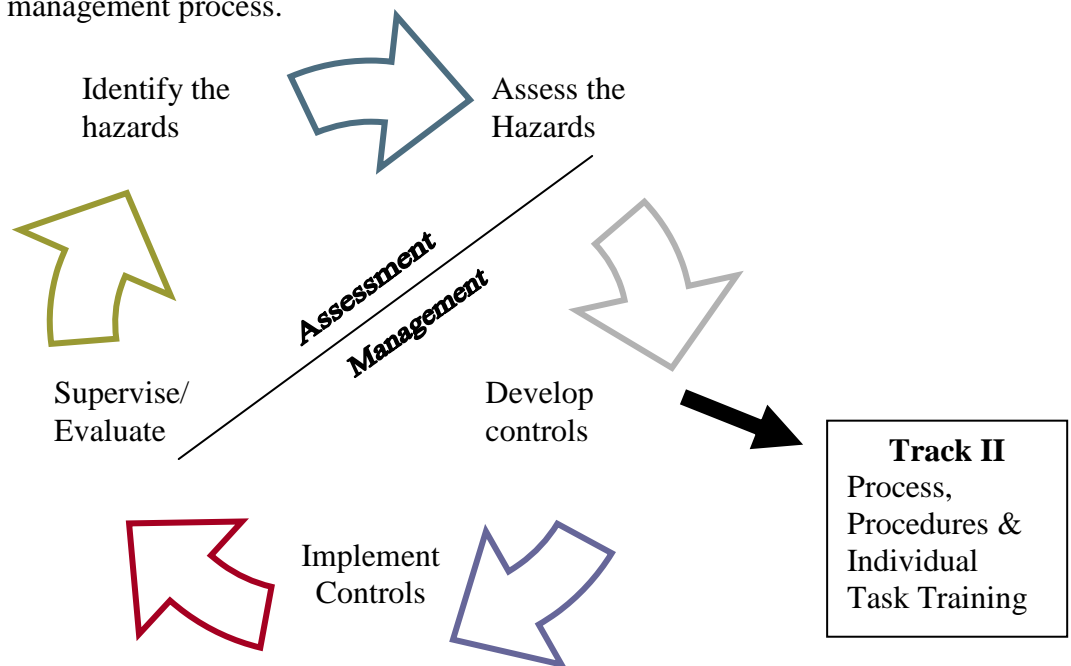


Figure 3: The Integrated Risk Management Process

Using the training toolkit (job-aids, processes and procedures) developed by your employees in conjunction with materials from SIRM, each employee shall develop automatic risk mitigation awareness.

## TRAINING METHODOLOGY

The five-step risk mitigation process is based on a core set of instructional system design models and research principals specific to the field of training and education. The following principles comprise the structure of the training.

### *Holistic and Behavioral Based Cognitive Objectives*

Employee behavior-based objectives guide your training. Training objectives are reviewed and matched to three critical learning domains: affective, psychomotor, and cognitive. As your organization completes the five-step process, each assessment and learning tool will build a “hierarchy of learning” within the three key training objective fields (Bloom, 1956).

### *Systematic and Holistic Design*

Kemp’s model is circular in practice due to constant assessment and the balance between training and learning (Kemp, 1977). This process encompasses all factors of the training environment and is open to constant and real-time adjustment.

### *Configuring Your Training*

Your employees will identify naturally occurring configurations (relationships), linkages (internally and externally), environmental conditions, and the fixed pool of resources that will effect your transformation into a safety conscious company (Bhola, 1982). The purpose is to effectively organize complex and interwoven organizational information (Kerr, 1982).

## IMPLEMENTING INTEGRATED RISK MANAGEMENT

### *Phase I: Building a core of safety experts*

First, SIRM must understand and embrace the diversity of location, educational background, and job duties at Wallerich. We will work with key leaders to identify lead

teams from each of Wallerich's operational communities to be subject matter experts. These individuals will be responsible for safety training and compliance at their respective facilities.

Each team will be trained in the process of identifying risks leading to determination of cause and the mitigating safety solution, if one exists. Internet based video-conferencing will keep managers and peer-teams apprised of the progress the safety experts are making and to solicit suggestions, both openly and via a suggestion box at each location. Cross training for risk management identification and solutions at all company locations will occur.

All personnel will be surveyed for current comprehension on safety standards, computer competency, standard operation procedures for safety (currently in place), and risk awareness. Training will be pertinent to all employees using relevant local examples and, if necessary, custom designed modules for specific locations. Specialized training will be coupled with a review of documented accident information available from each facility. Upon completion of the initial training cohort, further assessment will occur to identify and incorporate immediate changes or adjustments in training materials prior to deploying the package to the complete company workforce.

#### *Phase II: Decentralized team training*

Although the training uses multiple methods to "push down" information throughout the company, the training process will not be centralized to specific locations, but brought directly to each end-user.

#### *Instructional Design Approach*

SIRM will provide individual or coach/mentor multimedia-based integrated risk management training appropriate to each learner's current level of training/expertise. Currently, government and military personnel are trained from senior level manager to new employee using a web-based training module (US Army 2006). SIRM will develop similar web-based training adapted to your specific industry. All employees will participate in the

web-based training, regardless of location. Upon individual training completion, Wallerich employees will understand risk mitigation at the individual level and be ready to work within their specific teams to conduct the five step process on a daily basis. The company will then train each component unit or team on the IRM process to ensure leaders and workers are implementing the process in a cohesive manner.

Phase II training will be divided into two sections prior to the collective team training. First, supervisors will undergo additional training to understand critical incident procedures and review plant/operation specific training that is geared to address each location's specific needs. Upon completion of the necessary company requirements for such incidents, all supervisors will join their company teams in individual on-site or web-based training.

#### *Training Challenges and Solutions for Phase I and Phase II*

Why web-based individual training on the integrated risk mitigation process? Four major instructional design factors exist within your operations which preclude the use of a stationary classroom: the mobile nature of logging, sound levels in the field, weather, and learner styles. One solution for the remote employee teams is the use of mobile training centers (modified motor homes or, preferably, transformed cargo trailers which include the necessary tools and technology for all location-specific training). Such trailers are currently used by decentralized companies, construction crews, outdoor command centers, and reserve military units to bring mobile classrooms and facilities to remote locations. These vehicles fit the footprint of the traditional logging truck, and require nothing more than technical support (provided by SIRM), fuel and electrical access, or generators. These vehicles offer multiple access modes for multimedia-based training, using local access options such as satellite linking. Local community computer labs at schools or other facilities may be substituted for any and all training. When available, this method is cost-effective and preferred to mobile

units. The packaging plants and corporate location will need to set aside existing space to house these same training elements using more traditional computer labs/classrooms.

*Phase III: Processes, Procedures and Skills-based training*

During Phases I and II, safety gaps in procedures and processes, as well as individual skills-based training gaps, are identified. A comprehensive list of tasks will be provided to Wallerich leadership to identify and prioritize which processes, procedures, and individual tasks require training. This second track of training may be held congruently or after the initial 90 day training window for integrated risk management. SIRM provides, but is not limited to, Heartsaver Training (AHA, 2007) and OSHA 10/30 Hour Voluntary Compliance training (distance or on-site learning) (OSHA, 2007). SIRM can provide customized training programs for each skill-based training topic. Wallerich will provide trainers to ensure equipment and other company assets' operating procedures are trained and used to standard. See Appendix C for a list of potential skills-based training courses SIRM can provide your organization.

*Phase IV: Continuous Implementation and Supervision*

As stated, implementing the integrated risk management process requires a paradigm shift for all employees. Each employee will continuously develop as an on-the-scene local safety expert using tools and techniques that keep safety and risk mitigation a part of daily life. The overarching goal is to convert each employee into an empowered safety expert able to analyze risk appropriately and work with all employees to ensure safety compliance.

*Phase V: Recharging and Rewarding*

Periodic team and individual programs will be developed with Wallerich leadership for future training. Training delivery will include on-site, online, and on-the-job training to ensure knowledge is not lost with employee transitions. Rewarding successful implementation is just as important as effective training and supervision. SIRM will assist

your company with system development that rewards successes and reinforces the importance of risk mitigation.

## EVALUATING THE INTEGRATED RISK MANAGEMENT PROCESS

### Formative Evaluation

As a comprehensive risk reduction system, the IRM process requires formative evaluations at each benchmark/milestone stage. While development of content is critical to the success of the IRM process, “even an instructionally sound online course can fail to produce learning outcomes if students encounter a poorly designed Web site” (Lockee, Moore, and Burton, 2002 p. 22). Therefore, designated supervisors from each segment of the company (logging, manufacturing, and corporate) will begin to assist with module review at the formative evaluation stage before rollout to specific configurations. This evaluation stage will also include one-on-one discussions with selected members of the target training groups, an evaluation from supervisors viewed as subject matter experts, a file review to analyze previous accidents. A comprehensive review by SIRM multimedia designers will integrate all formative evaluation data into training product revisions. If required, field trials for the training will be conducted at this time. Doing so will ensure that appropriate adjustments to the training modules occur not only with regard to the accuracy and necessity of information being presented, but that the user interface is highly effective specific to Wallerich’s employee groups.

### Summative Evaluation

At the completion of training, summative evaluation will take place within collective units of the company. Summative evaluations will be conducted using on-site and online/hard copy survey tools. Individual interviews are preferred. Because this risk management model requires a paradigm shift, employees will be evaluated based not only on anticipated learning outcomes, but will also be assessed to determine whether anticipated

attitude shifts have been achieved and whether unexpected attitudes regarding the risk management process have come to light. Summative evaluations will use open-ended questions to measure learner attitude changes. Based upon summative input and due to the circular nature of the Kemp model of design, “what’s typically seen as summative information is truly formative, as results and lessons learned” will be used for the program’s continuing evolution (Lockee, Moore, and Burton, 2002 p.25).

#### Confirmative Evaluation and Metrics

An analysis will be conducted on the effectiveness of training and transfer of knowledge vis-à-vis bottom line accident cost savings. Using current Wallerich safety metrics, SIRM will provide actual cost-to-benefit figures. Safety metrics are based upon Wallerich’s documented to-date accident cost figures, employee wage figures, and current safety program costs. Ratio for measuring outcome success is cost of training versus accident rate and severity of accident expenses. The implementation of this program validates to all employees Wallerich’s commitment to employee health and safety. Preventing the loss of any life due to a work force accident justifies the investment in IRM and skills-based training. Accident cost-savings will result from post-training development of daily risk mitigation controls and comprehensive, system-wide, updates. Each team will continue to develop to keep safety a first-line priority.

#### CONCLUDING REMARKS

Our research indicates this proposal is a viable solution for your training needs. Our design will help ensure Wallerich employees work in a safe, productive environment where risk mitigation is a daily topic for all, making Wallerich exemplary as a leader in industrial safety. Supplemental to this proposal are the following:

1. Proposed timeline and implementation plan
2. Mobile training lab example

3. Comprehensive list of skills-based courses SIRM could provide to your employees. All materials may be viewed at:

<http://studentaccess.emporia.edu/~svalenti/SunflowerIRM/>.

This proposal offers an abstract and samples of items SIRM can offer. We would personally like to discuss this proposal with your executive team. Our presentation will include a hands-on review of the web-based training courses currently in use by other high-risk agencies and an overview of the training we can provide the outstanding employees at Wallerich Company, Inc.

## APPENDIX A

**Summary Milestones**

Note: A more thorough implementation timeline may be found at our website at <http://studentaccess.emporia.edu/~svalenti/SunflowerIRM/> or directly, at [www.sunflowerirm.updatelog.com](http://www.sunflowerirm.updatelog.com). Userid and Password for this site are: sunflowerirm and classof2007. This site will be used by the leadership team of Wallerich and selected employees to communicate messages, to-do lists, milestones, writeboards and real-time chat.

<b>Task</b>	<b>Time Units</b>	<b>Location</b>	<b>Methodology</b>
Employee Assessment	30 days	All sites	Surveys
Develop online training course	30 days	SIRM	Web-based
Develop skills training list	10 days	All sites	SIRM/Wallerich
Initial team training	5 days	Select	Classroom/online
Evaluate and update training	5 days	Wallerich	N/A
Schedule site training	5 days	Wallerich	Multiple methods
Conduct site training	60 days	Multi-site	Online/classroom/mobile
Targeted visits and consultation	20 days	Multi-site	Surveys, on-site, internet
Quarterly reviews	5 days	Multi-site	Surveys, visits, internet
One year review	5 days	Multi-site	Visits, internet, surveys
Three year review	5 days	Multi-site	Visits, surveys, internet
<b>Total estimated process</b>	<b>180 contract days</b>		

## APPENDIX B

### **Mobile Training Units**

Mobile Training Units are tractor/trailers approximately 48 feet to 54 feet in length and 8-9 feet wide. Each “rig” is pulled by a traditional over-the-road (OTR) truck. SIRM will place these trailers at remote Wallerich logging sites with access. Our trailers can be moved to any level spot that is logging truck accessible. These vehicles have many features that allow up to 12 workers to receive classroom and web-based training in remote environments. Power and heat/air are provided by DC systems run off 25- to 50-kilowatt diesel generators or, if available, local power access points. Internet service is provided via satellite. Our mobile classroom is capable of video-conferencing and two-way interactive video instruction. Our normal procedure is to use our vehicle driver for logistics of the vehicle and a trainer as your classroom host, with instruction provided by our expert trainers via satellite hookup.

For an example of the type of classroom discussed, visit one of our training partners at <http://www.mtcofswva.org/mobileLearningUnitDetail.htm>.

APPENDIX C

**Skills-based training courses**

Each course may be taught online or in the classroom. Course costs vary depending on instructional methodology and number of participants. SIRM Courses include:

- Bloodborne Pathogens and First Aid
- 10/30 Hour OSHA Voluntary Compliance Certification
- Chemical Safety
- Confined Spaces
- Construction Safety
- Driver Training/Equipment Operations
- Electrical Safety, 120/240/3-phase
- Environmental Awareness and Habitat Awareness
- Ergonomics and Back Safety
- Fall Protection
- Fire/Emergency
- Forklift and Crane Safety
- General Safety and Compliance
- Hand Tool and Machine Safety
- Hazardous Materials/MSDS
- HAZWOPER
- Lockout/Tagout
- Personal Protective Equipment
- Process Safety
- Respiratory Protection
- Safety Attitudes
- Substance Abuse

## APPENDIX D

**Estimate – Expense Recovery**

The cost of losing a life or having a severe injury is difficult to quantify, but can include expenses for:

- Hospital and medical treatment
- Legal fees
- Payout for death/injury benefits
- Decreased productivity within team/unit
- Decreased morale

Additionally, employee replacement costs include:

- Search and hiring expenses
- Training expenses
- Reduced productivity due to inexperience or learning curve
- Higher potential for future accidents due to inexperienced employee

SIRM training reduces costs by reducing injury rates. Our **estimated** cost for your training package is:

Phase I: Training Development (60 days):	\$144,000
Phase II: Implementation of Training (75 days):	\$180,000
Phase III: Post-training assessment and retraining (35 days):	\$84,000
<b>TOTAL ESTIMATED COST:</b>	<b>\$408,000</b>

(Costing is based on average industry consulting rates of \$150 per hour for two SIRM employees for the indicated number of days. Additional costs are possible based on use of local training space versus mobile-training units.)

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